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BLACKTIP OFFSHORE OPERATIONS ENVIRONMENT PLAN

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PR-OP	16	18/10/2024	Final Issue	WOR/ENI	JCO	LGI	WOR	
Validity Status	Rev. Number	Date	Description	Prepared by	Checked by	Approved by	Contractor Approval	Company Approval
Revision index								
 eni australia		Project name BLACKTIP OPERATIONS		Company identification 000036_DV_PR.HSE.0677.000 Job N. ____				
						Contractor identification Contract ____		
						Vendor identification Order N.....		
Facility Name			Location			Scale		Sheet of Sheets
BLACKTIP			BLACKTIP OPERATIONS			1:1		1 / 474
Document Title						Supersedes N.....		
BLACKTIP OFFSHORE OPERATIONS ENVIRONMENT PLAN						Superseded by N.....		
						Plant Area		Plant Unit

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REVISION HISTORY

Rev.	Date	No. of sheets	Description
13	08/05/2024	443	5-yearly revision
14	20/06/2024	448	5-yearly revision – NOPSEMA completeness
15	18/10/2024	475	5-yearly revision – Response to NOPSEMA RFFWI1
16	17/12/2024	475	5-yearly revision – Response to NOPSEMA OMR




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APPENDICES

Appendix A : Blacktip Environment Protection and Biodiversity Conservation Approval

Appendix B : Values and Sensitivities

Appendix C : Relevant Person Consultation

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Appendix C1: Relevant Persons Consultation Methodology For the Blacktip Operations
Environment Plan – Bridging Document

Appendix C2: Relevant Persons Register

Appendix C3: Consultatoin Materials


Appendix C4: 2023-24 Relevant Person Consultation Records

Appendix D : Health, Safety and Environment Statement


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ACRONYMS AND DEFINITIONS USED IN THIS DOCUMENT

Nomenclature	Definition
°C	degrees Celsius
μ	micro
AEP	Australian Energy Producers
AFMA	Australian Fisheries Management Authority
AHO	Australian Hydrographic Office
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
AIMS	Australian Institute of Marine Science
ALARP	as low as reasonably practicable
AMOSC	Australia Marine Oil Spill Centre
AMP	Australian Marine Park
AMSA	Australian Maritime Safety Authority
ANZG	Australian and New Zealand guidelines for fresh and marine water quality
APPEA	Australian Petroleum Production and Exploration Association
AUV	autonomous underwater vehicle
BP	boiling point
BESS	battery energy storage system
BIA	biologically important area
BTEX	benzene, toluene, ethylbenzene and xylene
CASA	Civil Aviation Safety Authority
CASR	Civil Aviation Safety Regulations
CCTV	closed-circuit television
CCUS	Carbon capture, storage and utilisation
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CEP	condensate export pipeline
CFA	Commonwealth Fisheries Association
cm	centimetres
CMT	Crisis Management Team
CO ₂ -e	carbon dioxide equivalents
DAFF	Department of Agriculture, Fisheries and Forestry
DAWE	Department of Agriculture, Water, and the Environment
DBCA	Department of Biodiversity, Conservation, and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety
DISR	Department of Industry, Science and Resources
DMP	Department of Mines and Petroleum
DNP	Director of National Parks
DoEE	Department of the Environment and Energy
DoT	Department of Transport
DPAW	Department of Parks and Wildlife

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Nomenclature	Definition
DPIRD	Department of Primary Industries and Regional Development
EMBA	environment that may be affected
Eni	Eni Australia BV
ENVID	environmental risk identification and assessment workshop
EP	Environment Plan
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
EPO	environmental performance objective
EPS	environmental performance standard
ESD	ecologically sustainable development
FG	fuel gas
FME	full moon equivalent
g	grams
GEP	gas export pipeline
GHG	greenhouse gas
gsm ³	109 standard cubic metres
GVI	general visual inspection
H ₂ S	hydrogen sulphide
HOCNF	Harmonised Offshore Chemical Notification Format
HQ	hazard quotient
hr	hour(s)
HSE	health, safety and environment
HSE IMS	HSE Integrated Management System
Hz	hertz
IAP	Incident Accident Plan
ICM	incident and crisis management
IMCA	International Marine Contractors Association
IMCRA	Integrated Marine and Coastal Regionalisation of Australia
IMO	International Maritime Organization
IMS	invasive marine species
IMT	Incident Management Team
IMR	inspection, maintenance and repair
IOGP	International Oil and Gas Producers
IOTC	Indian Ocean Tuna Commission
IPA	Indigenous Protected Area
ITOPF	International Tanker Owners Pollution Federation
IUCN	International Union for the Conservation of Nature
JBG	Joseph Bonaparte Gulf
KEF	key ecological feature
kg	kilogram(s)
kHz	kilohertz
km	kilometre(s)

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Nomenclature	Definition
kPag	kilo pascal gauge
L	litre(s)
m	metre(s)
MARPOL	International Convention for the Prevention of Pollution from Ships
mbar	megabar
MBES	multi-beam echo sounder
MC	measurement criteria
MDO	marine diesel oil
mg	milligram(s)
min	minute(s)
mL	millilitre(s)
mm	millimetre(s)
MMscf	million standard cubic feet
MMSI	Maritime Mobile Service Identity
MNES	matters of national environmental significance
MoC	management of change
MODU	mobile offshore drilling unit
MoU	Mutual Aid Memorandum of Understanding
Mpag	megapascal gauge
NEBA	net environmental benefit analysis
NGER	National Greenhouse and Energy Reporting
NIAA	National Indigenous Australians Agency
NLC	Northern Land Council
nm	nautical mile(s)
nm/h	nautical miles per hour
NMFS	United States National Marine Fisheries Service
NODC	National Oceanographic Data Centre
NOPIMS	National Offshore Petroleum Information Management System
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NOPTA	National Offshore Petroleum Titles Administrator
NPF	Northern Prawn Fishery
NPI	National Pollutant Inventory
NT	Northern Territory
NTFJA	Northern Territory Fisheries Joint Authority
NTGFIA	Northern Territory Guided Fishing Industry Association
OCIMF	Oil Companies International Marine Forum
OCNS	Offshore Chemical Notification Scheme
OGCI	Oil and Gas Climate Initiative
OIW	oil in water
OPEP	Oil Pollution Emergency Plan
OPGGGS Act	<i>Offshore Petroleum and Greenhouse Gas Storage Act 2006</i>

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Nomenclature	Definition
OPGGs(E) Regulations	Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023
OSPAR Convention	Protection of the Marine Environment of the North-East Atlantic
OSRL	Oil Spill Response Limited
OWR	oiled wildlife response
P&A	Plugged and abandoned
PAH	polycyclic aromatic hydrocarbons
PBCs	prescribed bodies corporate
PIC	person in charge
PIMS	pipeline integrity management system
PJ/a	petajoules per annum
PK	peak
PLEM	pipeline end manifold
PMST	Protected Matters Search Tool
POB	persons on board
POS	Plant Operations Superintendent
ppb	parts per billion
ppm	parts per million
psi	pounds per square inch
psia	pounds per square inch absolute
psig	pounds per square inch gauge
PSV	pressure safety valve
PSZ	petroleum safety zone
PTS	permanent threshold shift
PW	produced water
PWC	Northern Territory Power and Water Corporation
RCC	Rescue Coordination Centre
RMS	root mean square
ROV	remotely operated vehicle
SBP	sub-bottom profiler
SEL	sound exposure level
SEWPaC	Department of Sustainability, Environment, Water, Population and Communities
sm ³	standard cubic metres
SPFSF	Small Pelagic Fishery and Squid Fishery
SPL	sound pressure level
SPM	single point mooring
SSIV	subsea isolation valve
SSS	side scan sonar
stb	standard barrel

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Nomenclature	Definition
TDC	Thamarrurr Development Corporation Ltd
TJ	terajoules
TLC	Tiwi Land Council
TTS	temporary threshold shift
UAV	unmanned aerial vehicle
US	United States of America
V	volts
WA	Western Australia
WAFIC	Western Australian Fishing Industry Council
WANF	Western Australian North Coast Shark Fishery
WHP	wellhead platform
WOMP	Well Operations Management Plan
ZPI	zone of potential impact
YGP	Yelcherr Gas Plant
yr	year(s)


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1 INTRODUCTION

1.1 Project Overview and Background

Eni Australia BV (Eni) operates the Blacktip facilities, approximately 300km west southwest of Darwin, located in Production License WA-33-L, within Commonwealth waters in the Joseph Bonaparte Gulf (JBG). The facilities consist of a normally uncrewed wellhead platform (WHP), producing wells, flowlines, and a subsea gas export pipeline (GEP) (Licence WA-15-PL, NT/PL2). The Blacktip facilities bring whole well stream fluid (as in, gas, condensate and produced water) to the Yelcherr Gas Plant (YGP) near Wadeye in the Northern Territory (NT). Stabilised condensate is stored on site at the YGP before being exported via a subsea condensate export pipeline (CEP) (NT/PL3) to a single point mooring (SPM), located approximately 7km offshore in Commonwealth waters, for loading to tanker vessels then transporting to market.

Figure 1.1 and Figure 1.2 present the location of the Blacktip facilities, and a more detailed map is contained in Section 3.2.1. A portion of the GEP, CEP and the SPM overlap the JBG Australian Marine Park Multiple Use Zone, which was established after the Blacktip offshore facilities were constructed.

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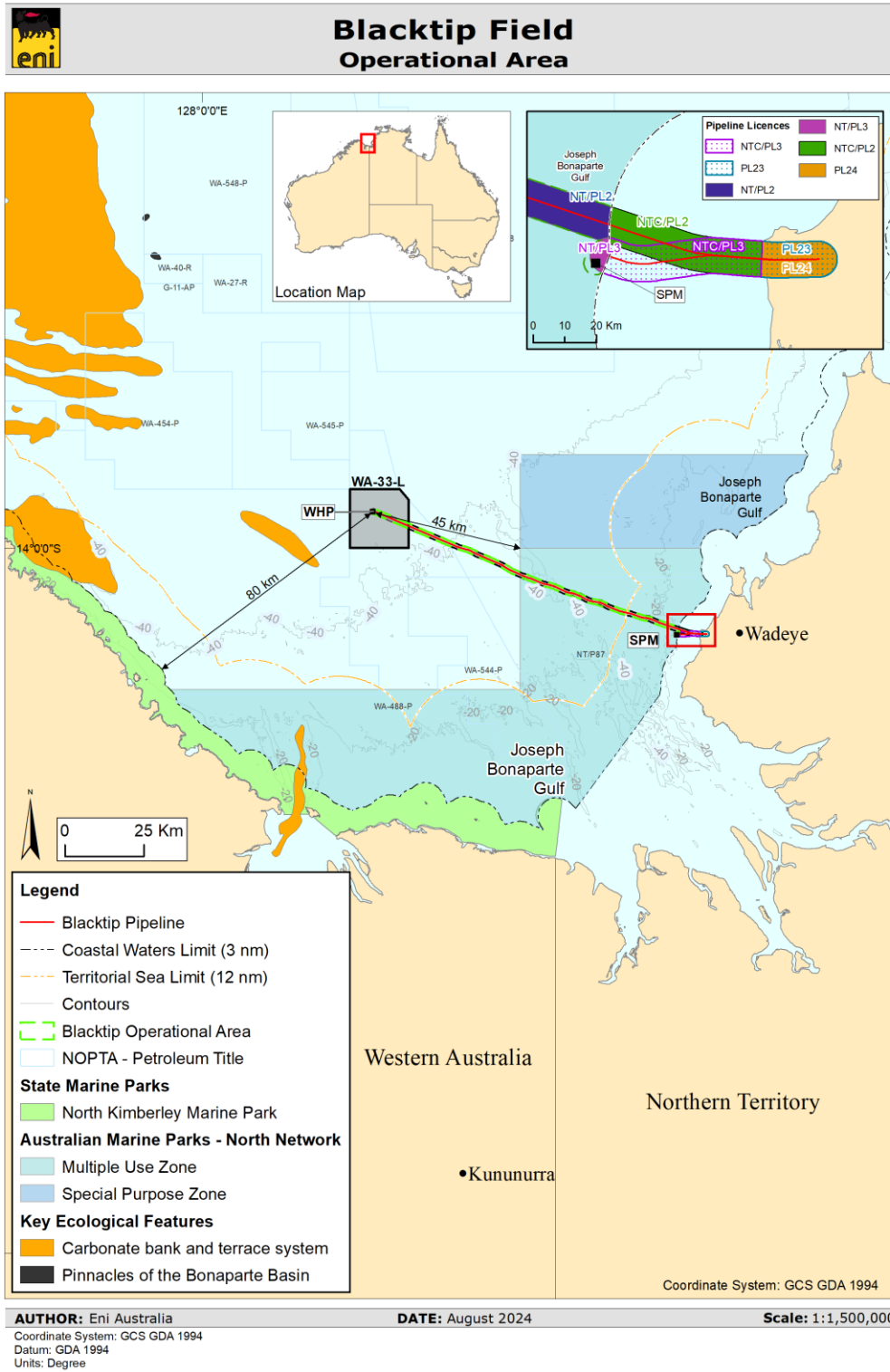


Figure 1.1: Blacktip facilities overview (1)



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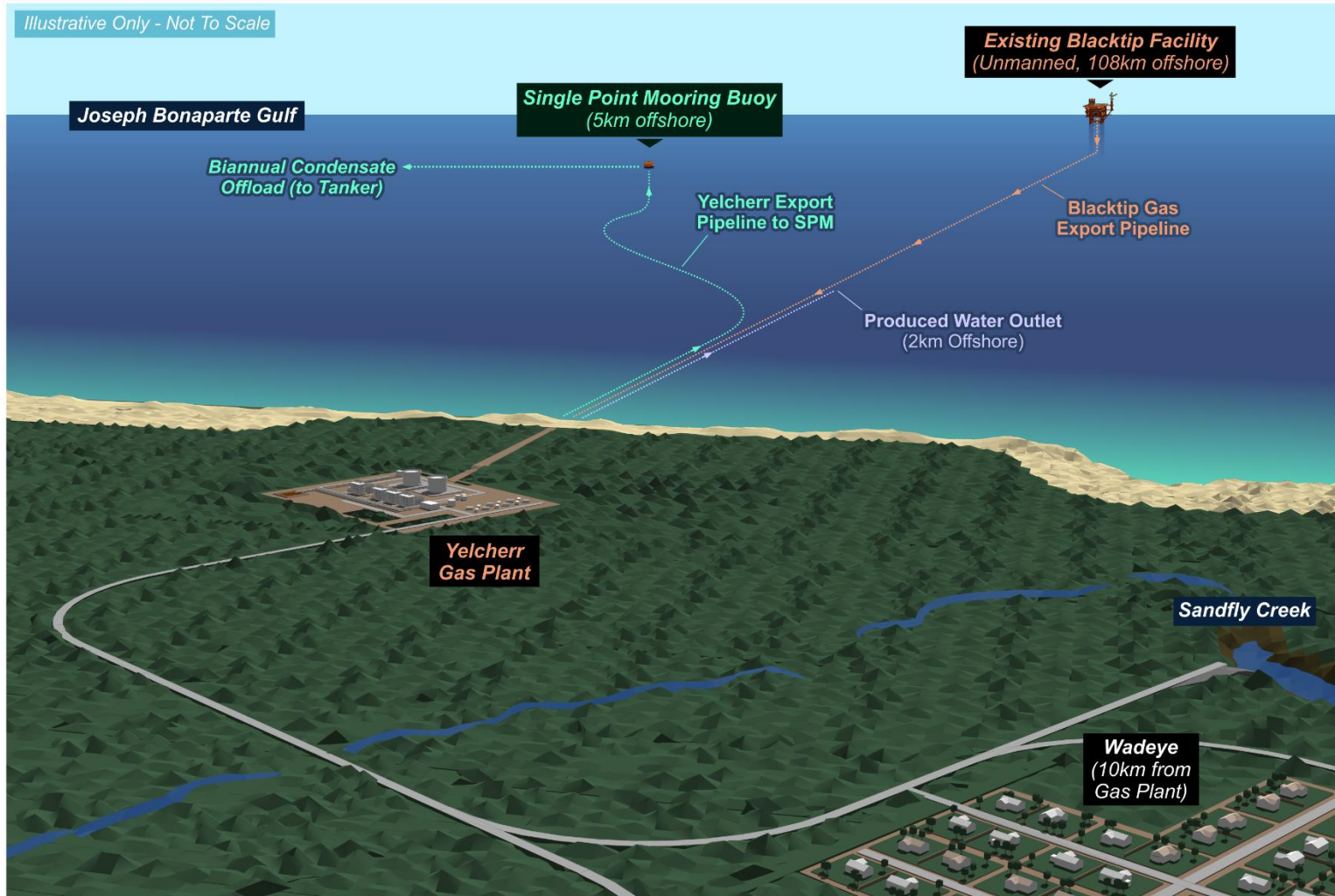



Figure 1.2: Blacktip facilities overview (2)

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The petroleum activity covered in this Environment Plan (EP) includes the Blacktip production operations in Commonwealth waters (herein referred to as the Blacktip operations). Blacktip operations are generally limited to:

- WHP normal (uncrewed) and pipeline production operations
- surface and subsea inspection, maintenance and repair (IMR) activities
- periodic tanker vessel offtakes of condensate from the SPM (approximately two times per year)
- rigless well intervention activities as required
- hook-up and commissioning of new Blacktip wells
- support vessel operations for the activities listed above.


There are currently three production wells on the WHP (P1, P2 and P3). The new P5 production well is anticipated to be drilled under the separate Blacktip Offshore Drilling EP (000036_DV_PR.HSE.0887.000) before the end of 2024. Operation of the P5 well, including hook-up and commissioning, is included in this EP. Additional wells may be drilled from the WHP over the validity of this EP, under the separate Blacktip Offshore Drilling EP (000036_DV_PR.HSE.0887.000). Table 1.1 further clarifies the scopes of this EP and the Blacktip Offshore Drilling EP (000036_DV_PR.HSE.0887.000).

Table 1.1: Blacktip Environment Plan scopes

Environment Plan	Scope
Blacktip Operations EP (this EP)	Ongoing operations of Blacktip facilities in Commonwealth waters, including the production from Blacktip wells included in the EP Geophysical survey The mobilisation, positioning, and demobilisation of a mobile offshore drilling unit (MODU) Hook-up and commissioning of Blacktip wells Intervention (rigless-based)
Blacktip Offshore Drilling EP (000036_DV_PR.HSE.0887.000)	Geophysical survey Mobilisation, positioning and demobilisation of a MODU Drilling and completions Well-cleanup Intervention (rig-based) Contingent workover operations (rig-based)

1.2 Purpose

This EP has been prepared for submission and acceptance by National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (OPGGGS(E) Regulations).

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The purpose of this EP is to identify the potential environmental risks and impacts that may result from the Blacktip operations. Management measures have been identified to reduce the environmental risks and impacts to an acceptable level. Specific environmental performance outcomes, performance standards and measurement criteria have been developed to reduce impacts and risks to 'as low as reasonably practicable' (ALARP).

This EP will supersede the existing Blacktip Offshore Operations EP (000036_DV_PR.HSE.0677.000, Rev 12) and is valid for five years from the date of its acceptance by NOPSEMA. In accordance with the requirements of OPGGS(E) Regulation 41, Eni will submit to NOPSEMA a proposed revision to this EP at least 14 days before the end of each period of five years.

The Operational Area for this EP is in Commonwealth waters, where Blacktip operations are undertaken. The extent of the Operational Area is defined in Section 3.2.2. This EP only addresses the potential environmental impacts from planned petroleum activities within the Operational Area and any potential unplanned events that originate from within the Operational Area.


This EP excludes related activities within NT State waters and any onshore requirements, such as those related to the onshore YGP. These aspects are outside of NOPSEMA jurisdiction and are assessed under relevant NT planning and approvals processes, including those needed to meet the requirements of the NT *Environment Protection Act 2019*.

1.3 Environment Plan Summary

An EP summary has been prepared from material provided in this EP (Table 1.2).

Table 1.2: Environment Plan summary

EP Summary material requirement	Relevant section of this EP containing EP Summary material
The location of the activity	Section 3.2.1
A description of the receiving environment	Section 4
A description of the activity	Section 3
Details of the environmental impacts and risks	Section 7 and 8
The control measures for the activity	Section 7, 8 and 9.1
The arrangements for ongoing monitoring of the titleholder's environmental performance	Section 10
Response arrangements in the Oil Pollution Emergency Plan (OPEP)	Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)
Consultation already undertaken and plans for ongoing consultation	Section 5
Details of the titleholder's nominated liaison person for the activity	Section 1.4

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1.4 Details of Titleholder

Eni Australia BV (Eni) is the Titleholder for Production Licence WA-33-L and the Blacktip Pipeline Licences WA-15-PL, NT/PL2 and NT/PL3. The Blacktip field and associated offshore infrastructure as well as YGP are 100% owned and operated by Eni. Eni is a subsidiary of Eni S.p.A., one of the world's major integrated energy companies, operating in 70 countries around the world, with headquarters in Milan, Italy.

Eni's Australian head office is in Perth (address below), with a secondary office in Darwin. As well as the Blacktip operations, Eni has ongoing offshore exploration and joint venture production interests. Eni also has three solar plants in the NT, generating approximately 59MW per year.

Eni's contact details are:

Eni Australia BV
226 Adelaide Terrace
Perth Western Australia (WA) 6000
Telephone: (08) 9320 1111

Eni's Australian Business Number is 18 092 812 023 and Australian Company Number is 092 812 023. Eni Australia Ltd is an affiliate of Eni Australia BV.


1.4.1 Details of the Liaison Person

The nominated liaison person for this EP is:

Joe Covic
Eni Australia Ltd
Tel: (08) 9320 1111
Email: info@eniaustralia.com.au

1.5 Notification Procedure in the Event of Changed Details

In the event there is a change in the nominated operator, the operator's nominated liaison person, or a change in the contact details for the operator or liaison person, Eni will notify NOPSEMA and provide the updated details.

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2 ENVIRONMENTAL LEGISLATION

The OPGGS(E) Regulation 21(4) requires Eni to describe in this EP the relevant requirements that apply to Blacktip operations, along with how they will be met. Relevant legislation, standards and guidelines are summarised in the next subsections and include:

- Commonwealth legislation (Section 2.1)
- Commonwealth polices and guidelines (Section 2.2)
- international agreements and conventions (Section 2.3).

While this EP applies to Commonwealth petroleum activities, Sections 2.4 and 2.5 summarise key State requirements relevant to aspects of the Blacktip operations outside of NOPSEMA's jurisdiction.

2.1 Commonwealth Legislation

The Blacktip operations will be conducted in Commonwealth waters and are therefore subject to the Commonwealth legislation of:

- the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act, Section 2.1.1)
- the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act, Section 2.1.2).


Other Commonwealth legislation also applies to environmental management of the Blacktip operations; these have been considered in Section 2.1.3.

2.1.1 Offshore Petroleum and Greenhouse Gas Storage Act 2006

The OPGGS Act is the principal legislation managing petroleum activities in Australian Commonwealth waters. The OPGGS Act and supporting regulations address all licencing, health, safety, environmental and royalty issues for offshore petroleum and gas exploration and production operations in Commonwealth waters.

The OPGGS(E) Regulations prescribe the requirements for managing environmental impacts associated with petroleum activities. They require proponents to submit an EP to the Regulatory Authority for acceptance before commencing activities. The object of the OPGGS(E) Regulations is to ensure petroleum activities in Commonwealth waters are performed in a manner:

- consistent with the principles of environmentally sustainable development set out in section 3A of the EPBC Act
- by which the environmental impacts and risks of the activity will be reduced to as low as reasonably practicable
- by which the environmental impacts and risks of the activity will be at an acceptable level.

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The OPGGS(E) Regulations also include requirements for considering matters of national environmental significance (MNES), as defined in Part 3 of the EPBC Act; refer to Section 2.1.2 for a description of MNES.

Section 572 of the OPGGS Act requires complete removal of all infrastructure above the mudline and plug and abandonment of wells as the base case. This requirement has been discussed in Section 3.7.

Table 2.1 includes the pertinent sections of the OPGGS(E) Regulations and details the sections of the EP which ensure compliance with the requirements.




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Table 2.1: Requirements of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023


Reg.	Requirement	Relevant section in the EP
Environmental assessment		
21(1)	<p><i>Description of the activity</i></p> <p>The environment plan must contain a comprehensive description of the activity including the following:</p> <ul style="list-style-type: none"> the location or locations of the activity general details of the construction and layout of any facility or other structure an outline of the operational details of the activity (for example, seismic surveys and production) and proposed timetables any additional information relevant to consideration of environmental impacts and risks of the activity. 	<p>Section 3.2.1 Location</p> <p>Section 3.3 Blacktip Field</p> <p>Section 3 Blacktip Operations – Description of Activities</p>
21(2)	<p><i>Description of the environment</i></p> <p>The environment plan must:</p> <ul style="list-style-type: none"> describe the existing environment that may be affected by the activity include details of the relevant values and sensitivities (if any) of that environment. 	<p>Section 4 Description of the Environment</p>
21(4)	<p><i>Requirements</i></p> <p>The environment plan must:</p> <ul style="list-style-type: none"> describe the requirements, including legislative requirements, that apply to the activity and are relevant to the environmental management of the activity demonstrate how those requirements will be met. 	<p>Section 2 Environmental Legislation</p>
21(5)	<p><i>Evaluation of environmental impacts and risks</i></p> <p>The environment plan must include:</p> <ul style="list-style-type: none"> details of the environmental impacts and risks for the activity an evaluation of all the impacts and risks, appropriate to the nature and scale of each impact or risk details of the control measures that will be used to reduce the impacts and risks of the activity to as low as reasonably practicable and an acceptable level. 	<p>Section 6 Environmental Risk Assessment Methodology</p>
21(6)	<p>To avoid doubt, the evaluation mentioned in paragraph (5)(b) must evaluate all the significant impacts and risks arising directly or indirectly from:</p> <ul style="list-style-type: none"> all operations of the activity; and potential emergency conditions, whether resulting from accident or any other reason. 	<p>Section 6 Environmental Risk Assessment Methodology</p>

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Reg.	Requirement	Relevant section in the EP
21(7)	<p><i>Environmental performance outcomes and standards</i></p> <p>The environment plan must:</p> <ul style="list-style-type: none"> • set environmental performance standards for the control measures identified under paragraph (5)(c) • set out the environmental performance outcomes against which the performance of the titleholder in protecting the environment is to be measured • include measurement criteria that the titleholder will use to determine whether each environmental performance outcome and environmental performance standard is being met. 	Section 9 Environment Outcomes, Standards and Measurement Criteria
Implementation strategy for the environment plan		
22(1)	The environment plan must contain an implementation strategy for the activity in accordance with this regulation.	Section 10 Implementation Strategy
22(2)	<p>The implementation strategy must contain a description of the environmental management system for the activity, including specific measures to be used to ensure that, for the duration of the activity:</p> <ul style="list-style-type: none"> • the environmental impacts and risks of the activity continue to be identified and reduced to a level that is as low as reasonably practicable • control measures detailed in the environment plan are effective in reducing the environmental impacts and risks of the activity to as low as reasonably practicable and an acceptable level • environmental performance outcomes and standards set out in the environment plan are being met. 	Section 10.6 Auditing and Inspection
22(3)	The implementation strategy must establish a clear chain of command, setting out the roles and responsibilities of personnel in relation to the implementation, management, and review of the environment plan, including during emergencies or potential emergencies.	Section 10.2 Roles and Responsibilities
22(4)	The implementation strategy must include measures to ensure that each employee or contractor working on, or in connection with, the activity is aware of his or her responsibilities in relation to the environment plan, including during emergencies or potential emergencies, and has the appropriate competencies and training.	Section 10.2 Roles and Responsibilities
22(5)	The implementation strategy must provide for sufficient monitoring, recording, audit, management of non-conformance and review of the titleholder's environmental performance and the implementation strategy to ensure that the environmental performance outcomes and standards in the environment plan are being met.	Section 10.8 External Reporting Section 10.9 Internal Reporting Section 10.6 Auditing and Inspection Section 10.7 Non-conformance, Corrective and Preventative Actions

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Reg.	Requirement	Relevant section in the EP
22(6)	The implementation strategy must provide for sufficient monitoring of, and maintaining a quantitative record of, emissions and discharges (whether occurring during normal operations or otherwise), such that the record can be used to assess whether the environmental performance outcomes and standards in the environment plan are being met.	Section 10.5 Monitoring Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)
22(7)	The implementation strategy must: <ul style="list-style-type: none"> state when the titleholder will report to the Regulator in relation to the titleholder's environmental performance for the activity provide that the interval between reports will not be more than 12 months. 	Section 10.8 External Reporting
22(8)	The implementation strategy must contain an oil pollution emergency plan and provide for the updating of the plan.	Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)
22(9)	The oil pollution emergency plan must include adequate arrangements for responding to and monitoring oil pollution, including the following: <ul style="list-style-type: none"> the control measures necessary for timely response to an emergency that results or may result in oil pollution the arrangements and capability that will be in place, for the duration of the activity, to ensure timely implementation of the control measures, including arrangements for ongoing maintenance of response capability the arrangements and capability that will be in place for monitoring the effectiveness of the control measures and ensuring that the environmental performance standards for the control measures are met the arrangements and capability in place for monitoring oil pollution to inform response activities. 	Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)
22(10)	The implementation strategy must provide for the monitoring of impacts to the environment from oil pollution and response activities that: <ul style="list-style-type: none"> is appropriate to the nature and scale of the risk of environmental impacts of the activity is sufficient to inform any remediation activities. 	Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)
22(11)	The implementation strategy must include information demonstrating that the response arrangements in the oil pollution emergency plan are consistent with the national system for oil pollution preparedness and response.	Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)

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Reg.	Requirement	Relevant section in the EP
22(12)	The implementation strategy must include arrangements for testing the response arrangements in the oil pollution emergency plan. The testing arrangements must be appropriate to the response arrangements and to the nature and scale of the risk of oil pollution for the activity	Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)
22(13)	The testing arrangements must include: <ul style="list-style-type: none"> • statement of the objectives of testing • a proposed schedule of tests • mechanisms to examine the effectiveness of response arrangements against the objectives of testing • mechanisms to address recommendations arising from tests. 	Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)
22(14)	The proposed schedule of tests must provide for the following: <ul style="list-style-type: none"> • testing the response arrangements when they are introduced • testing the response arrangements when they are significantly amended • testing the response arrangements not later than 12 months after the most recent test • if a new location for the activity is added to the environment plan after the response arrangements have been tested, and before the next test is conducted—testing the response arrangements in relation to the new location as soon as practicable after it is added to the plan • if a facility becomes operational after the response arrangements have been tested and before the next test is conducted—testing the response arrangements in relation to the facility when it becomes operational. 	Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)
22(15)	The implementation strategy must provide for appropriate consultation with: <ul style="list-style-type: none"> • relevant authorities of the Commonwealth, a State or a Territory • other relevant interested persons or organisations. 	Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17)
22(16)	The implementation strategy must comply with the Act, this instrument, any other regulations made under the Act, and any other environmental legislation applying to the activity.	Section 2

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Reg.	Requirement	Relevant section in the EP
Details of titleholder and liaison person		
23(1)	The environment plan must include the following details for the titleholder: <ul style="list-style-type: none"> • name • business address • telephone number (if any) • fax number (if any) • email address (if any) • if the titleholder is a body corporate that has an Australian Company Number (within the meaning of the Corporations Act 2001), the Australian Company Number. 	Section 1.4 Details of Titleholder
23(2)	The environment plan must also include the following details for the titleholder's nominated liaison person: <ul style="list-style-type: none"> • name • business address • telephone number (if any) • fax number (if any) • email address (if any). 	Section 1.5 Details of Liaison Person
23(3)	The environment plan must include arrangements for notifying the Regulator of a change in the titleholder, a change in the titleholder's nominated liaison person or a change in the contact details for either the titleholder or the liaison person.	Section 10 Implementation Strategy
Other information in the environment plan		
24	The environment plan must contain the following: <ul style="list-style-type: none"> • a statement of the titleholder's corporate environmental policy • a report on all consultations under section 25 of any relevant person by the titleholder, that contains: <ul style="list-style-type: none"> - a summary of each response made by a relevant person - an assessment of the merits of any objection or claim about the adverse impact of each activity to which the environment plan relates - a statement of the titleholder's response, or proposed response, if any, to each objection or claim - a copy of the full text of any response by a relevant person • details of all reportable incidents in relation to the proposed activity. 	Appendix D Eni Health, Safety and Environment (HSE) Statement Section 5 Stakeholder Consultation Section 10.8 External Reporting

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Reg.	Requirement	Relevant section in the EP
Consultation with relevant authorities, persons, and organisations, etc.		
25(1)	In the course of preparing an environment plan, or a revision of an environment plan, a titleholder must consult each of the following (a <i>relevant person</i>): <ul style="list-style-type: none"> each Commonwealth, State or Northern Territory agency or authority to which the activities to be carried out under the environment plan may be relevant; if the plan relates to activities in the offshore area of a State—the Department of the responsible State Minister; if the plan relates to activities in the Northern Territory offshore area—the Department of the responsible Northern Territory Minister; a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the environment plan; any other person or organisation that the titleholder considers relevant. 	Section 5 Stakeholder Consultation
25(2)	For the purpose of the consultation, the titleholder must give each relevant person sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on the functions, interests or activities of the relevant person.	Section 5 Stakeholder Consultation
25(3)	The titleholder must allow a relevant person a reasonable period for the consultation	Section 5 Stakeholder Consultation
25(4)	The titleholder must tell each relevant person the titleholder consults that: <ul style="list-style-type: none"> the relevant person may request that particular information the relevant person provides in the consultation not be published information subject to such a request is not to be published under this Part. 	Section 5 Stakeholder Consultation
Revision of an environment plan		
38	A titleholder may submit a revised environment plan under section 26 to include a new activity under the title (rather than submit a separate plan for the new activity). <p><i>Note 1: This is subject to NOPSEMA's approval (see subsection 26(7)) and, if the new activity is, or is part of, an offshore project, the requirements of subsections 26(3) to (5).</i></p> <p><i>Note 2: It is an offence to undertake an activity under a title without an environment plan being in force for the activity (see section 17).</i></p>	Section 10.12 Management of Change and Reviews of this EP
39(1)	A titleholder must submit to the Regulator a proposed revision of the environment plan for the activity before the commencement of any significant modification or new stage of the activity that is not provided for in the environment plan that is currently in force.	Section 10.12 Management of Change and Reviews of this EP

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Reg.	Requirement	Relevant section in the EP
39(2)	<p>A titleholder must submit a proposed revision of the environment plan for an activity before, or as soon as practicable after:</p> <ul style="list-style-type: none"> • the occurrence of any significant new environmental impact or risk, or significant increase in an existing environmental impact or risk, not provided for in the environment plan in force for the activity; or • the occurrence of a series of new environmental impacts or risks, or a series of increases in existing environmental impacts or risks, which, taken together, amount to the occurrence of: <ul style="list-style-type: none"> ▪ a significant new environmental impact or risk; or ▪ a significant increase in an existing environmental impact or risk; <p>that is not provided for in the environment plan in force for the activity.</p>	Section 10.12 Management of Change and Reviews of this EP
39(3)	<p>If there is a change in the titleholder of a title and the change will result in a change in the manner in which the environmental impacts and risks of an activity under the title are managed; the new titleholder must submit a revised environment plan for the activity under section 26 as soon as practicable after becoming the new titleholder.</p>	Section 10.12 Management of Change and Reviews of this EP
Revision on request by the Regulator		
40	<p>NOPSEMA may request a titleholder submit a revised environment plan for an activity under the title. The titleholder must comply with this request, unless NOPSEMA accepts a submission from the titleholder which establishes that a revised environment plan is not necessary. If a request for a revised environment plan is made by NOPSEMA to a titleholder and not withdrawn, the titleholder must submit the revised environment plan under section 26 by the time stated in the request.</p>	Section 10.12 Management of Change and Reviews of this EP

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Reg.	Requirement	Relevant section in the EP
Revision at the end of each five years		
41	<p>A titleholder must submit to the Regulator a proposed revision of the environment plan for an activity at least 14 days before the end of each period of 5 years, commencing on the latest of the following:</p> <ul style="list-style-type: none"> the day an environment plan for the activity is first accepted by NOPSEMA under section 33; if a revised environment plan submitted in accordance with this section is accepted by NOPSEMA under section 33 – the last day on which such a revised environment plan is accepted; if NOPSEMA gives the titleholder a notice– the day specified in the notice; <p>If the titleholder submits a revised environment plan in accordance with section 38, 39 or 40, NOPSEMA may notify the titleholder that the period of five years starts on a day specified in the notice.</p>	Section 10.12 Management of Change and Reviews of this EP

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2.1.2 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the primary Commonwealth environmental assessment legislation aimed at protecting and managing flora, fauna, ecological communities, environmentally sensitive and heritage places which are defined as matters of national environmental significance (MNES).

On 28 February 2014, NOPSEMA became the sole designated assessor of petroleum and greenhouse gas activities in Commonwealth waters in accordance with the Minister for the Environment's endorsement of NOPSEMA's environmental authorisation process under Part 10, Section 146 of the EPBC Act. All actions which are petroleum and greenhouse gas activities undertaken in Commonwealth waters in accordance with the OPGGS(E) Regulations – noting exceptions for activities with extreme sensitivity, such as those in the Great Barrier Reef or Antarctica – have been approved as 'approved classes of actions' and do not require referral, assessment or approval under the EPBC Act. Before the streamlining change in 2014, the Blacktip Project received approval under the EPBC Act (EPBC 2003/1180) in 2008. This approval continues to have effect (see Appendix A for approval decision). Table 2.2 presents the conditions of the EPBC approval and details how they have been met within this EP.




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Table 2.2: Environment Protection and Biodiversity Conservation conditions attached to EPBC 2003/1180 approval


Condition number	Condition	Section
1	<p>The person taking the action must submit, for the Minister's approval, a plan for managing the impacts of construction. The plan must address the following:</p> <ol style="list-style-type: none"> design and construction of facilities to allow for the complete removal of all structures and components (except flowlines) above the sea floor sea floor surveys around the proposed flowline paths and well sites to identify sensitive marine ecosystems such as reefs, sponge beds and sea grasses and historic shipwrecks selection of flowline paths and well sites to avoid impacts on sensitive marine ecosystems referred to in 1.b. and historic shipwrecks a schedule of works managing the impacts on cetaceans, including interaction procedures for aircraft and supply and construction vessels that are consistent with Part 8 of the Environment Protection and Biodiversity Conservation Regulations 2000 ballast water management for international construction or tanker vessels arriving in Australia in accordance with Australian Quarantine and Inspection Service Australian Ballast Water Management Requirements. <p>Offshore construction may not commence until the plan is approved. The approved plan must be implemented.</p>	No offshore construction activities will be undertaken under this EP.

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Condition number	Condition	Section
2	<p>The person taking the action must submit, for the Minister's approval, a plan for managing the offshore impacts of operation. The plan must address the following:</p> <ol style="list-style-type: none"> a. the monitoring and disposal of produced water (PW), including the following: <ol style="list-style-type: none"> i. analysis of expected PW chemistry ii. baseline biological and physical information at the PW outfall site iii. toxic impacts of PW on marine fauna based on ecotoxicological, bioaccumulation and biodegradation studies iv. industry best practice disposal of PW v. monitoring and reporting of biological and physical indicators vi. contingency measures if adverse impacts occur b. managing the collection, handling and disposal of naturally occurring radioactive materials that may occur c. the use and disposal of hydrotest water additives, based on modelling of the hydrotest water discharge plume <p>Operations may not commence until the plan is approved. The approved plan must be implemented.</p>	<p>Disposal of PW is outside the scope of this EP (disposal occurs within the Northern Territory regulatory jurisdiction).</p> <p>Naturally occurring radioactive materials (NORM) are not associated with Blacktip operations and have not been recorded to date. Blacktip PW has recorded low level radionuclides, this PW disposal occurs within Northern Territory regulatory jurisdiction. There is no planned collection, handling and disposal of NORM under the scope of this EP.</p> <p>The use and disposal of hydrotest water additives are not associated with the Blacktip operations. 2(c) relates to the hydrotesting of the pipeline post construction, which is complete. Given the pipeline is in operation there is the ability to send water and fluids to YGP for disposal.</p>

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Condition number	Condition	Section
3	<p>The person taking the action must submit for the Minister's approval an oil spill contingency plan to mitigate the environmental effects of any hydrocarbon spills. The plan must identify oil sensitive marine environments and biota, and address spill response and clean-up strategies, the equipment to be used and the identification of capacity to maintain and implement rapid response equipment, the rehabilitation of impacted ecosystems, the training of staff in oil spill response measures and reporting of oil spill incidents to the Minister. The plan must include details of insurance arrangements that have been made in respect of the costs associated with repairing any environmental damage arising from potential oil spills.</p> <p>Offshore construction may not commence until the plan is approved. The approved plan must be implemented.</p>	The Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17) is considered to meet this condition.
4	<p>The person taking the action must submit, for the Minister's approval, a plan or plans to address measures for minimising the potential for listed threatened turtles to be impacted during the pipeline construction and for monitoring of the impacts on turtles. The plan or plans must address the impacts of onshore and near shore lighting, the construction, any seabed, or onshore blasting required, and the rehabilitation of potential turtle habitat after construction.</p> <p>Onshore construction may not commence until the plan is approved. The approved plan must be implemented.</p>	Outside the scope of this EP
5	<p>At least twelve months before the expiry of this approval, the person taking the action must submit a decommissioning plan to the Minister for approval, addressing the removal of all the structures and components above the sea floor.</p> <p>Decommissioning may not commence until the plan is approved. The approved plan must be implemented.</p>	<p>Section 3.7 includes Eni's decommissioning commitment and planning process.</p> <p>A decommissioning plan will be submitted to the Minister for approval At least twelve months before the expiry of the EPBC 2003/1180 approval.</p>
6	<p>On July 1 of each year, the person taking the action must provide a certificate stating that the person taking the action has complied with the conditions of this Approval.</p>	Annual Report to these conditions has been submitted

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Condition number	Condition	Section
7	If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans referred to in conditions 1, 2, 3, 4 and 5 the person taking the action may submit for the Minister's approval a revised version of any such plan. If the Minister approves a revised plan so submitted, the person taking the action must implement that plan instead of the plan as originally approved.	Plans have been submitted to the Minister for previous Blacktip phases (e.g. construction). Condition 3 relates to the Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17). This OPEP includes all Blacktip operations covered by the EPBC 2003/1180 approval. In the event that Blacktip operations cover additional activities outside the scope of the EPBC 2003/1180 approval then a revised OPEP may be submitted to the Minister, in accordance with the condition.
8	If the Minister believes that it is necessary or desirable for the better protection of the environment to do so, the Minister may request the person taking the action to make specified revisions to a plan pursuant to conditions 1, 2, 3, 4 and 5 and to submit the revised plan for the Minister's approval. The person taking the action must comply with any such request. If the Minister approves a revised plan pursuant to this condition, the person taking the action must implement that plan instead of the plan as originally approved.	Outside the scope of this EP
9	The person taking the action must ensure that an independent audit of compliance with conditions of approval is conducted and a report submitted to the Minister within 12 months of the commencement of construction and within two years of commencement of operations. The independent auditor must be approved by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Outside the scope of this EP

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Where there is the potential for MNES to be impacted by petroleum activities, an assessment of impacts must be presented in the EP. MNES identified as relevant to the Blacktip operations are:

- listed 'threatened' species and ecological communities
- listed 'migratory' species (protected under international agreements)
- Commonwealth marine environment
- world heritage properties
- national heritage places
- Ramsar wetlands.

Environmental values and sensitivities, including MNES, are described in Section 4. These descriptions inform the assessment of environmental impacts and risks in Sections 7 and 8.


Biologically important areas (BIAs) have been designed to support decision-making under the EPBC Act. They are spatially defined areas where aggregations of individuals of a species are known to display biologically important behaviour such as breeding, foraging, resting or migration. BIAs have been referenced in Section 4.

2.1.2.1 Principles of Ecologically Sustainable Development

NOPSEMA considers whether the petroleum activities are consistent with the principles of ecologically sustainable development (ESD), as defined in the EPBC Act. The principles of ESD include:

- Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations; the 'integration principle'.
- If there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation; the 'precautionary principle'.
- The present generation should ensure the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations; the 'intergenerational principle'.
- The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making; the 'biodiversity principle'.
- Improved valuation, pricing and incentive mechanisms should be promoted; the 'valuation principle'.

Eni has considered these principles when assessing environmental impacts and risks in Sections 7 and 8.

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2.1.2.2 Management Plans

Under the EPBC Act, listed 'threatened' species are managed through management plans, recovery plans and conservation advice. Their purpose is summarised in Table 2.3.

Under s139(1)(b) of the EPBC Act, the Environment Minister must not act inconsistently with a recovery plan for a listed 'threatened' species or ecological community or a threat abatement plan for a species or community protected under the Act. Similarly, under s268 of the EPBC Act:

'A Commonwealth agency must not take any action that contravenes a recovery plan or a threat abatement plan.'

In relation to offshore petroleum activities in Commonwealth waters, these requirements are now administered by NOPSEMA in accordance with commitments set out in the plans. Recovery plans or threat abatement plans relevant to the scope of this EP have been identified as described in Table 2.4 and assessed in Sections 7 and 8.

Table 2.3: Summary of the purpose of management plans, recovery plans and conservation advice

Plan/advice	Summary
Recovery plans	Recovery plans are intended to ensure the recovery of threatened species by setting recovery objectives. These objectives are informed by: <ul style="list-style-type: none"> descriptions of the state of the threatened species in Australia and globally identification of threats to the species identification of actions by which these threats may be mitigated, and the recovery objectives achieved.
Conservation advice	Conservation advice advise about relevant impacts and threats and set requirements for management and protection. This advice is developed in consultation with the Threatened Species Scientific Committee. Conservation advice: <ul style="list-style-type: none"> describes the threatened species, including its distribution, habitat and conservation status describes threats to the recovery of the species outlines research priorities and conservation actions to prevent further decline of the threatened species.
Wildlife conservation plans	Wildlife conservation plans may be made under the EPBC Act for the protection, conservation and management of species protected under the Act.
Threat abatement plans	Threat abatement plans may be made under the EPBC Act for threatening processes on native species and ecological communities. The plans describe objectives for mitigating threatening processes and the actions intended to achieve the objectives.



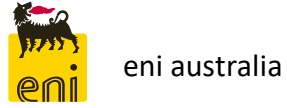
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Table 2.4: Summary of additional environment protection and biodiversity conservation management and recovery plans and conservation advice relevant to the Blacktip operations

Species	Plan or advice	Protection under EPBC Act	Relevant key threats identified	Relevant objectives	Relevant conservation actions
Vertebrates					
All vertebrate fauna	Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (Commonwealth of Australia, 2018)	N/A	Marine debris	Objectives: <ul style="list-style-type: none"> Contribute to long-term prevention of the incidence of marine debris. Understand the scale of impacts from marine plastic and microplastic on key species, ecological communities and locations. Remove existing marine debris. 	No explicit management actions for non-fisheries related industries; note that management actions in the plan relate largely to management of fishing waste (e.g., 'ghost' gear), and State and Commonwealth management through regulation.
Marine Mammals					
Blue whale (includes pygmy blue whale)	Conservation Management Plan for the Blue Whale 2015–2025 (Commonwealth of Australia, 2015a)	Endangered	Noise interference	The long-term recovery objective for blue whales is to minimise anthropogenic threats to allow for their conservation status to improve so that they can be removed from the EPBC Act threatened species list.	Assessing and addressing anthropogenic noise: <ul style="list-style-type: none"> Assess the effect of anthropogenic noise on blue whale behaviour.
			Vessel disturbance		Anthropogenic noise in biologically important areas will be managed such that any blue whale continues to utilise the area without injury. <ul style="list-style-type: none"> Minimising vessel collisions: Develop a national vessel strike strategy that investigates the risk of vessel strike on blue whales and also identifies potential mitigation measures. Ensure all vessel strike incidents are reported in the National Ship Strike Database Ensure the risk of vessel strikes on blue whales is considered when assessing actions that increase vessel traffic in areas where blue whales occur and, if required, appropriate mitigation measures are implemented.
			Climate variability and change		Understanding impacts of climate variability and change: <ul style="list-style-type: none"> Continue to meet Australia's international commitments to reduce greenhouse gas (GHG) emissions and regulate the krill fishery in Antarctica.
Sei whale	Approved Conservation Advice for <i>Balaenoptera borealis</i> (Sei Whale)	Vulnerable	Noise interference	No explicit relevant objectives.	Assess and manage acoustic disturbance.
			Vessel disturbance		Minimising vessel collisions: <ul style="list-style-type: none"> Develop a national vessel strike strategy that investigates the risk of vessel strikes on sei whales and also identifies potential mitigation measures. Ensure all vessel strike incidents are reported in the National Vessel Strike Database.
			Climate and oceanographic variability and change		Understanding impacts of climate variability and change: <ul style="list-style-type: none"> Continue to meet Australia's international commitments to reduce GHG emissions and regulate the krill fishery in Antarctica.
			Pollution (persistent toxic pollutants)		No explicit relevant management actions; pollution identified as a threat.

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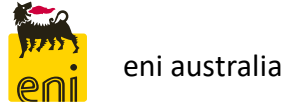
Species	Plan or advice	Protection under EPBC Act	Relevant key threats identified	Relevant objectives	Relevant conservation actions
Fin whale	Approved Conservation Advice for <i>Balaenoptera physalus</i> (Fin Whale)	Vulnerable	Noise interference	No explicit relevant objectives.	Once the spatial and temporal distribution (including BIAs) of fin whales is further defined, assess the impacts of increasing anthropogenic noise, including seismic surveys, port expansion and coastal development.
			Vessel disturbance		Minimising vessel collisions: <ul style="list-style-type: none"> Develop a national vessel strike strategy that investigates the risk of vessel strikes on fin whales and also identifies potential mitigation measures. Ensure all vessel strike incidents are reported in the National Vessel Strike Database.
			Climate and oceanographic variability and change		Understanding impacts of climate variability and change: <ul style="list-style-type: none"> Continue to meet Australia's international commitments to reduce GHG emissions and regulate the krill fishery in Antarctica.
			Pollution (persistent toxic pollutants)		No explicit relevant management actions; pollution identified as a threat.
Humpback whale	Approved Conservation Advice for <i>Megaptera novaeangliae</i> (Humpback Whale)	Vulnerable	Noise interference	No explicit relevant objectives.	For actions involving acoustic impacts – for example, pile driving, explosives – on humpback whale calving, resting, feeding areas, or confined migratory pathways, undertake site-specific acoustic modelling, including cumulative noise impacts.
			Vessel disturbance		Minimising vessel collisions: <ul style="list-style-type: none"> Ensure the risk of vessel strike on humpback whales is considered when assessing actions that increase vessel traffic in areas where humpback whales occur and, if required, implement appropriate mitigation measures to reduce the risk of vessel strike. Maximise the likelihood that all vessel strike incidents are reported in the National Ship Strike Database.
			Climate and oceanographic variability and change		Understanding impacts of climate variability and change: <ul style="list-style-type: none"> Continue to meet Australia's international commitments to reduce GHG emissions and regulate the krill fishery in Antarctica.
Marine Reptiles					
Loggerhead, hawksbill, green, olive ridley, flatback and leatherback turtles	Recovery plan for Marine Turtles in Australia (Commonwealth of Australia, 2017b)	Endangered (loggerhead, leatherback, olive ridley turtles) Vulnerable (green, hawksbill, flatback turtles)	Marine debris	Long-term recovery objective: <ul style="list-style-type: none"> Minimise anthropogenic threats to allow for the conservation status of marine turtles to improve so they can be removed from the EPBC Act threatened species list. Interim objective 3: <ul style="list-style-type: none"> Anthropogenic threats are demonstrably minimised. 	A3: Reduce the impacts from marine debris: <ul style="list-style-type: none"> Understand the threat posed by marine debris. Determine the extent to which marine debris is impacting turtles.
			Chemical and terrestrial discharge		A4: Minimise chemical and terrestrial discharge: <ul style="list-style-type: none"> Ensure spill risk strategies and response programs adequately include management for marine turtles and their habitats, particularly in reference to 'slow to recover habitats', such as nesting habitat, seagrass meadows or coral reefs.

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Species	Plan or advice	Protection under EPBC Act	Relevant key threats identified	Relevant objectives	Relevant conservation actions
			Light pollution		A8: Minimise light pollution: <ul style="list-style-type: none"> Manage artificial light in or adjacent to habitat critical to the survival of marine turtles such that marine turtles are not displaced from these habitats.
			Vessel disturbance		Vessel interactions identified as a threat; no specific management actions in relation to vessels prescribed in the plan.
Leatherback turtle	Approved Conservation Advice for <i>Dermochelys coriacea</i> (Leatherback Turtle)	Endangered	Vessel disturbance	No explicit relevant objectives.	No explicit relevant management actions; vessel strikes identified as a threat only.
			Marine debris		No explicit relevant management actions; marine debris identified as a threat.
			Climate change		No explicit relevant management actions; climate change identified as a threat only.
Short-nosed sea snake	Approved Conservation Advice on <i>Aipysurus apraefrontalis</i> (Short-Nosed Sea Snake)	Critically Endangered	Habitat degradation or modification	No explicit relevant objectives.	Ensure there is no anthropogenic disturbance in areas where the short-nosed sea snake occurs, excluding necessary actions to manage the conservation of the species.
Leaf-scaled sea snake	Approved Conservation Advice on <i>Aipysurus foliosquama</i> (Leaf-Scaled Sea Snake)	Critically Endangered	Habitat degradation or modification	No explicit relevant objectives.	Ensure there is no disturbance in areas where the leaf-scaled sea snake occurs, excluding necessary actions to manage the conservation of the species.
Dusky sea snake	Approved conservation advice on <i>Aipysurus fuscus</i> (Dusky Sea Snake)	Endangered	Climate change – marine heatwaves, high average water temperature, severe cyclones and storms	No explicit relevant objectives.	No explicit relevant management actions
			Oil pollution		
Fish, sharks and rays					
All sawfish and river sharks	Sawfish and River Shark Multispecies Recovery Plan (Commonwealth of Australia, 2015b)	NA	Habitat degradation or modification	The primary objective of this recovery plan is to assist the recovery of sawfish and river sharks in Australian waters with a view to: <ul style="list-style-type: none"> improving the population status, leading to the removal of the sawfish and river shark species from the threatened species list of the EPBC Act ensuring anthropogenic activities do not hinder recovery in the near future, or impact on the conservation status of the species in the future. 	Objective 5: Reduce and, where possible, eliminate adverse impacts of habitat degradation and modification on sawfish and river shark species: <ul style="list-style-type: none"> Identify risks to important sawfish and river shark habitat and measures needed to reduce those risks.
			Marine debris		Objective 6: Reduce and, where possible, eliminate any adverse impacts of marine debris on sawfish and river shark species.
Dwarf sawfish	Approved Conservation Advice for <i>Pristis clavate</i> (Dwarf Sawfish)	Vulnerable	Habitat degradation or modification	The specific objectives of the recovery plan (relevant to industry) are: <ul style="list-style-type: none"> Objective 5: Reduce and, where possible, eliminate adverse impacts of habitat degradation and modification on sawfish and river shark species. Objective 6: Reduce and, where possible, eliminate any adverse impacts of marine debris on sawfish and river shark species, noting the linkages with the Threat Abatement Plan for the Impact of Marine Debris on Vertebrate Marine Life. 	No explicit relevant management actions; habitat loss, disturbance and modification identified as threats.
Green sawfish	Approved Conservation Advice for Green Sawfish	Vulnerable	Habitat degradation or modification		No explicit relevant management actions; habitat loss, disturbance and modification identified as threats.
Largetooth sawfish	Approved Conservation Advice for <i>Pristis pristis</i> (Largetooth Sawfish)	Vulnerable	Habitat degradation or modification		No explicit relevant management actions; habitat loss, disturbance and modification identified as threats.
Northern river shark	Approved Conservation Advice for <i>Glyphis garricki</i> (Northern River Shark)	Endangered	Habitat degradation or modification		No explicit relevant management actions; habitat loss, disturbance and modification identified as threats.

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Species	Plan or advice	Protection under EPBC Act	Relevant key threats identified	Relevant objectives	Relevant conservation actions
Great white shark	Recovery Plan for the White Shark (<i>Carcharodon carcharias</i>) (Commonwealth of Australia, 2013)	Vulnerable	Habitat modification Climate change	The primary objective of this recovery plan is to assist the recovery of the white shark in Australian waters with a view to: <ul style="list-style-type: none"> improving the population status, leading to the removal of the white shark species from the threatened species list of the EPBC Act ensuring anthropogenic activities do not hinder recovery in the near future, or impact on the conservation status of the species in the future. 	Ensure anthropogenic activities do not hinder recovery of the species in the near future or impact on the conservation status of the species in the future. No explicit relevant management actions; ecosystem effects as a result of habitat modification and climate change identified as threats.
Grey nurse shark	Recovery Plan for the Grey Nurse Shark (<i>Carcharias taurus</i>) (Commonwealth of Australia, 2014)	Vulnerable	Pollution and disease	The primary objective of this recovery plan is to assist the recovery of the grey nurse shark in Australian waters with a view to: <ul style="list-style-type: none"> improving the population status, leading to the removal of the grey nurse shark species from the threatened species list of the EPBC Act ensuring that anthropogenic activities do not hinder recovery in the near future, or impact on the conservation status of the species in the future. 	No explicit relevant management actions; pollution and disease and ecosystem effects as a result of habitat modification and climate change identified as threats.
Speartooth shark	Approved Conservation Advice for <i>Glyphis glyphis</i> (Speartooth Shark)	Critically Endangered	Habitat degradation or modification	No explicit relevant objectives.	Implement measures to reduce adverse impacts of habitat degradation or modification.
Whale shark	Approved Conservation Advice for <i>Rhincodon typus</i> (Whale Shark)	Vulnerable	Vessel disturbance	To maintain existing levels of protection for the whale shark in Australia while working to increase the level of protection afforded to the whale shark within the Indian Ocean and Southeast Asian region, to enable population growth so the species can be removed from the threatened species list of the EPBC Act.	Minimise offshore developments and transit time of large vessels in areas close to marine features likely to correlate with whale shark aggregations along the northward migration route that follows the northern WA coastline along the 200m isobath, as set out in the Conservation Values Atlas (DCCEEW, 2014).
			Habitat degradation or modification		Implement measures to reduce adverse impacts of habitat degradation or modification.
			Marine debris		No explicit relevant management actions; marine debris identified as a threat.
			Climate change		No explicit relevant management actions; climate change identified as a threat.
Seabirds and shorebirds					
Seabirds	Wildlife Conservation Plan for Seabirds (Commonwealth of Australia, 2020)	NA	Habitat loss or modification	Seabirds and their habitats are protected and managed in Australia.	No explicit relevant management actions; habitat loss or modification identified as a threat.
			Anthropogenic disturbance		2d. Ensure all areas of important habitat for seabirds are considered in the development assessment process. 2e. Manage the effects of anthropogenic disturbance to seabird breeding and roosting areas.
			Climate change		No explicit relevant management actions; identified as a threat.
			Invasive species		2f. Ensure seabirds are protected from the adverse effects of invasive species.
			Pollution (marine debris, light, water)		2h. Enhance contingency plans to prevent and respond to environmental emergencies that have an impact on seabirds and their habitats.

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Species	Plan or advice	Protection under EPBC Act	Relevant key threats identified	Relevant objectives	Relevant conservation actions
			Resource extraction		No explicit relevant management actions; identified as a threat. Noted that seabirds are known to aggregate around oil and gas platforms in above-average numbers due to night lighting, flaring, food concentrations and other visual cues.
Migratory shorebirds	Wildlife Conservation Plan for Migratory Shorebirds (Commonwealth of Australia, 2015c)	NA	Habitat loss or modification	Anthropogenic threats to migratory shorebirds in Australia are minimised or, where possible, eliminated.	No explicit relevant management actions; identified as a threat.
			Anthropogenic disturbance		3c. Investigate the significance of cumulative impacts on migratory shorebird habitat and populations in Australia. 3f. Ensure all areas important to migratory shorebirds in Australia continue to be considered in development assessment processes, specifically for coastal developments.
			Climate change		3b: Investigate the impacts of climate change on migratory shorebird habitat and populations in Australia.
Curlew sandpiper	Approved Conservation Advice for <i>Calidris ferruginea</i> (Curlew Sandpiper)	Critically Endangered	Habitat degradation or modification (oil pollution)	Australian objective: • Disturbance at key roosting and feeding sites reduced.	No explicit relevant management actions; oil pollution recognised as a threat.
Eastern curlew	Approved Conservation Advice for <i>Numenius madagascariensis</i> (Eastern Curlew)	Critically Endangered	Habitat loss, disturbance and modification	Australian objective: • Disturbance at key roosting and feeding sites reduced.	Manage disturbance at important sites when the species is present.
Red knot	Approved Conservation Advice for <i>Calidris canutus</i> (Red knot)	Endangered	Habitat degradation or modification	No explicit relevant objectives.	No explicit relevant management actions; oil pollution and climate change recognised as a threat.
			Climate change		
Northern Siberian bar-tailed godwit	Conservation Advice for <i>Limosa lapponica menzbieri</i> (Bar-Tailed Godwit (Northern Siberian))	Critically Endangered	Habitat degradation or modification	No explicit relevant objectives.	No explicit relevant management actions; oil spills recognised as a threat.
Abbott's booby	Conservation Advice for the Abbott's Booby – <i>Papasula abbotti</i>	Endangered	Habitat degradation or modification	No explicit relevant objectives.	No explicit relevant management actions; oil spills recognised as a threat.
			Climate change – severe storm events and prey depletion		No explicit relevant management actions; climate change recognised as a threat.
Australian painted snipe	Approved Conservation Advice for <i>Rostratula australis</i>	Endangered	Habitat degradation or modification	No explicit relevant objectives.	No explicit relevant management actions; habitat loss or modification identified as a threat.

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2.1.2.3 Australian Marine Parks

Under the EPBC Act, Australian Marine Parks (AMPs) are declared in Commonwealth waters based on the International Union for the Conservation of Nature (IUCN) principles and guidelines for categorising protected areas. These AMPs are declared for the purpose of conserving marine habitats and the species that live and rely on these habitats. AMPs are managed under a series of region-based management plans, which detail the management objectives of the AMP, the environmental values within each of the AMPs, and the activities that are permissible within the zones of the AMP.

The EPBC Act allows AMPs to be divided into zones and a category assigned to each, which may differ from the overall category of the AMP. The EPBC Regulations prescribe the Australian IUCN Reserve Management Principles (Environment Australia, 2002) applicable to each category. All activities undertaken within an AMP must be consistent with the objectives of the zone and the values of the AMP (DNP, 2018a), being:

- Special Purpose Zone (IUCN category VI) – to provide for ecologically sustainable use and the conservation of ecosystems, habitats and native species, while applying special-purpose management arrangements for specific activities
- Multiple Use Zone (IUCN category VI) – to provide for ecologically sustainable use and the conservation of ecosystems, habitats and native species
- Habitat Protection Zone (IUCN category IV) – to provide for the conservation of ecosystems, habitats and native species in as natural a state as possible, while allowing activities that do not harm or cause destruction to seafloor habitats
- National Park Zone (IUCN category II) – to provide for the protection and conservation of ecosystems, habitats and native species in as natural a state as possible.

Zoning accounts for the purposes for which the AMP was declared, the objectives of the region-based management plan, and the requirements of the EPBC Act and EPBC Regulations.


AMPs relevant to the Blacktip operations are described in Section 4.5.1.

A portion of the GEP, CEP and the SPM overlap the Joseph Bonaparte Gulf AMP Multiple Use Zone (IUCN category VI) (Figure 3.1, Section 3.2.1). The AMP was established after construction of the Blacktip offshore facilities.

2.1.2.4 Australian Whale Sanctuary

The Australian Whale Sanctuary has been established to protect all whales and dolphins found in Australian waters. The Australian Whale Sanctuary comprises the Commonwealth marine area, beyond the coastal waters of each state and the NT. It includes all of Australia's Exclusive Economic Zone, from 3 nm extending 200 nm from the coast. Under the EPBC Act, all cetaceans – whales, dolphins and porpoises – are protected in Australian waters: In summary:

- The Australian Whale Sanctuary includes all Commonwealth waters from the 3 nm state waters limit out to the boundary of the Exclusive Economic Zone; as in, out to 200 nm and further in some places.

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- Within the Australian Whale Sanctuary, it is an offence to kill, injure or interfere with a cetacean. Severe penalties apply to anyone convicted of such offences.
- All states and territories also protect whales and dolphins within their waters.

2.1.3 Additional relevant Commonwealth Legislation

In addition to the OPGGS Act and EPBC Act, Table 2.5 lists other Commonwealth legislation relevant to the Blacktip operations.


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Table 2.5: Additional Commonwealth legislation relevant to the Blacktip operations

Legislation	Summary	Relevance to the Blacktip operations
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>	<p>The Act seeks to 'preserve and protect places, areas and objects of particular significance' to Aboriginal people. Under the Section 9 and 10 provisions of the Act, the Minister for the Environment may declare significant Aboriginal areas temporarily or permanently protected if they are considered under threat. Similar declarations regarding Aboriginal objects can be made under Section 12.</p> <p>Under Section 22 of the Act, the contravention of any of these declarations is an offence. Additionally, the discovery of any Aboriginal remains must be reported to the Minister under Section 20.</p> <p>Damage or interference with Aboriginal objects or places is not an offence under the Act, except within Victoria under Section 21U.</p>	<p>The Blacktip operations will be undertaken to ensure there is no impact on cultural heritage properties protected under the Act.</p> <p>There are no known cultural heritage sites of significance or shipwreck sites within the Operational Area.</p>
<i>Air Navigation Act 1920</i>	This Act is responsible for managing navigation within the avian environment.	Helicopter and other aircraft activities operating under the Blacktip operations scope are required to abide to the requirements under this Act.
<i>Australian Heritage Council Act 2003</i>	The Act categorises and safeguards areas that hold significance in terms of heritage, which encompasses locations listed on the Commonwealth Heritage, World Heritage and National Heritage lists.	<p>This Act applies to any activities that may occur within areas that may have associated heritage values.</p> <p>Heritage values protected under the Act that may be impacted by the Blacktip operations have been identified in Section 4.5.4. No impacts to heritage values will occur as a result of the planned operational activities.</p>



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Legislation	Summary	Relevance to the Blacktip operations
<i>Australian Maritime Safety Authority Act 1990</i>	Facilitates international cooperation and mutual assistance in preparing and responding to major oil spill incidents and encourages countries to develop and maintain adequate capability to deal with oil pollution emergencies. The Act applies to offshore petroleum activities that have the potential to affect maritime safety or result in environmental damage, including pollution associated with the operation of vessels. Requirements are implemented through the Australian Maritime Safety Authority (AMSA). AMSA is the designated authority for applying the Act.	All vessels and facilities undertaking activities within the scope of the Blacktip operations will comply with the requirements of the Act.
<i>Biosecurity Act 2015</i>	This Act is the primary legislation for managing the risk of diseases and pests that may cause harm to human, animal or plant health, the environment, and the economy. The Act manages biosecurity risks, risks related to ballast water, and requires operators of all vessels to provide information about biofouling management practices before arriving in Australia.	The Act regulates the condition of vessels entering Australian waters regarding biosecurity. All vessels undertaking Blacktip operations activities will comply with the requirements of the Act.
Environment Protection and Biodiversity Conservation Regulations 2000: 8.1	These regulations provide guidelines for operating aircraft and vessels in the vicinity of cetaceans.	All vessels and aircraft undertaking Blacktip operations will comply with the requirements of the Act. The requirements are detailed in the Australian National guidelines for whale and dolphin watching. (Commonwealth of Australia, 2017d).
<i>Hazardous Waste (Regulation of Exports and Imports) Act 1989</i>	This Act regulates the export, import and transit of hazardous waste to ensure hazardous waste is dealt with appropriately so humans and the environment, both within and outside Australia, are protected from the harmful effects of the waste. The Act requires that a permit be obtained before hazardous waste is exported from Australia or imported into Australia. The Act gives effect to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 1972 (commonly referred to as the Basel Convention).	Import, export and transport of hazardous waste required for Blacktip operations will comply with the requirements of the Act.



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Legislation	Summary	Relevance to the Blacktip operations
National Environment Protection (National Pollutant Inventory [NPI]) Measure 1998 (established under the <i>National Environment Protection Council Act 1994</i>)	This Act aims to implement national measures to enhance, restore and protect the Australian environment. The NPI National Environment Protection Measure provides the framework for developing and establishing the NPI, which is an internet database designed to provide publicly available information about the types and amount of certain substances being emitted to the air, land and water.	Reporting requirements for the Blacktip operations will comply with the National Environment Protection Measure through the routine reporting of the relevant NPI Substances.
<i>National Greenhouse and Energy Reporting Act 2007</i>	This Act provides a national framework for reporting and distributing information related to GHG emissions, GHG projects, energy production and energy consumption. The Act includes National Greenhouse and Energy Reporting (NGER) requirements and the Safeguard Mechanism requirements. Australia has ratified the Paris Agreement and has set a target to reduce emissions by 43% below 2005 levels by 2030. The primary policy mechanisms to implement this target, and therefore Australia's current commitments under the Paris Agreement, are the National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 (Cth) (the Safeguard Mechanism) made under the NGER Act and administered by the Clean Energy Regulator. The recently released National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Reform) Rules 2023 provide further clarity for emission reporting.	Reporting requirements for GHG emissions associated with Blacktip operations will comply with the reporting requirements of the Act, including the NGER requirements.

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Legislation	Summary	Relevance to the Blacktip operations
<i>Navigation Act 2012</i>	<p>This Act and subsidiary Marine Orders reduce the risk of accidents and unplanned interactions with other users of the marine environment. The Act reflects changes in the maritime sector and is the primary legislative means for the Australian Government to regulate international ship and seafarer safety, shipping aspects of protecting the marine environment, and the actions of seafarers in Australian waters.</p> <p>The Act also gives effect to the relevant international conventions (through Marine Orders) to which Australia is a signatory, including the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78), the International Regulations for Preventing Collisions at Sea 1972, and the International Convention for the Safety of Life at Sea 1974.</p> <p>Marine Orders that relate to petroleum activities include:</p> <ul style="list-style-type: none"> • Marine Order 21: Safety of navigation and emergency procedures • Marine Order 30: Prevention of collisions • Marine Order 59: Offshore industry vessel operations. 	All vessels undertaking Blacktip operations activities will comply with the requirements of the Act and subsidiary Marine Orders.
<i>Protection of the Sea (Harmful Antifouling Systems) Act 2006</i>	<p>This Act and subsidiary Marine Order aims to protect the marine environment from the effects of harmful anti-fouling systems. Under the Act, the negligent application of a harmful anti-fouling compound to a ship by a person or persons is an offence.</p> <p>The Act also requires that all Australian ships hold 'antifouling certificates', providing they meet specific criteria.</p> <p>The Marine Order that relates to petroleum activities is:</p> <ul style="list-style-type: none"> • Marine Order 98: Marine pollution – anti-fouling systems. 	All vessels undertaking Blacktip operations activities will comply with the requirements of the Act and subsidiary Marine Orders. Where relevant, the vessels will hold anti-fouling certificates.

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Legislation	Summary	Relevance to the Blacktip operations
<i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i>	<p>This Act regulates Australian regulated vessels for ship-related operational activities, including discharges that may result in pollution to the marine environment.</p> <p>The Act and subsidiary Marine Orders enact the International Convention for the Prevention of Pollution from Ships 1973 as modified by the protocol of 1978, commonly referred to as the MARPOL 73/78 convention.</p> <p>This Act requires ships heavier than 400 gross tonnes to have in place pollution emergency plans, and provides for emergency discharges from ships.</p> <p>It includes the requirement for an approved Shipboard OPEP or Shipboard Marine Pollution Emergency Plan – or equivalent, according to class – that describes emergency response activities.</p> <p>Marine Orders that relate to petroleum activities include:</p> <ul style="list-style-type: none"> • Marine Order 91: Marine pollution prevention – oil • Marine Order 93: Marine pollution prevention – noxious liquid substances • Marine Order 94: Marine pollution prevention – packaged harmful substances • Marine Order 95: Marine pollution prevention – garbage • Marine Order 96: Marine pollution prevention – sewage • Marine Order 97: Marine pollution prevention – air pollution. 	<p>All vessels undertaking Blacktip operations activities will comply with the requirements of the Act and subsidiary Marine Orders.</p>

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Legislation	Summary	Relevance to the Blacktip operations
<i>Underwater Cultural Heritage Act 2018</i>	This Act prescribes penalties for damaging protected underwater cultural heritage without a permit under Section 30 or in contravention of a permit in Section 28. Protected underwater cultural heritage is prescribed in Section 16 to automatically include the remains and associated artefacts of any vessel or aircraft that has been in Australian waters for 75 years, whether known or unknown. This protection is also extended to underwater cultural heritage in Commonwealth waters, specified by the Environment Minister under Section 17. Without a declaration under this section, Aboriginal underwater cultural heritage is not protected under the <i>Underwater Cultural Heritage Act</i> .	The Blacktip operations will be undertaken to ensure there is no impact upon cultural heritage properties protected under the Act. There are no known cultural heritage sites of significance or shipwreck sites within the Operational Area.

2.2 Commonwealth Guidelines and Policies

While guidelines do not typically have force under legislation, they are often considered to be consistent with good practice. Table 2.6 summarises the Commonwealth policies and guidelines that are relevant to the Blacktip operations.

Table 2.6: Summary of Commonwealth guidelines and policies relevant to the Blacktip operations

Policies and Guidelines	Summary	Relevance to the Blacktip operations
Australian Energy Producers (AEP) Code of Environmental Practice 2008 (AEP, 2008)	Management system and a comprehensive list of environmental guidelines for the petroleum industry. Provides guidelines for activities that are not formally regulated and have evolved from the collective knowledge and experience of the oil and gas industry.	The EP has been developed considering the AEP Code of Environmental Practice 2008.
Australian and New Zealand guidelines for fresh and marine water quality guidelines (ANZG, 2018)	Provides guidelines and a comprehensive set of tools for assessing and managing ambient water and sediment quality.	Where relevant, changes to water and sediment quality will be assessed using the methods and concentrations for toxicants in the guideline.



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Policies and Guidelines	Summary	Relevance to the Blacktip operations
Australian Ballast Water Management Requirements (DAWE, 2020)	Provides requirements for management measures to reduce the risk of introducing harmful aquatic organisms into Australia's marine environment through ship ballast water.	All vessels undertaking Blacktip operations activities will be required to comply with the requirements.
National biofouling management guidelines for the petroleum production and exploration industry (Marine Pest Sectoral Committee, 2018)	A voluntary biofouling management guidance document developed under the National System for the Prevention and management of Marine Pest Incursions. Its purpose is to provide tools to operators to minimise the amount of biofouling accumulating on their vessels, infrastructure and submersible equipment thereby minimising the risk of spreading marine pests.	All vessels undertaking Blacktip operations activities will implement effective biofouling controls as a best practice.
National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2023)	The guidelines provide best-practice industry standard for managing potential impacts of light pollution on marine fauna.	National Light Pollution Guidelines for Wildlife will be used when assessing the relevant mitigation controls to apply to the Blacktip operations light emissions.
NOPSEMA Bulletins – Oil Spill Modelling (NOPSEMA, 2019)	Provides advice relating to the application of oil spill modelling to support risk evaluations.	The spill modelling and associated outputs have been developed in accordance with the guidance note.
NOPSEMA Guidance Note: Petroleum activities and Australian Marine Parks (NOPSEMA, 2020)	Provides guidance on managing risks and impacts to Australian Marine Parks from petroleum activities and to support consultation with the Director of National Parks (DNP).	The GEP, CEP and SPM are in the Joseph Bonaparte Gulf AMP. The guidance has been used when consulting the relevant persons (Section 5).
NOPSEMA Information paper – Reducing marine pest biosecurity risks through good practice biofouling management (NOPSEMA, 2021)	Provides advice that is consistent with the expectations of all jurisdictions responsible for regulating biofouling management within the Australian marine environment. Also clarifies biosecurity requirements relevant to offshore activities.	Blacktip operations will comply with the relevant biosecurity requirements, including adopting requirements that may apply to the movement of vessels into and between Commonwealth and State jurisdictions.
NOPSEMA Policy – Section 572 Maintenance and removal of property (NOPSEMA, 2022a)	Outlines NOPSEMA's expectations on maintenance and removal of property.	Decommissioning of Blacktip facilities is outside the scope of this EP. However, Blacktip infrastructure is designed and selected to meet the regulatory base case for full removal.



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Policies and Guidelines	Summary	Relevance to the Blacktip operations
NOPSEMA Guideline: Consultation with Commonwealth agencies with responsibilities in the marine area (NOPSEMA, 2022b)	Provides guidance on consultation for EPs, specifically Australian Government agencies with responsibilities in the Commonwealth marine area.	The guidance has been used when consulting the relevant persons (Section 5).
NOPSEMA Guidance Note: Responding to public comment on environment plans (NOPSEMA, 2022c)	Provides guidance on consultation for EPs. The guidance reflects NOPSEMA's interpretation of the requirements of the OPGGS(E) Regulations.	The guidance has been used when consulting the relevant persons (Section 5).
NOPSEMA Guideline: Consultation in the course of preparing an environment plan (NOPSEMA, 2023a)	Provides guidance on consultation for EPs. This guideline is used to develop processes for consulting stakeholders. The guideline focuses on the instructive reasons given by the Full Federal Court of Australia, in its appeal decision Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 (appeal decision) on 2 December 2022.	The guidance has been used when consulting the relevant persons (Section 5).
Offshore Installations – Biosecurity Guide (Department of Agriculture and Water Resources, 2020)	Provides the offshore petroleum industry with guidance about Australian biosecurity requirements.	All Blacktip operations vessels will implement effective biosecurity controls, in accordance with the requirements of this biosecurity guideline.
Offshore Petroleum Decommissioning Guideline (Department of Industry, Science and Resources, 2022)	Provides a decommissioning guideline and confirms the Australian Government's policy that removing property is the 'base case' or default decommissioning requirement. Assists offshore petroleum industry in planning and seeking the regulatory approvals necessary to undertake a decommissioning project, and to understand the expectations of relevant decision-makers.	Decommissioning of Blacktip facilities is outside the scope of this EP. However, Blacktip infrastructure is designed and selected to meet the regulatory base case for full removal.


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2.3 International Agreements


International agreements and conventions that are relevant to the Blacktip operations activities are summarised in Table 2.7.

Table 2.7: Applicable international agreements and conventions


International Agreements and Conventions	Summary
Agreement between the Government of Australia and the Government of Japan for the Protection of Migratory Birds in Danger of Extinction and their Environment 1974, commonly referred to as JAMBA	These agreements recognise international concern for the protection of migratory birds and birds in danger of extinction. The EPBC Act gives effect to the agreement by listing migratory birds recognised by it. Migratory species are MNES.
Agreement between the Government of Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their Environment 1986, commonly referred to as CAMBA	These agreements recognise international concern for protecting migratory birds and birds in danger of extinction. The EPBC Act gives effect to the agreement by listing migratory birds recognised by it. Migratory species are MNES.
Convention on the Conservation of Migratory Species of Wild Animals 1979 (Bonn Convention)	This convention aims to improve the status of all migratory species by national action and international agreements between range states. The EPBC Act gives effect to the Bonn Convention through listing species as 'migratory' under Part 3 of the Act. Migratory species are MNES.
Convention on Wetlands of International Importance (Ramsar Convention)	The Ramsar Convention provides for conserving and sustainably using wetlands. The EPBC Act gives effect to the Ramsar Convention by providing specific protection for wetlands recognised by the Convention under Part 3 of the EPBC Act.
Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 (the London Convention and more recently, the London Protocol)	The London Convention contributes to the international control and prevention of marine pollution by prohibiting the dumping of certain hazardous materials. The <i>Environment Protection (Sea Dumping) Act 1981</i> gives effect to the London Protocol.
Convention on Biological Diversity 1992	The objectives of the convention are the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources.

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International Agreements and Conventions	Summary
Convention for the Prevention of Pollution from Ships 1973/1978 (MARPOL 73/78)	<p>This convention aims to preserve the marine environment by eliminating completely pollution by oil and other harmful substances and by minimising accidental discharge of such substances.</p> <p>It contains five Annexes, dealing respectively with oil, noxious liquid substances, harmful packaged substances, sewage and garbage. Detailed rules are laid out as to the extent to which (if at all) such substances can be released in different sea areas.</p>
Convention on Oil Pollution Preparedness, Response and Co-operation 1990 (OPRC 90)	<p>This convention establishes national arrangements for responding to oil pollution incidents from ships, offshore oil facilities, seaports and oil handling.</p> <p>The convention recognises that in the event of a pollution incident, prompt and effective action is essential.</p>
Convention for the Prevention of Pollution from Ships 1973/1978 (MARPOL 73/78)	<p>This convention aims to preserve the marine environment by eliminating pollution by oil and other harmful substances and by minimising accidental discharge of such substances.</p> <p>It contains five Annexes, dealing respectively with oil, noxious liquid substances, harmful packaged substances, sewage and garbage. Detailed rules are laid out as to the extent to which (if at all) such substances can be released in different sea areas.</p>
International Convention for the Control and Management of Ships Ballast Water and Sediment 2004	<p>The convention aims to prevent the spread of harmful aquatic organisms from one region to another via ballast water and sediment. The <i>Biosecurity Act 2015</i> gives effect to the convention.</p>
International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978	<p>This convention sets out minimum standards for masters, officers and watch personnel on merchant vessels. The <i>Navigation Act 2012</i> and subsidiary Marine Orders give effect to the convention.</p>
International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978	<p>This convention sets out minimum standards for masters, officers and watch personnel on merchant vessels. The <i>Navigation Act 2012</i> and subsidiary Marine Orders give effect to the convention.</p>
International Convention for the Safety of Life at Sea 1974	<p>This convention sets out minimum standards for construction, equipment and operation of merchant ships. The convention requires signatory flag states to ensure the ships flagged by them comply with these standards as a minimum. The <i>Navigation Act 2012</i> and subsidiary Marine Orders give effect to the convention.</p>

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International Agreements and Conventions	Summary
International Regulations for Preventing Collisions at Sea 1972	These regulations outline internationally recognised navigation rules to be used by vessels at sea to avoid collisions. The regulations are published by the International Maritime Organization (IMO). The <i>Navigation Act 2012</i> and subsidiary Marine Orders give effect to the regulations.
International Convention on Civil Liability for Oil Pollution Damage 1969	The Civil Liability Convention ensures adequate compensation is available to persons who suffer oil pollution damage resulting from maritime casualties involving oil-carrying ships by placing liability for such damage on the owner of the ship.
International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties 1969	The Convention gives State Parties powers to intervene on ships on the high seas when their coastlines are threatened by an oil spill from that ship.
Kyoto Protocol	This is an international treaty that extends the 1992 United Nations Framework Convention on Climate Change, which commits state parties to reduce GHG emissions.
Minamata Convention on Mercury 2013	The convention is an international treaty that seeks to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. The convention covers all aspects of the lifecycle of mercury, controlling and reducing mercury across a range of products, processes and industries. Department of Climate Change, Energy, the Environment and Water (DCCEEW) leads Australia's involvement in the Minamata Convention.
The Paris Agreement	The Paris Agreement aims to limit global temperature rise this century to well below 2°C above preindustrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C. The Australian Government is committed to developing legislation to implement the commitments made in the Paris Agreement.
United Nations Framework Convention on Climate Change 1992	The convention is an international environmental treaty with the objective of stabilising GHG concentrations at a level that would prevent dangerous anthropogenic interference with the climate system.
Vienna Convention for the Protection of the Ozone Layer 1985 and the Montreal Protocol on Substances that Deplete the Ozone Layer 1987	The convention is a multilateral environmental agreement that acts as a framework for international efforts to protect the ozone layer. The accompanying Montreal Protocol specifies goals for reducing the uses of chlorofluorocarbons, the main chemical agents causing ozone depletion.


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2.4 Western Australian Legislation

The Operational Area for this EP is described in Section 3.2.2 and is within Commonwealth waters. Vessels supporting the Blacktip operations may pass through WA State waters while transiting to and from a port and must comply with a variety of WA legislation. Table 2.8 summarises the WA legislation relevant to the Blacktip operations.

Table 2.8: Summary of the Western Australia legislation relevant to the Blacktip operations

Legislation	Summary
<i>Dangerous Goods Safety Act 2004</i>	Relating to general vessel operations: this Act provides for safely storing, handling and transporting certain dangerous goods, including explosives, gases and flammable or combustible liquids. Licencing may be required, depending on the substances involved and the quantities stored or transported. These laws are administered by the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS).
<i>Environmental Protection Act 1986</i>	Relating to non-routine operations (potential oil spills) in areas under State jurisdiction: this Act provides for preventing, controlling and abating pollution and environmental harm and for conserving, preserving, protecting, enhancing and managing the environment.
Marine (Certificates of Competency and Safety Manning) Regulations 1983	Marine Safety is responsible for administering national and internationally agreed competency standards; and for examining candidates for commercial Certificates of Competency as master, mate or engineer in WA vessels.
<i>Pollution of Waters by Oil and Noxious Substances Act 1987</i>	Relating to non-routine operations (potential oil spills) in State waters: this Act relates to protecting the sea and certain waters from pollution by oil and other noxious substances discharged from ships and places on land.
Prevention of Collisions at Sea Regulations 1983	Regulations largely comprise the Rules set out in the International Regulations for Preventing Collisions at Sea 1972 (COLREGs) applicable in state and internal waters.
<i>Western Australia Marine Act 1982</i>	Relating to vessel movements: an Act to regulate navigation and shipping.
<i>Western Australian Marine (Sea Dumping) Act 1981</i>	Relating to general vessel operations: an Act to provide for protecting the environment by regulating the dumping into the sea, and the incineration at sea, of wastes and other matter and the dumping into the sea of certain other objects, and for other purposes.
<i>Biodiversity Conservation Act 2016</i>	The <i>Biodiversity Conservation Act 2016</i> came into effect on 3 December 2016 and replaced the <i>Wildlife Conservation Act 1950</i> . Relating to potential impacts to listed species: this Act provides for conserving and protecting WA wildlife.
Fish Resources Management Regulations 1995	Under Regulation 176 of the Fish Resources Management Regulations 1995, it is an offence to translocate live non-endemic fish to WA without permission. Under Section 105 of the <i>Fish Resources Management Act 1994</i> , it is an offence to bring noxious fish into WA. Also, under Part 16A of the <i>Fish Resources Management Act 1994</i> , DEMIRS has emergency powers to deal with incursions of invasive marine species (IMS), which include directing a person to perform necessary activities to prevent or control the spread of IMS, or to eradicate them in WA waters. If these activities are not undertaken,

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Legislation	Summary
	Eni may perform the activities and recover any costs incurred from the person initially directed to do so.

2.5 Northern Territory Legislation

Vessels supporting Blacktip operations often leave from Darwin or Wadeye and thus pass through NT waters while transiting to and from Blacktip facilities. While in NT waters, the support vessels must comply with a variety of NT legislation. Table 2.9 summarises the NT legislation relevant to the Blacktip operations.

Table 2.9: Summary of the Northern Territory legislation relevant to the Blacktip operations

Legislation	Summary
<i>Dangerous Goods Act 1998</i>	This Act provides for safely storing, handling and transporting certain dangerous goods (such as flammable, combustible liquids) to promote public safety and protect property and the environment.
<i>Environment Protection Act 2019</i>	This Act establishes the framework for assessing potential or anticipated environmental impacts of development. The objective of the Act is to ensure matters affecting the environment to a significant extent are fully examined and taken into account in decisions by the NT Government.
Environment Protection (National Pollutant Inventory) Objective 2004	This is an objective under the <i>Waste Management and Pollution Control Act</i> that provides for compulsory reporting of air emissions by certain facilities, in accordance with the Commonwealth National Environment Protection (NPI) Measure.
<i>Heritage Act 2011</i>	This Act established the NT Heritage Council and governs the protection of both natural and cultural heritage places within the NT jurisdiction.
<i>Northern Territory Aboriginal Sacred Sites Act 1989</i>	This Act facilitates protecting and registering sacred sites by providing procedures for avoiding sacred sites when developing and using land and by establishing an Authority for the purposes of the Act.
<i>Waste Management and Pollution Control Act 1998</i>	This Act provides for protecting the environment through encouraging effective waste management and pollution prevention measures, including licencing for certain levels of pollution discharges to air and water. The Act does not apply to wastes that are confined to the site on which they are generated, but requires licencing and registration for wastes that are discharged offsite.

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3 DESCRIPTION OF ACTIVITIES

3.1 Overview

This section has been prepared in accordance with Regulation 21(1) of the OPGGS(E) Regulations. The petroleum activities to be undertaken under this EP are described in this section.

3.2 Scope

The petroleum activities covered in this EP are the Blacktip operations in Commonwealth waters, which are generally limited to:

- WHP normal (uncrewed) and pipeline production operations
- surface and subsea IMR activities
- periodic tanker vessel offtakes of condensate from the SPM (approximately two times per year)
- rigless well intervention activities as required
- support vessel operations for the activities listed above.

This EP excludes related activities within NT State waters and any onshore requirements, such as those related to the onshore YGP. These aspects are outside of NOPSEMA's jurisdiction and are assessed under relevant NT planning and approvals processes, including those needed to meet the requirements of the NT *Environment Protection Act 2019*.

Table 3.1 summarises the activities associated with the Blacktip operations.

The current expected end life for Blacktip is estimated to extend beyond the 5 year period of this EP. Therefore no end of facility life decommissioning activities is scheduled to occur within the 5-year in-force period of this EP. Eni's decommissioning planning and commitments is included in Section 3.7. A comprehensive inventory of equipment and the precise locations of installed infrastructure is recorded by Eni and included in Section 3.4. This inventory will be used to plan for future decommissioning.

A future decommissioning EP will meet the requirements of the OPGGS Act and OPGGS(E) Regulations, and any additional relevant legislation, policies – such as NOPSEMA Policy 'Section 572 Maintenance and removal of property' – and guidelines – such as Department of Industry, Science and Resources (DISR) Guideline 'Offshore Petroleum Decommissioning Guideline' – in force at the time (NOPSEMA, 2022a; DISR, 2022). Decommissioning options will be assessed before the end of project life, as per relevant legislative requirements, and in consultation with relevant and interested persons (refer to Section 3.7).


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Table 3.1: Blacktip operations petroleum activities overview

Item	Description
Permit/Title areas	<ul style="list-style-type: none"> • WA-33-L (production license) • WA-15-PL (export pipeline licence – WA) • NT/PL2 (export pipeline licence – NT) • NTC/PL3 (condensate export pipeline licence – including SPM)
Location	Joseph Bonaparte Gulf
Infrastructure	<ul style="list-style-type: none"> • WHP • GEP • CEP • SPM
Wells	<ul style="list-style-type: none"> • Three producing wells (P1, P2, P3) • An additional well (P5) is anticipated to be drilled by the end of 2024 • additional wells that may be in production over the validity of this EP
Key Coordinates (GDA94)	<ul style="list-style-type: none"> • WHP: 13° 53' 41" S 128° 29' 3" E • SPM: 14° 14' 28.3" S 129° 21' 1.6" E
Water depth	<ul style="list-style-type: none"> • WHP: 51m • SPM: 20m
Hydrocarbon	Blacktip gas and minor volumes of condensate
Activities	<p>Key activities include:</p> <ul style="list-style-type: none"> • WHP normal (uncrewed) and pipeline production operations • surface and subsea IMR activities • periodic tanker vessel offtakes of condensate from the SPM (approximately two times per year) • rigless well intervention activities as required • hook-up and commissioning of new wells
Vessels	Support/supply vessel operations for the activities listed above

There are three production wells on the WHP – P1, P2 and P3. – with surface wellheads. An additional well (P5) is anticipated to be drilled by the end of 2024. Additional wells may be drilled from the WHP over the validity of this EP, under a separate Blacktip Offshore Drilling EP (000036_DV_PR.HSE.0887.000) or other EPs. As such, this EP includes production operations from additional Blacktip production wells. Table 3.2 further clarifies the scope of this EP and the Blacktip Drilling EP (000036_DV_PR.HSE.0887.000).


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Table 3.2: Blacktip Environment Plan scopes

Environment Plan	Scope
Blacktip Operations EP (this EP)	Ongoing operations of Blacktip facilities, including the production of natural gas and condensate from Blacktip wells Geophysical survey Hook-up and commissioning of Blacktip wells Intervention (rigless-based)
Blacktip Drilling EP (000036_DV_PR.HSE.0887.000)	Geophysical survey The mobilisation, positioning and demobilisation of a MODU Drilling and completions Intervention (rig-based) Contingent workover operations (contingent on intervention outcome)

3.2.1 Location

The Blacktip field is approximately 300km west-south-west of Darwin, in permit area WA-33-L in the JBG. Gas and condensate produced from the WHP are exported via the 108 km¹ long GEP, to YGP for processing. Stabilised condensate is exported via the CEP to an SPM located approximately 7km offshore in Commonwealth waters, where it is loaded to tanker vessels.

The coordinates and water depth of the WHP and the SPM are presented in Table 3.3. The trees for the wells are located on the WHP. The SPM is in the Joseph Bonaparte Gulf AMP Multiple Use Zone.

Table 3.3: Coordinates of the wellhead platform and the single point mooring (GDA94)

Component	Water depth (metres)	Latitude	Longitude
WHP	51	13° 53' 41" S	128° 29' 3" E
SPM	20	14° 14' 28.3" S	129° 21' 1.6" E

Water depths along the GEP route (within Commonwealth waters) vary from 51m at the deepest point at the WHP, to 20m at the shallowest point at the Commonwealth waters boundary (Table 3.4).

Approximately 52km of the GEP lies within the Joseph Bonaparte Gulf AMP Multiple Use Zone. The CEP in Commonwealth waters lies entirely in the AMP.

¹ From the WHP to the shore crossing


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Table 3.4: Coordinates relevant to the gas export pipeline and condensate export pipeline (GDA94)

Location	Latitude	Longitude
Export pipeline entering the Multiple Use Zone	14° 07' 37.34" S	128° 09' 00" E
Export pipeline Commonwealth/NT waters boundary crossing	14° 22' 94.6" S	129° 35' 08.9" E
CEP Commonwealth/NT waters boundary crossing	14° 34' 13.4" S	129° 35' 08.3" E

Figure 1.1 presents the location of the Blacktip operations facilities.

3.2.2 Operational Area


The Operational Area defines the spatial boundary within which all petroleum activities associated with the Blacktip operations occur. The Operational Area includes:

- the WHP and the area within the 500m petroleum safety zone (PSZ) in place around the WHP and pipeline spool bend
- the GEP from the Blacktip WHP to the Commonwealth/NT waters boundary and an area extending 1500m either side
- the SPM and the 500m PSZ in place around it
- the CEP from the SPM to the Commonwealth/NT waters boundary and an area extending 1500m either side.

Offshore supporting vessels conducting related activities within the Operational Area must comply with this EP. Outside the Operational Area, maritime regulations and other requirements apply to the vessels. This EP applies to activities undertaken within the Operational Area, as described in this section.

The GEP and CEP do extend into NT State waters; however, the extents located within NT waters are outside the scope of this EP.

Figure 3.1 presents the location of the Operational Area.

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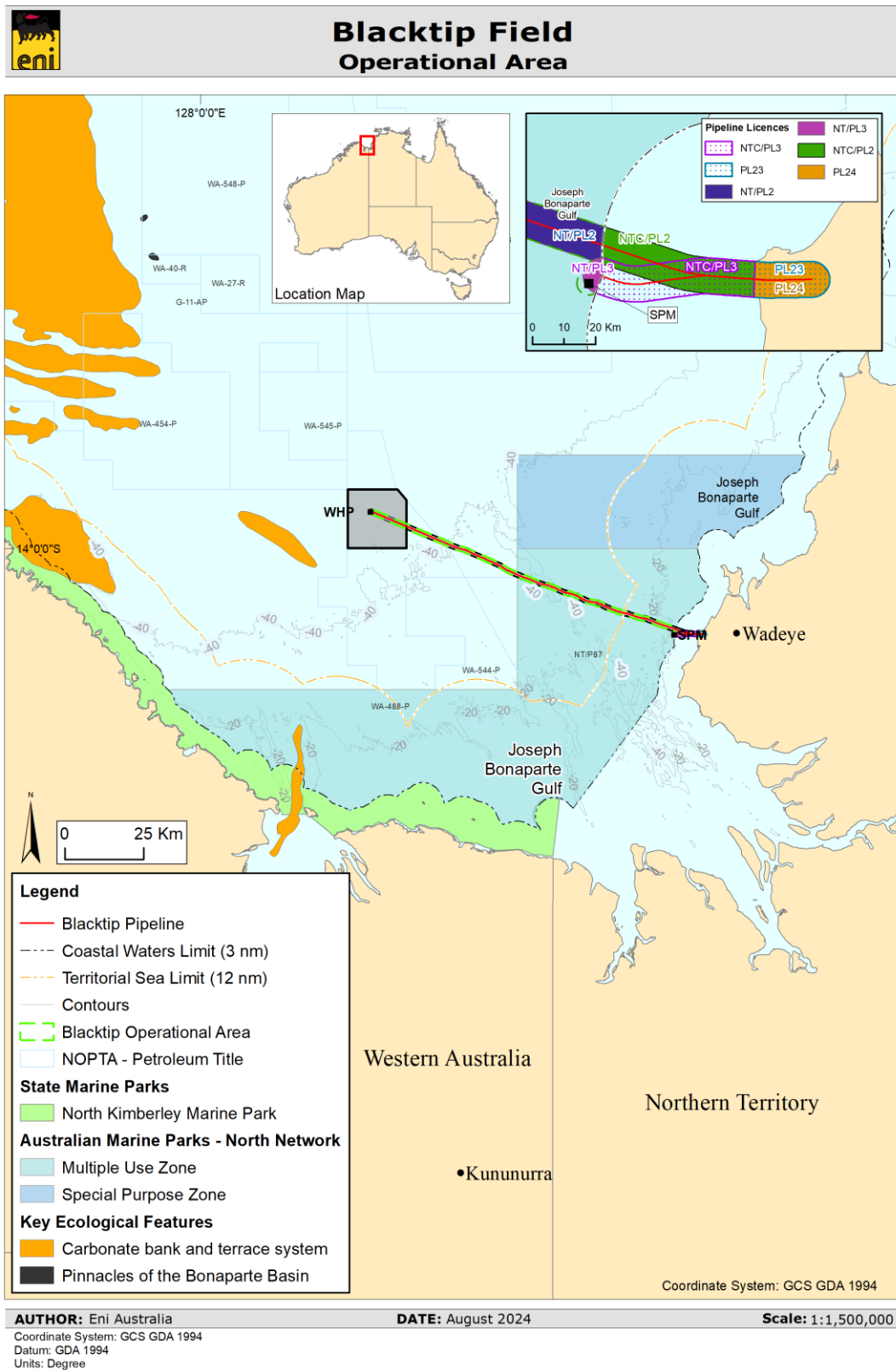



Figure 3.1: Blacktip facilities location and Operational Areas

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3.2.3 Timing

The Blacktip field commenced production in 2009. Production operations may be undertaken any time of the year over the validity of this EP (five years). This EP comes into force on acceptance by NOPSEMA and supersedes the currently in-force Blacktip Offshore Operations EP.

Decommissioning is not planned to occur within the validity period of this EP (refer to Section 3.2).

The EP will end when Eni notifies NOPSEMA that the petroleum activities under the scope of this EP have ended, and all the obligations under the EP have been completed, and NOPSEMA has accepted the notification, in accordance with OPGGS(E) Regulation 46.

3.3 Blacktip Field Overview

The Blacktip field comprises 12 stacked reservoirs in four separate geological formations at depths ranging from 1000 to 3100m true vertical depth subsea. Development was initially focused on production from the Keyling and Treachery Formation reservoirs, at 2000 to 2800m and 3100m true vertical depth subsea, respectively. The first phase of subsurface development consisted of two wells: P1 and P2. A second phase consisted of the P3 well. A third phase comprising the addition of the P5 well will be completed before the end of 2024.

The field has a condensate to gas ratio of 2 stb/MMscf.

End of field life is dependent on several factors, including operational performance and possible future field developments. The current (October 2024) anticipated life of the development extends until approximately 2040.

Characteristics of Blacktip gas and condensate are presented in Section 8.6.2.

3.4 Blacktip Facilities Overview

Blacktip infrastructure includes:

- Blacktip WHP (Section 3.4.1)
- WHP production wells (Section 3.4.2)
- WHP production manifold (Section 3.4.3)
- Export pipeline (Section 3.4.4)
- Condensate export pipeline (Section 3.4.5)
- Condensate single point mooring (Section 3.4.5)

An equipment inventory for Blacktip offshore facilities in the title areas is included in Table 3.5. Production well locations are on the WHP and details are provided in Section 3.4.2. Three historic exploration wells (Blacktip-1, Blacktip-1 North and Blacktip 2) have been drilled in WA-33-L and have been fully plugged and abandoned (P&A) with the wellhead removed and tubulars cut approximately 5m below the mudline.



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Table 3.5: Inventory for Blacktip offshore facilities in the title areas

Equipment	Section reference	Number	Location (GDA94)		Status	Title	
			Latitude	Longitude			
WHP (4 leg steel structure) with topside equipment included in Section 3.4.1 and 6 well slots	Section 3.4.1	1	13° 53' 41" S	128° 29' 3" E	Active	WA-33-L	
Blacktip production wells	Section 3.4.2	P1	Wellheads on WHP, refer to Table 3.8 for surface locations		Active		
		P2			Active		
		P3			Active		
		P5	Anticipated well location contained within Table 3.8. Welhead will be on the WHP	Will be hooked-up, commissioned and operated under this EP			
Production manifold	Section 3.4.3	1	On WHP topsides		Active		
WHP riser	Section 3.4.1	1	WHP to GEP SSIV		Active		
WHP riser umbilical (4-inch)		1	WHP to GEP SSIV		Active		
GEP (18-inch)	Section 3.4.4	1	WHP to YGP - refer to Table 3.4		Active		WA-15-PL and NT/PL2
GEP SSIV		1	13° 53' 38.78" S	128° 29' 3.99" E	Active		
GEP tie-in spools		1	13° 53' 41.2" S	128° 29' 2.9" E	Active		
CEP (12-inch)	Section 3.4.5	1	YGP to SPM - refer to Table 3.4		Active	NTC/PL3	
CEP PLEM		1	14° 14' 28.1" S	129° 21' 1.4" E	Active		
SPM		1	14° 14' 28.3" S	129° 21' 1.6" E	Active		
SPM anchors		6	1 - 14° 14' 26.9" S 2 - 14° 14' 27.2" S 3 - 14° 14' 30.0" S 4 - 14° 14' 29.3" S 5 - 14° 14' 28.4" S 6 - 14° 14' 25.9" S	1 - 129° 21' 3.1" E 2 - 129° 21' 3.5" E 3 - 129° 21' 2.1" E 4 - 129° 21' 0.5" E 5 - 129° 21' 0.3" E 6 - 129° 21' 0.8" E	Active		



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Equipment	Section reference	Number	Location (GDA94)		Status	Title
			Latitude	Longitude		
SPM mooring chains		6	SPM to SPM anchors		Active	
SPM floating hose (12-inch)		1	Connected to the SPM		Active	
SPM to CEP PLEM umbilical (4-inch)		1	SPM to CEP PLEM		Active	
SPM to CEP PLEM subsea hose		1	SPM to CEP PLEM		Active	

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3.4.1 Blacktip Wellhead Platform


The Blacktip WHP is normally uncrewed and consists of a steel jacket supporting a topsides structure consisting of main, mezzanine, cellar and sub-cellar decks (Figure 3.2 and Figure 3.3). WHP operations equipment is controlled via telemetry from the YGP central control room by a Honeywell distributed control system, which is designed with spare capacity to cope with expansion or for replacement or repair purposes. Emergency shutdown and fire and gas systems on the WHP are designed for autonomous operations and shut the WHP down after a time delay or loss of communication with the YGP central control room.

The WHP accommodates six well slots. Whilst tieback of adjacent fields is outside the scope of the current approval under the EPBC Act (EPBC 2003/1180), the WHP has provision for future tieback options. Any future tieback would be subject to additional environmental approvals.

There is no hydrocarbon processing on the WHP. Well fluids are commingled in the pipeline manifold on the topsides and exported to YGP through the GEP.



Figure 3.2: Blacktip wellhead platform

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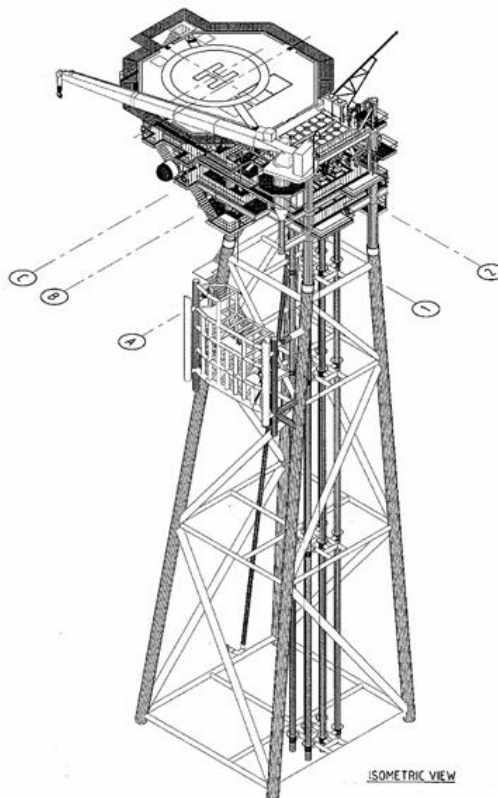



Figure 3.3: Blacktip wellhead platform isometric view

Utilities to support WHP operations are described in Table 3.6 and consist of:

- communications systems
- fuel gas system
- power generation
- cold vent system
- closed drains
- open drains
- deck lighting
- corrosion inhibitor system
- service water and potable water
- pedestal crane.

As described in Table 3.6, a fuel gas system on the WHP is designed to supply the required fuel gas to two power generators which cater for all the electrical power requirements of the WHP. No flaring occurs from the WHP; however, a cold vent is provided to manually depressurise the WHP topside piping during maintenance operations or pressure safety valve (PSV) relief (typically pigging activities).

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More information regarding the design and operating philosophy and the management of hazards and risks associated with the WHP is provided in the Blacktip WHP Safety Case (000036_DV_PR.HSE.0852.000).




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Table 3.6: Wellhead platform utilities descriptions


Utility	Description
Communications	<p>The telecommunications for the WHP include communications between the WHP and YGP and the Eni Darwin and Perth offices, incorporating telephone extensions, radio and public address and a closed-circuit television (CCTV) system.</p> <p>A combined ultra-high frequency and marine very high frequency radio is installed on the WHP.</p> <p>The CCTV system for the WHP comprises colour cameras of both fixed and pan/tilt/zoom types. The cameras on the WHP are located to allow viewing of:</p> <ul style="list-style-type: none"> • all principal process equipment • access points • helideck. <p>For navigational and safety purposes, a radar beacon unit is installed on the WHP.</p>
Fuel gas system	<p>The fuel gas system on the WHP supplies fuel gas to two power generators, which cater for the electrical power requirements of the WHP. The fuel gas system comprises:</p> <ul style="list-style-type: none"> • fuel gas pre-heater • pressure control valves • level control valves • fuel gas knock-out drum • fuel gas super heater. <p>Fuel gas is tapped off from the GEP. This gas is preheated before the pressure is reduced to the fuel gas system pressure and routed to the fuel gas knock-out drum for gas-liquid separation. Liquid separated in the fuel gas separator is routed under automatic control to the closed drains drum.</p>
Power generation	<p>The WHP main power system batteries are provided with two independent redundant systems, to support continuous production on loss of power generation and to maintain vital instrumentation and communications equipment. The essential power supply system is designed such that capacity of the batteries includes a reserve for black start of the WHP after a prolonged shutdown.</p> <p>No emergency generator is provided at the WHP. Essential and vital users are supplied from battery-backed systems.</p>

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Utility	Description
Cold vent system	<p>A WHP cold vent is provided to manually depressurise the WHP topside piping during maintenance or PSV relief. The WHP discharges the vapour to atmosphere at a safe location.</p> <p>During normal operation, the vent is continuously purged with approximately 0.7 sm³/day nitrogen, supplied from nitrogen gas bottles and designed to maintain positive pressure and to prevent air ingress to the vent header. The gas is metered using an ultrasonic flow meter.</p> <p>Re-supply of nitrogen occurs with the supply of other consumables and is conducted as required by a supply vessel, typically only two or three times per year</p>
Closed drains system	Liquid in the closed drain drum primarily comes from the fuel gas knock-out drum via a closed drains header and is mainly composed of condensate and well fluids that have dropped out of the fuel gas knock out drum. The liquid contained in the closed drains drum is drained and routed back to the production manifold.
Open drains system	The open drains system is provided primarily to collect rainwater and chemical spills on the WHP. The open drains are fed from drip pans to the open drains header, which feeds down to a hose connection point at the boat landing, which then can be connected to a small portable container or via a hose to the slops tank. Any chemical spills are returned to a container on the supply vessel for disposal onshore.
Lighting	<p>The lighting systems on the WHP consist of:</p> <ul style="list-style-type: none"> • general platform area lighting • emergency illumination of walkways and escape routes. <p>Emergency illumination of critical operational areas may require operator attendance during emergency situations or during activities required for re-start of systems.</p> <p>Lighting provisions also include marine navigational aids and helideck lighting. Marine navigation aid lanterns are fed from a dedicated control panel with integral distribution with its own battery system. Lighting is kept on 24 hours a day for safety purposes in accordance with requirements of the <i>Navigation Act 1912</i>.</p>

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Utility	Description
Corrosion inhibitor system	<p>Corrosion inhibitor is continuously injected into the production manifold on the WHP as part of the pipeline corrosion management strategy.</p> <p>The injection system consists of a horizontal tank with 22.9m³ capacity and injection pumps. The tank capacity is designed to hold up to 90 days' consumption volume of the corrosion inhibitor with an average consumption rate of 226.6 L/day. The system is designed to provide continuous injection; however, the frequency and flowrates requirements are adjusted in accordance with sampling and testing results.</p> <p>The corrosion inhibitor injection line is equipped with a shutdown valve close to the injection point on the production manifold.</p> <p>Re-supply of corrosion inhibitor occurs with the supply of other consumables and is conducted as required by a supply vessel, typically only two or three times per year. Typically, tote tanks are lifted by crane from the supply vessel onto the WHP for transfer of chemicals into the WHP storage tanks. After re-supply, tote tanks are returned to the supply vessel.</p>
Service water and potable water	<p>Service water is used on the WHP for wash water. Service water is supplied by supply vessel each time there is an operational visit.</p> <p>Potable water is required for the safety shower and eye wash stations. A fresh supply of potable water gets lifted in a tote tank from the support vessel on its arrival for planned maintenance visits to the WHP.</p>
Pedestal crane	<p>Major materials handling on the WHP and to/from supply boats is facilitated by a diesel-hydraulic pedestal crane. This provides safe, efficient and workable systems for common operational activities such as chemical loading and diesel filling.</p> <p>The crane holds 1000 L of diesel. Diesel is lifted onto the WHP and transferred to topsides via a 4 kL offshore lift rated ISO container. The crane diesel tank is only filled to the level required for its intended use during the specific activity, therefore the remaining inventory is very minimal after use.</p>

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3.4.1.1 Wellhead Platform Hazardous Substances and Inventories

The WHP is a 'minimum facilities installation'. Therefore, the hazardous substances and inventories are limited to the production fluids, corrosion inhibitor and hydraulic fluid used to actuate the subsea isolation valve (SSIV).

Table 3.7 summarises the process chemicals that are used at the WHP. All chemicals are supplied via supply vessels (typically only three or four times per year) and are environmentally assessed in accordance with the process described in Section 3.6.

Table 3.7: Chemicals used on the wellhead platform

Substance	Use	Tank size	Estimated use per year
Corrosion inhibitor	Pipeline treatment	22.9m ³	22m ³
Subsea hydraulic fluid	Well control	0.5m ³	1m ³

No other chemicals are stored on the WHP. Small quantities of maintenance chemicals, including paints and hydraulic fluids, may also be required and are returned to shore after use.

3.4.2 Production Wells

Production wells are detailed in Table 3.8. Additional wells may be drilled through an existing slot on the WHP over the validity of this EP, under a separate Blacktip Offshore Drilling EP (000036_DV_PR.HSE.0887.000) (refer to Section 3.2). As such, this EP assesses production operations from additional planned Blacktip production wells.

The wells have surface trees with a surface-controlled subsurface safety valve and provision for hydrocarbon conveyance and pressure containment of the well stream from the reservoir. The well completion also provides emergency pressure containment in the event of catastrophic failure of control systems or failure of a completion string. Production wing and master valves isolate the wells from the reservoir. These valves are isolated automatically by the emergency shutdown system at various levels of shutdown. There are also mechanisms for manual isolation of individual valves.

The wells are perforated and serviced (where possible) through wireline intervention.

Further details on the wells are provided in the Blacktip Well Operations Management Plan (WOMP).

Locations of the production wells are on the WHP, with exact locations provided in Table 3.8 below (as per the NOPIMS database).


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Table 3.8: Blacktip production well locations (surface)

Well	Location GDA94	
	Latitude	Longitude
Blacktip P1	13° 53' 41.81"	128° 29' 2.81"
Blacktip P2	13° 53' 41.732"	128° 29' 2.82"
Blacktip P3	13° 53' 41.734"	128° 29' 2.75"
Blacktip P5	13° 53' 41.80"	128° 29' 2.89"

3.4.3 Production Manifold

Production wells tie into the production manifold on the WHP via flowlines (described in Section 3.4.2). Flowlines are vertical within the frame of the WHP and there are no horizontal sections lying on the seabed. The production manifold is equipped with:

- clamp-on type corrosion and erosion monitoring
- corrosion coupons
- corrosion inhibition injection to protect the GEP
- electrical resistance probe
- manual depressurising flow orifice.


A condensate returns line returns liquid from the closed drains drum (described in Table 3.6) into the manifold.

3.4.4 Export Pipeline

An 18-inch diameter GEP runs for 108km from the WHP to the YGP shore crossing, transporting Blacktip wet gas. Table 3.9 summarises the key GEP details. The GEP system is illustrated in Figure 3.4.

Table 3.9: Key export pipeline details (Commonwealth waters)

Item	Description
Material	Carbon steel Grade 450 22Cr duplex stainless steel (upstream of the riser emergency shutdown valve) Concrete weight coating Field joint coatings
Pipe size	18-inch diameter

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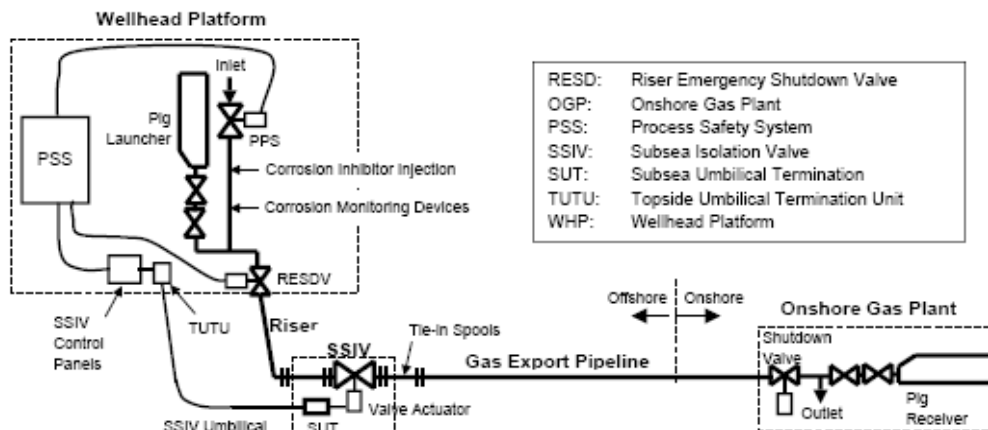


Figure 3.4: Export pipeline system layout

From the GEP SSIV, an 18-inch export riser is clamped to the side of the WHP jacket. The riser is vertically supported by an anchor flange at the WHP jacket top elevation and supported by three guide clamps spaced down the WHP jacket.


A WHP pig launcher is permanently installed on the WHP. Connection points may be used for introducing batch pigging chemicals into the launcher, such as gels, biocides and corrosion inhibitors. Pigging is undertaken in a closed system with no discharges to the marine environment.

Major pipeline and riser leaks are detected by the process monitoring systems at YGP; flow meters and pressure indicators detect any unusual drop in pipeline pressure.

3.4.4.1 Subsea Isolation Valve and Emergency Shutdown Valves

The isolation of the GEP is by the SSIV, which is a hydraulically actuated, fail-safe (closed) ball valve and is located 80m in a direct line down from the WHP. The valve, actuator and subsea umbilical termination are mounted on a support structure that facilitates remotely operated vehicle (ROV) docking for ROV valve actuation (i.e., actuator override). The SSIV actuator is linked to the WHP with a control umbilical running from the subsea umbilical termination, along the seabed, up a J-tube and terminating in a topside umbilical termination unit. The topside umbilical termination unit is linked to an SSIV control panel that is interfaced with the process safety system. There is a protection frame over the SSIV.

The GEP is isolated in an emergency – such as upon loss of hydraulic pressure – or as a precaution – such as during transfer of personnel onto the WHP. The SSIV can also be opened and closed manually by ROV, during high-risk activity; for example, bringing drill rigs over the WHP.

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3.4.5 Condensate Export and Single Point Mooring

A 12-inch CEP transports stabilised condensate from holding tanks in the YGP to the offshore pipeline end manifold (PLEM) and then up to the SPM via a 12-inch submarine hose (Figure 3.6), for loading into an offtake tanker through a 12-inch flexible floating hose. The proportion of the CEP in Commonwealth waters is less than 1km. Table 3.9 summarises the key CEP details. The CEP and SPM are illustrated in Figure 3.5.

Table 3.10: Key condensate export pipeline details (Commonwealth waters)

Item	Description
Material	Carbon steel Concrete weight coating Field joint coatings
Pipe size	12-inch diameter

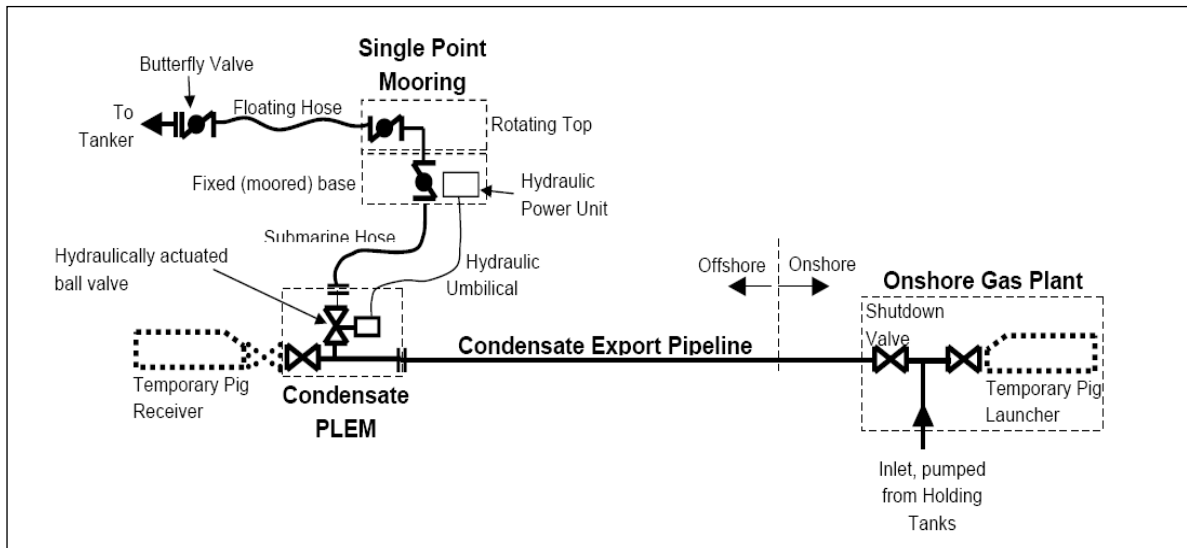



Figure 3.5: Condensate export pipeline and single point mooring layout

Note: whilst Figure 3.5 shows a temporary pig receiver there has been no historic use of the temporary pig receiver in the figure and there is no plan or requirement for its future use. Pigging operations are completed using a self-propelled tether pig which is launched and received onshore.

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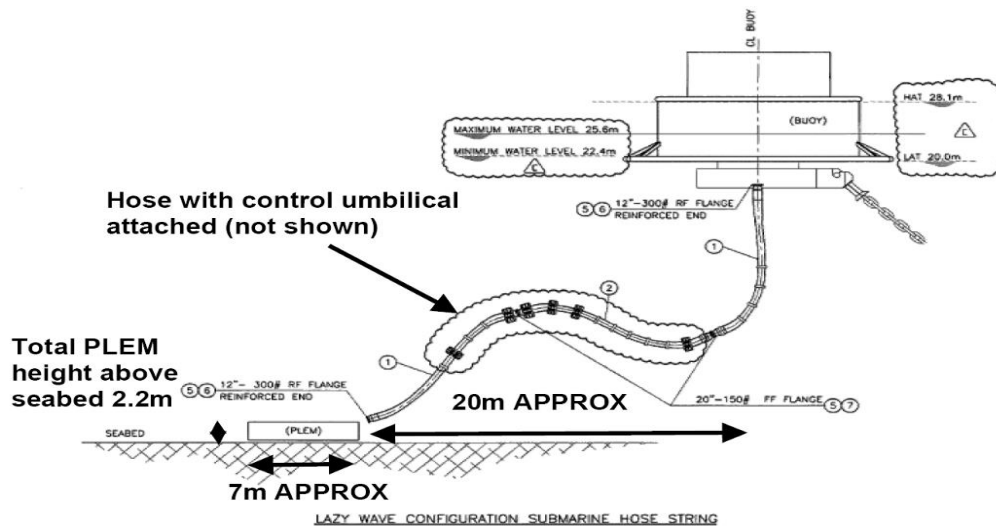


Figure 3.6: Submarine hose string layout

The CEP has provision for installing temporary pig launchers and receivers.


The SPM (Figure 3.7 and Figure 3.8) is a floating, moored buoy with a rotating top to allow the tanker to align itself with the prevailing wind and current. The condensate is transported from the SPM to the tanker via a 12-inch floating hose string which is removed between offtakes. A butterfly valve is located at the end of the floating hose. The PLEM valve is powered by a hydraulic power unit on the SPM and accommodates remote actuation from the tanker in the event of an emergency.

The SPM includes:

- catenary anchor leg mooring buoy
- anchor chains and anchor points
- floating and submarine hose string
- mooring hawser assembly.



Figure 3.7: Single point mooring and floating hose

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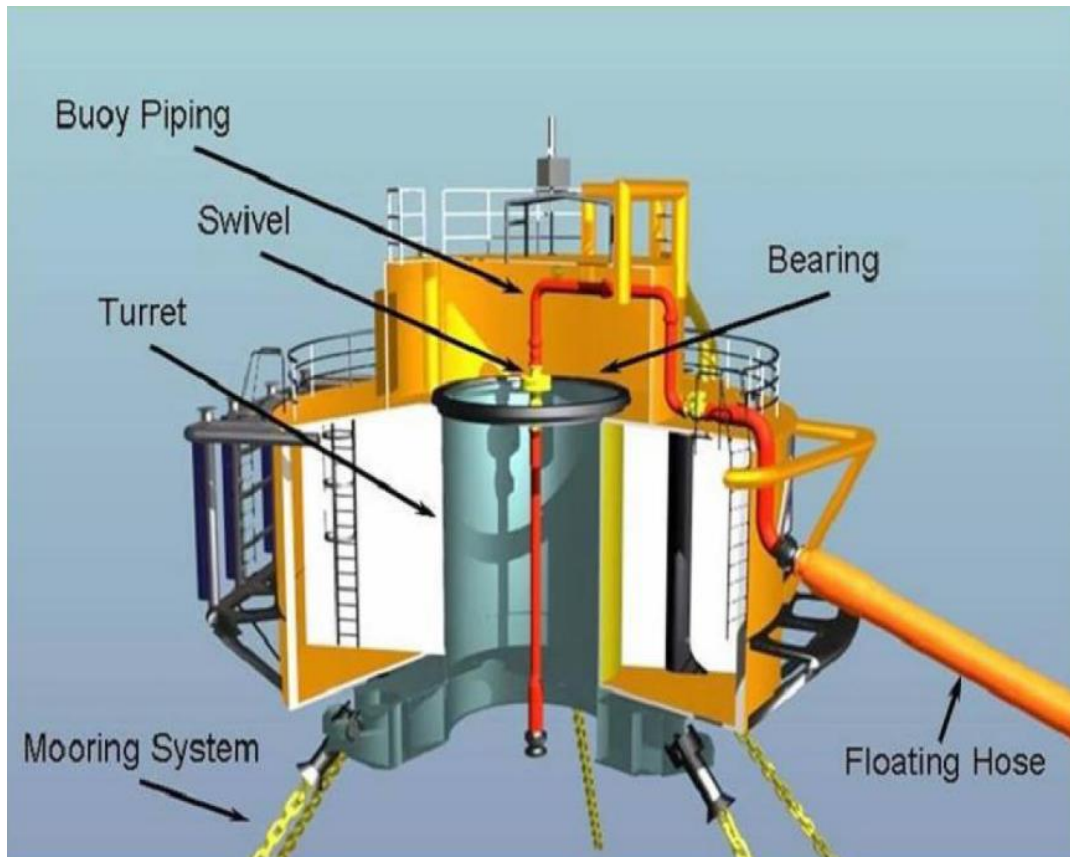


Figure 3.8: Catenary anchor leg mooring buoy profile

The catenary anchor leg mooring buoy body is designed to allow flooding of two compartments. The deckhouse can resist a wave crest height of 0.9m.


3.5 Blacktip Operations

This section describes the scope of the offshore Blacktip facilities operational activities used for considering the environmental risks and impacts presented in Sections 7 and 8.

3.5.1 Blacktip Wellhead Platform Operations

The WHP is normally uncrewed. However, it is visited twice per year for planned activities, for approximately 14 days per visit. Additional visits may occur for specific campaigns, such as rigless well interventions or unplanned maintenance (detailed in Table 3.11). The size of the visiting personnel varies depending on the nature of the visit but typically involves no more than 18 persons in total.

Personnel operations on-board the WHP typically only take place during daylight hours, with no planned overnight stays permitted under normal operations. Work on the WHP during workover or wireline intervention (refer to Section 3.5.4) may be conducted on a 24-hour basis; personnel would be accommodated on the support vessel. To accommodate potential unforeseen emergencies, incidents – such as helicopter failure or sudden change of weather – or repairs, facilities are provided for emergency overnight stays should it be necessary.

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Utilities to support WHP operations are described in Section 3.4.1.

3.5.2 Export Pipeline Operations

The GEP operates within a closed system transporting wet gas. There are no planned discharges.

3.5.3 Inspection, Maintenance and Repair Activities

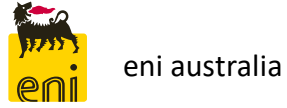
Table 3.11 presents routine and non-routine IMR activities for the Blacktip offshore facilities. Typical frequency and durations presented are based on previous years of operational experience and provide indicative values only. Specific maintenance requirements are based on operational requirements.

Maintenance and inspection personnel execute work scopes to comply with the Eni procedures and standards relating to integrity management and maintenance, its minimum performance specifications for a computerised maintenance and materials management system, and its minimum standards for technical competency and training of personnel.


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Table 3.11: Blacktip inspection, maintenance and repair activities overview

IMR activity	Details	Typical frequency and duration	Typical chemical use and discharge to marine environment
General WHP topsides maintenance and inspection activities	<p>Helicopters, supply or support vessels are typically used to access the WHP (refer to Section 0). Typical maintenance and inspection activities include:</p> <ul style="list-style-type: none"> replenishing hydraulic and diesel fuel at the WHP replenishing consumables, particularly monoethylene glycol, nitrogen, and corrosion inhibitor, which are supplied in tote tanks/quads and loaded using the platform crane at the WHP inspecting piping, rotating equipment, instruments, valving, sumps and drains performing critical function testing to demonstrate ongoing suitability and fitness-for-purpose of Safety Critical Elements isolating process and electrical equipment to perform maintenance tasks or make modifications inhibiting, isolating or adjusting safety-critical functions, trips and instrument settings to calibrate, inspect, test, maintain or modify equipment performing intervention activities on valves, rotating equipment, instrumentation and the crane maintaining safety equipment and lifesaving equipment, including periodically replacing components maintaining gas, pneumatic, diesel, electric and hydraulic systems. 	<p>Two planned visits per year using supply vessel and/or helicopter, 12 to 14 days in duration.</p> <p>Zero to six non-routine visits per year using supply vessel and/or helicopter, each visit is, on average, four hours duration (excluding the helicopter crew).</p>	<p>No discharges, all chemicals returned to shore.</p> <p>Venting will occur in the event the WHP topside piping is depressurised.</p>
General SPM maintenance and inspection activities	<p>Typical activities include:</p> <ul style="list-style-type: none"> SPM inspection maintenance and repair hose maintenance and repair. 	Two to six planned visits per year using supply vessel.	No planned discharges.
Surveys of the subsea infrastructure (GEP, SPM, CEP)	<p>Typical survey activities include the use of equipment deployed from a survey vessel, including:</p> <ul style="list-style-type: none"> boomer for mapping the seabed sub-bottom profiler (SBP) for mapping the seabed multibeam echo-sounder (MBES) for swathe bathymetry mapping of water depths along the survey track side-scan sonar (SSS) for delineating seabed features. <p>SSS is typically undertaken twice every five years and after extreme cyclonic events (Eni Pipeline Inspection, Monitoring and Maintenance Plan 000036_DV_PR.DPM.0663.000). The purpose is to survey and log the layout and condition of seabed laid pipelines (or riser sections), ancillary components and the surrounding seabed.</p> <p>An acoustic profile survey by ROV or equivalent method may be substituted for SSS if an equal or superior resolution can be obtained.</p> <p>Where the SSS survey has identified a significant change in the pipeline trench entry/exit location in the nearshore area, a MBES survey may be undertaken to determine depth of burial.</p>	<p>Every two years at the SPM for three to five days.</p> <p>Every five years over the GEP for three to five days.</p> <p>Every two years over the CEP for three to five days.</p>	No planned discharges.
Inspection and maintenance of subsea infrastructure (at WHP, GEP, SPM, CEP) using ROV or divers	<p>Typical activities include visual inspection of subsea infrastructure using an ROV (deployed from a support vessel), necessary for inspecting the WHP and associated infrastructure to detect external features, damage or signs of damage, and deterioration that could present a risk. Typical subsea activities include:</p> <ul style="list-style-type: none"> marine growth assessment and removal welding, repair, installation and disconnection activities various forms of non-destructive testing, such as magnetic particle inspection, alternating current field measurement, ultrasonic testing, cathodic potential measurements general visual inspection (GVI)/close visual inspection – undertaken by ROV in proximity (within 1 m) of wells, along the GEP, spools, risers and associated clamps, and WHP jacket members. GVI will locate spans along the GEP, which may exceed allowable span lengths. GVI, close visual inspection and measurements include the use of video and still photography. <p>The use of ROV is prioritised for subsea inspection activities; however, diving may be performed for inspection and maintenance purposes if required.</p>	Up to twice a year in conjunction with other campaigns.	<p>Marine growth removal</p> <p>Inorganic and organic acids (such as citric acid required for marine growth removal).</p>

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IMR activity	Details	Typical frequency and duration	Typical chemical use and discharge to marine environment
GEP and CEP pigging activities	<p>As described in Section 3.4.4, a vertical GEP pig launcher is installed on the WHP, with a pig receiver located at the YGP. The CEP has provision for installing temporary pig launchers and receivers. The pigging operations are typically managed by a specialist pigging contractor with support from Blacktip operations personnel, with access to the WHP via support vessel.</p> <p>Pigging is primarily performed for asset integrity purposes, which includes pipeline monitoring and corrosion inhibitor or biocide batching. Pigging also includes line-sweep and cleaning.</p> <p>Pipeline monitoring pigging involves using intelligent pigs, once cleaning pigs have been run, to determine pipeline wall thickness anomalies. For corrosion, batching with corrosion inhibitor is typically used. The fluid is pushed through the pipeline between two bi-directional pigs and the process leaves a film of corrosion inhibitor on the pipeline's internal surface. This process may also be applied for pigging with gels or biocides, or a biocide batch can be applied to the pipeline between two pigs.</p> <p>Pigging support operations generally include using support vessel and crane and lifting operations.</p> <p>Before launching each pig, the pig launcher is depressured, isolated on a double block and bleed, and purged. During pigging, vent valves are open to atmosphere. Closed drains header valves are closed.</p> <p>No pigging discharges occur offshore. Waste sludge is collected at a pig receiver onshore at YGP and disposed of by a licenced waste contractor.</p>	<p>Pigging operations are planned activities and performed as part of the GEP integrity management program. Pigging operations occur at least once every five years for the GEP, up to once per year.</p> <p>CEP pigging occurs once every seven years.</p>	<p>No discharges offshore. Waste sludge is collected onshore at YGP.</p> <p>Venting will occur in the event the WHP topside piping is depressurised.</p>
Pipeline maintenance and repair or replacement activities	<p>The exact details and requirements for pipeline maintenance and repair or replacement activities are determined based on results of pipeline inspections and surveys. Activities typically include:</p> <ul style="list-style-type: none"> • pipeline freespan repair (subsea gravel/grout bags installed under the pipeline to provide support) • pipeline clamp installation (installed externally around the pipeline) or repair • pipeline sectional replacement (replacement of a section of the pipeline, maximum length of 100m). <p>Pipeline maintenance and repair activities involve using support vessels and ROVs. In the event of non-routine replacement a construction vessel may be used.</p> <p>Pipeline freespan repair requires placing subsea gravel/grout bags, which are installed under the pipeline to provide support. An area of 9m² is anticipated to be disturbed or modified during the placement.</p> <p>Pipeline repair activity methodology will be developed on a case-by-case basis in accordance with the Emergency Pipeline Repair Plan (000036_DV_EX.OPS.0662.000_A012). Typically, repair options include:</p> <ul style="list-style-type: none"> • bolted or welded sleeve • mechanical clamp • platelet technology • composite repair • welded patch • flange repair • hot tapping (with bypass). <p>Where repair is not feasible, a whole section (up to 100m) of pipeline may be replaced.</p> <p>As part of pipeline repair or replacement, the pipeline is flushed with potable water or seawater treated with biocide and corrosion inhibitor or fully purged with nitrogen. Volumes required depend on length of pipeline under repair or replacement; however, typically volumes do not exceed 20m³. Potable water or treated seawater are routed to YGP on completion where they are treated and disposed of. The pipeline is made gas-free before any required cutting activities. Residual quantities of condensate may be in the pipeline only, which could be discharged upon pipeline cutting.</p>	<p>Not planned over the life of this EP; however, in the event of relevant activities (e.g., damage to pipeline) it would take approximately one month for pipeline section replacement, using a construction vessel with support vessel.</p>	<p>Residual quantities of condensate left in the pipeline (full section replacement only).</p> <p>Typically, no discharges during pipeline repair.</p>

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3.5.4 Well Operations – Rigless Well Intervention and Workover Activities

The WHP is designed for rigless intervention and workover for both planned and unexpected events. Rigless intervention and workover are performed by specialist contractors with support from Blacktip operations personnel if required.

Typically, workover operations includes placing bridge plugs just above the perforation zone and re-perforating other zones of interest in the reservoir. Wireline intervention is a contingency operation and may include:

- slickline – tubing retrievable safety valve lock-open and insert valve installation, drift run, isolation plug installation, bottom hole pressure survey, fishing operations, sand bailing operation, corrosion monitoring, etc
- e-line – production logging, re-perforation, corrosion monitoring, inflatable bridge plug installation, cement plug placement, tubing punch, tubing cutting and perforation, etc. The plugging and perforation operations are conducted on the WHP by wireline operations secured by the WHP pedestal crane.

Well intervention operations are performed in accordance with the Blacktip WOMP, including handover procedures via Well Handover Certificates, and maintenance of two independent well barriers at all times.

The frequency of rigless well intervention and workover campaigns is estimated to be once every four years, using support vessel(s). Each campaign is on average 10 days' duration for 18 personnel, however, is subject to the specific requirement of the activity.

All intervention and workover chemicals will be environmentally assessed in accordance with the process described in Section 3.6. All intervention chemicals are flowed to YPG for disposal.


3.5.5 Condensate Offtake from the Single Point Mooring

The SPM is intermittently operated for condensate offtakes to a tanker under static tow. A 12-inch CEP transports stabilised condensate from holding tanks in YGP to the offshore PLEM, then up to the SPM via a 12-inch submarine hose, for loading into an offtake tanker through a 12-inch flexible floating hose Figure 3.9 and Figure 3.10 illustrate the offtake tanker connected via the hawser to the SPM.

Offtake tanker visits are approximately two to three times per year, with visits lasting up to a week. Berthing is only undertaken in daylight hours which are half an hour before sunrise and half an hour after sunset, with mooring and hose connection to be completed within this time. Departure is at any time.

Pre-offtake visits occur via support vessel to prepare for offtake. Each offtake is approximately 36,000 barrels of condensate. Additional vessels involved in the offtake process include a static-tow vessel (tug) and a support vessel.

After offtakes, seawater is used to flush hydrocarbons in the submarine hose back to YGP. The hose is then sealed by closing the butterfly valve and installing a blank flange. The floating hose string is removed between offtakes.

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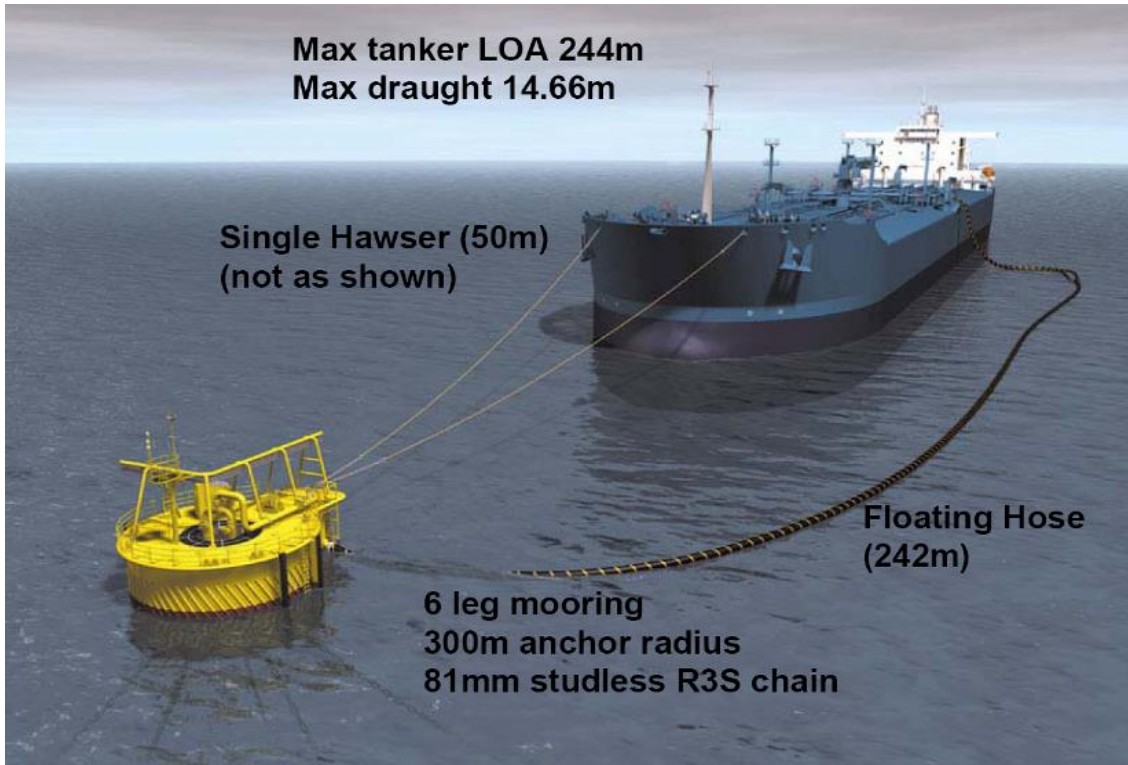



Figure 3.9: Offtake arrangement for tanker and single point mooring



Figure 3.10: Tanker moored to single point mooring for condensate offtake

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Condensate export operations are governed by the Operations Terminal Handbook (Doc No. 000036_DV_PR.DPM.0486.000) (Terminal Handbook) with which all offtake tankers are required to comply. The Terminal Handbook describes all the marine and onshore operations involved in preparing for and executing a condensate offtake and securing the facilities afterwards. These include offtake tanker standards and specifications, HSE policies (drugs and alcohol abuse, smoking, hot work, etc), pre-offtake checks, tanker and SPM safety and security checks, pilotage arrangements, mooring, loading, suspension of loading, emergency disconnection and emergency response plans. The Terminal Handbook also covers the roles and responsibilities of all personnel with specific condensate offtake duties, including the Tanker Master, the Berthing Master (or Pilot), Berthing Master's Assistant and Berthing Crew.

The onshore and offshore operating procedures in combination with the Terminal Handbook contain guidance about the way in which the CEP is to be managed during operation. Offtake tanker mooring operations and maximum loads, or stresses applied to the SPM, are detailed in the Terminal Handbook and controlled by the Terminal (Plant) Representative in conjunction with the Berthing Master and Loading Master.

Eni vets offtake tankers to ensure no substandard vessels are allowed, and offtake tankers are provided with the Terminal Handbook to enable safe mooring at the SPM.

An experienced pilot, with a nominated back-up, both of whom have extensive local knowledge and experience in condensate loading operation, moor the offtake tankers. The pilot takes charge of condensate loading operations.

SPM mooring and loading of condensate only occurs if weather conditions are suitable. As an additional safety measure, the maximum acceptable weather condition has been set below the design maximum of the SPM.


All valves and the flexible transfer hoses are checked for integrity before use. Hoses and flanges are overrated for the requirements and location.

During offtakes, condensate rates and pressures are monitored in the central control room. Condensate discharges are stopped automatically by the control system if operating limits are reached, or it can be stopped manually either by radio instruction to the central control room or activation of the remotely operated shut-down valve by the terminal representative on the offtake vessel.

3.5.6 Hook-up and Commissioning of New Wells

Hookup and commissioning refers to bringing new Blacktip wells online for production. As the WHP has pre-existing slots on the topsides for new wells, these activities are minimal and involves opening production valving. Commissioning fluids are routed to the Blacktip YGP onshore via the GEP and there is no offshore discharge. Well cleanup activities for new wells are outside the scope of this activity (covered under the Blacktip Offshore Drilling EP (000036_DV_PR.HSE.0887.000)). Support Operations

Helicopter is the quickest method of accessing the WHP. Helicopters operate out of Darwin, with trips to the WHP occurring between 2 and 6 times a year for mostly less than a day in duration. Helicopters do not refuel on the WHP.

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Vessel requirements depend on the specific offshore activity; however, are generally limited to support, survey and supply vessels required for IMR, described in Section 3.5.3. Table 3.12 details a representative vessel that may be used during Blacktip operations. Vessels operate out of Darwin or Port Keats.

Refuelling at sea is not normally required for Blacktip operations activities, given the duration of offshore activities (typically less than 14 days); however, may occur during an emergency.

Table 3.12: Typical support vessel details

Parameter	Description
Draft (max)	3.25m (max)
Length	57m
Gross tonnage	1475 Gt
Hull	Steel hull
Fuel type	Marine diesel
Total fuel volume	140m ³
Volume of largest fuel tank	30m ³
Maximum persons on board (POB)	40

In the unlikely event (not planned) that a section of the GEP is replaced (refer to Section 3.5.3 for further detail on pipeline section replacement) a larger installation vessel will be required (Table 3.13).

Table 3.13: Typical installation vessel details


Parameter	Description
Draft (max)	6m
Length	90m
Gross tonnage	4500 Gt
Hull	Steel hull
Fuel type	Marine diesel
Total fuel volume	600m ³
Volume of largest fuel tank	100m ³
Maximum persons on board (POB)	90

As referenced in Table 3.11, ROVs are required for activities such as visual inspections. ROVs are manoeuvrable submersible craft, deployed and operated from vessels, and are typically 3m long and 2m wide.

3.5.7 Bird Management

Two main safety risks have been occurring on the WHP from increased bird activity:

- potential bird strikes during helicopter flight operations
- exposure to guano which is toxic to humans and expedites corrosion of the steel structure.

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Eni personnel are required to travel to the platform (typically 2 to 6 times a year) to execute routine and non-routine IMR activities (refer to Section 3.5.3). The Blacktip WHP is subject to bird activity in between maintenance visits to the facility, particularly when there is a significant gap (3 – 6 months) between maintenance visits. This bird activity is evident by either the presence of birds or the presence of bird guano on the upper deck of the WHP, both of which are also evident on CCTV cameras. During the wet season, guano is partially or entirely washed off the facility by the seasonal rains. To manage this guano during the dry season, maintenance campaigns are preceded by a WHP cleaning program lasting between 1 and 2 days where the upper decks are washed of bird guano using freshwater in preparation for the longer planned maintenance campaigns. Seabird interaction history with the WHP is described in Section 8.2.3.3.

3.6 Chemical Assessment Process

All operational chemicals used in Blacktip operations are considered within the scope of this chemical assessment and selection process. Chemicals required for maintenance activities (such as paints, lubricants and greases), portable water treatment chemicals, emergency response chemicals and those used for domestic purposes are considered out of scope, which follows the same principles as applied in the United Kingdom under the Offshore Chemical Regulations 2002 (as Amended 2011).

3.6.1 Assessment Process


3.6.1.1 Chemicals Registered Under the Centre for Environment, Fisheries and Aquaculture Science Offshore Chemical Notification Scheme

All chemicals registered on the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) Offshore Chemical Notification Scheme (OCNS) list with assigned Hazard Quotient (HQ) Bands of Gold or Silver, or OCNS Groups E or D and have no substitution warnings or product warnings, are determined to not require further assessment, as they do not present a significant impact on the environment in standard discharge scenarios. These chemicals are considered approved for use or discharge for the Blacktip activities.

CEFAS OCNS registered chemicals with a substitution warning, product warning or HQ Bands of White, Blue, Orange, Purple or OCNS Groups of A, B or C require assessment by the Eni Environment Team to understand the environment risk of their use and discharge into the marine environment. The Eni HSE Team may either reject or approve once an ALARP assessment is documented and signed off, showing the environmental risk from their use and discharge is acceptable.

3.6.1.2 Chemicals Not Registered Under the Centre for Environment, Fisheries and Aquaculture Science Offshore Chemical Notification Scheme

All chemicals proposed for use that are not on the CEFAS OCNS register require assessment by the Eni HSE Team to understand the environment impacts of their use and discharge to the marine environment.

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3.6.1.3 As Low as Reasonably Practicable Chemical Assessment and Justification for Use/Discharge

CEFAS OCNS registered chemicals that have a substitution warning, a product warning or have HQ Bands of White, Blue, Orange or Purple, or OCNS Groups of A, B or C, and any chemical that is not registered under the CEFAS OCNS require further assessment by the Eni HSE Team in accordance with the principles of ALARP. This assessment includes:

- assessment of the chemical's application and discharge
- assessment of the ecotoxicity, biodegradation and bioaccumulation potential of the chemical in the marine environment and any other applicable environmental information available (see below)
- investigation of potential alternatives for the chemical, with preference for options that are on the OCNS Ranked List of Notified Chemicals with OCNS HQ of Gold or Silver, or are Group E or D with no substitution or product warning, or chemicals with low ecotoxicity risk (Section 3.6.2), are readily biodegradable (Section 3.6.3) and do not bioaccumulate (Section 3.6.4)
- if no more environmentally suitable alternatives are available, consideration of further risk reduction measures (e.g., controls related to use and discharge) for the specific context and implementation where relevant to ensure the risk is ALARP and acceptable
- justification of the selected chemical in respect to others available
- further risk reduction measures; i.e., specific controls on its use or future recommendations
- concurrence and sign-off by the relevant environment team lead that the environmental risk associated with the chemical use or discharge is ALARP and acceptable.


The above is included and documented in the HSE Standard: Hazardous Materials Management (ENI-HSE-ST-009).

3.6.2 Ecotoxicity Assessment

Table 3.14 and Table 3.15 can act as guidance in assessing a chemical's toxicity. Table 3.14 is used by CEFAS to group chemicals based on ecotoxicity results, 'A' representing the highest toxicity or risk to the environment and 'E' the lowest. Table 3.15 shows classifications of toxicity against ecotoxicity results.

Table 3.14: Initial Centre for Environment, Fisheries and Aquaculture Science Offshore Chemical Notification Scheme grouping

Initial grouping	A	B	C	D	E
Result for aquatic-toxicity data (ppm)	<1	>1 to 10	>10 to 100	>100 to 1000	>1000
Result for sediment-toxicity data (ppm)	<10	>10 to 100	>100 to 1000	>1000 to 10,000	>10,000

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Note: Aquatic toxicity refers to the *Skeletonema costatum* EC50, *Acartia tonsa* LC50, and *Scophthalmus maximus* (juvenile turbot) LC50 toxicity tests.

Source: DMP, 2013, *Environmental Risk Assessment of Chemicals Used in WA Petroleum Activities Guideline*

Table 3.15: Aquatic species toxicity grouping

Category	Species	LC50 and EC50 criteria
Very toxic	Fish	LC50 (96 hrs) of <1mg/l
	Crustacea	EC50 (48 hrs) of <1mg/l
	Algae/other aquatic species	ErC50 (72 or 96 hrs) of 1mg/l
Toxic	Fish	LC50 (96 hrs) of >1mg/l to > 10mg/l
	Crustacea	EC50 (48 hrs) of >1mg/l to < 10mg/l
	Algae/other aquatic species	ErC50 (72 or 96hr) of 1mg/l to < 10mg/l
Harmful	Fish	LC50 (96 hrs) of <10mg/l to <100mg/l
	Crustacea	EC50 (48 hrs) of <10mg/l to <100mg/l
	Algae/other aquatic species	ErC50 (72 or 96 hrs) of <10mg/l to <100mg/l

Source: DMP, 2013, *Environmental Risk Assessment of Chemicals Used in WA Petroleum Activities Guideline*

If a product has no specific ecotoxicity data available, then the following options should be considered:

- Ecotoxicity data for analogous products can be referred to where the chemical ingredients and composition are largely identical; for example, Portland Cement is produced by different manufacturers with some having minor variations in content, ecotoxicity from a variation product may be used with careful consideration.
- Ecotoxicity data may be referenced for each separate chemical ingredient (if known) within the product.


3.6.3 Biodegradation Assessment

The biodegradation of chemicals is assessed using the CEFAS biodegradation criteria, which aligns with the categorisation outlined in *Environmental Risk Assessment of Chemicals used in WA Petroleum Activities Guideline* (2013).

CEFAS categorises biodegradation into:

- readily biodegradable: results of >60% biodegradation in 28 days to an OSPAR harmonised offshore chemical notification format (HOCNF) accepted ready biodegradation protocol
- inherently biodegradable: results >20% and <60% to an OSPAR HOCNF accepted ready biodegradation protocol or result of >20% by OSPAR accepted inherent biodegradation study
- not biodegradable: results from OSPAR HOCNF accepted biodegradation protocol or inherent biodegradation protocol are < 20%, or half-life values derived from aquatic simulation test indicate persistence.

Chemicals with >60% biodegradation in 28 days to an OSPAR HOCNF accepted ready biodegradation protocol are considered acceptable in terms of biodegradation.

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3.6.4 Bioaccumulation Assessment

The bioaccumulation of chemicals is assessed using the CEFAS bioaccumulation criteria, which aligns with the categorisation outlined in *Environmental Risk Assessment of Chemicals used in WA Petroleum Activities Guideline (2013)*.

The following guidance is used by CEFAS:

- Non-bioaccumulative: LogPow <3, or BCF ≤100 and molecular weight is ≥700.
- Bioaccumulative: LogPow ≥3 or BC>100 and molecular weight is <700.

3.6.5 Review of Chemical Assessments

Chemical ALARP assessments for Blacktip offshore operations are reviewed annually. No chemicals are currently discharged at the WHP.

3.7 Decommissioning

Decommissioning of the Blacktip development will be undertaken in accordance with the OPGGS Act and OPGGS(E) Regulations, and any additional relevant legislation, policies – such as NOPSEMA Policy 'Section 572 Maintenance and removal of property' – and guidelines – such as DISR Guideline 'Offshore Petroleum Decommissioning Guideline' (NOPSEMA, 2022a; DISR, 2022) in force at the time.

Section 572 of the OPGGS Act places duties on titleholders to:


- Maintain all structures, equipment and property in a title area in good condition and repair
- Remove all structures, equipment and property when it is neither used nor to be used in connection with operations authorised by the title.

There may also be requirements under the *Environmental Protection (Sea Dumping) Act 1981 (Cth)* that apply to some decommissioning activities. Structures, equipment and property in NT jurisdiction will be decommissioned in accordance with relevant Territory requirements in force at the time.

In accordance with EPBC 2003/1180 (Condition 5) (refer to Table 2.2) a decommissioning plan will be submitted for approval prior to decommissioning of any the property associated with the Blacktip development (i.e. the WHP, wells, GEP, SPM and any associated infrastructure).

Blacktip currently has an end of field life of 2040, and all Blacktip property listed in Table 3.5 has a design life to at least this date. All structures, equipment and property associated within the Blacktip title areas will be maintained in good condition and repair to ensure it can be fully removed, unless there is agreement at that time from NOPSEMA to do otherwise through an accepted EP.

The location of all structures, equipment and property installed on the Blacktip title areas on either a temporary or permanent basis is detailed and tracked in the Eni Blacktip asset register and updated when status changes.

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3.7.1 Maintenance of property

Section 572(2) of the OPGGS Act provides that a titleholder must maintain in good condition and repair all structures that are, and all equipment and other property that is:

(a) in the title area; and

(b) used in connection with the operations authorised by the permit, lease, licence or authority

Through ongoing IMR activities (as described in Section 3.5.3), Eni will ensure that structures, equipment and property on the Blacktip title areas is monitored, maintained and repaired as required throughout Blacktip operations. IMR is undertaken in accordance with Eni procedures and standards relating to integrity management and maintenance to ensure that structures, equipment and property is in good condition and can be decommissioned when required.

3.7.2 Removal of property

Section 572(3) of the OPGGS Act provides that a titleholder must remove from the title area all structures that are, and all equipment and other property that is, neither used nor to be used in connection with the operations:


a. in which the titleholder is or will be engaged; and

b. that are authorised by the permit, lease, licence or authority.

Unless there is agreement from NOPSEMA to do otherwise through an accepted EP, Eni will remove from the Blacktip title areas all structures that are, and all equipment and other property that is, neither used nor to be used in connection with the Blacktip operations, as per Section 572(3) of the OPGGS Act. Section 572(7) and Section 270(3) of the OPGGS Act provide scope for in-situ decommissioning or other arrangements to be made where it can be demonstrated that the risks and impacts are ALARP and acceptable. If other arrangements for decommissioning are planned, the proposed alternative presented in an EP must comply with all other Acts and legislation.

As per the current the NOPSEMA Decommissioning Compliance Strategy (2024-2029) (NOPSEMA, 2023a), Eni will ensure Blacktip property and equipment no longer producing are targeted for decommissioning as follows:

- Floating infrastructure (e.g. the Blacktip SPM and mooring chains) are removed as soon as practicable and within 12 months of permanently ceasing production.
- All wells are plugged and abandoned within 3 years of the production system ceasing production.
- All structures, equipment and property (e.g. Blacktip WHP, GEP, CEP) that forms part of a production system are decommissioned to approved end-state as soon as reasonably practicable and no later than 5 years from that production system permanently ceasing production.

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The impacts from decommissioning activities will be reduced to levels that are ALARP through effective planning and management, described below.

3.7.3 Decommissioning Planning

The decommissioning base case for all Blacktip structures, equipment and property is full removal.

Decommissioning policy and guidelines will be considered during the decommissioning planning process, this may include:

- Guideline: Offshore Petroleum Decommissioning Guideline (DISER, 2022)
- The current NOPSEMA Decommissioning Compliance Strategy
- NOPSEMA Policy 'Section 572 Maintenance and removal of property' (NOPSEMA, 2022a)


As part of decommissioning planning Eni will undertake further technical studies and assessments to inform decisions and the assessment of removal options. These may include:

- Engineering studies, including:
 - Decommissioning studies in support of assessing removal options (including technical feasibility and equipment and vessel requirements)
- Material degradation assessments.
- Waste management studies for end point disposal (e.g., recycling, repurposing and disposal) of recovered property.
- Analysis of existing environmental data (e.g. ROV footage)
- Collection and analysis of new environmental data (e.g., sediment and water quality).
- Remediation and monitoring requirements.

Eni will have a detailed decommissioning framework no later than five years prior to the end of field life, this will include how Eni will meet the obligations under Section 572 of the OPGGS Act. The framework will include:


- Design life and status of all property on Blacktip title areas.
- Ongoing property monitoring and maintenance commitments.
- Strategy for regulatory approvals.
- Identification and schedule for regulatory approval documents and other milestones.
- Identification and schedule for technical studies and assessments.
- Identification and schedule for vessels and long lead equipment.
- Identification of environmental monitoring requirements to inform decision making.
- Overall decommissioning objective(s).

A control has been included in Table 9.2 relating to development of the decommissioning framework.

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3.7.3.1 Decommissioning Environment Plans

EPs for decommissioning will be informed by the strategy for regulatory approvals developed as part of the decommissioning framework referred to in Section 3.7.3. EPs will be developed to at least meet acceptance by the dates within in the NOPSEMA Decommissioning Compliance Strategy (2024-2029) (referenced in Section 3.7.2), with contingency applied to their acceptance schedules. To meet these dates EP development will begin at least 2 years prior to targeted acceptance dates. Technical inputs (e.g. technical studies and assessments) required for the EPs will be factored into a detailed schedule to ensure they can be readily incorporated.

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4 DESCRIPTION OF THE ENVIRONMENT

This section addresses the requirements of OPGGS(E) Regulations 21(2) and 21(3) by describing the environmental values and sensitivities that may be affected by both planned activities and unplanned events for Blacktip operations.

The description of the environmental values and sensitivities in this section applies to two spatial areas, being:

1. the Operational Area (as defined in Section 3.2.2)
2. the environment that may be affected (EMBA) or low exposure area (as defined in Section 4.1).

A third area is referenced in this EP. The zone of potential impact (ZPI) or moderate exposure zone (as defined in Section 8.5 and shown in Figure 4.1) is smaller than the EMBA and may be representative of an area of biological impact from hydrocarbons (refer Section 8.5 for more information).

The environmental values and sensitivities relevant to the Operational Area and EMBA are described in Appendix B.

The DCCEEW Protected Matters Search Tool (PMST) was used to identify matters of national environmental significance listed under the EPBC Act within the Operational Area, ZPI and EMBA (refer Appendix B attachments). This section is informed by these searches.

4.1 Determination of the Environment that May Be Affected

Stochastic hydrocarbon dispersion and fate modelling (referenced in Sections 8.6 and 8.9) has been performed on the worst case credible hydrocarbon releases from the Blacktip operations (refer Table 8.2). The EMBA (Figure 4.1) encompasses the outermost boundary of the modelled worst case spatial extent of the credible hydrocarbon release scenarios, based on the hydrocarbon low exposure values presented (described in Section 8.5).

Table 4.1: Credible hydrocarbon release scenarios and exposure thresholds applied to create the environment that may be affected

Spill scenario	Modelling	Section
4943m ³ surface loss of Blacktip condensate as a result of a uncontrolled release during production operations (including rigless intervention activities)	RPS, 2019	Section 8.6
100m ³ surface loss of marine diesel oil (MDO) from vessel collision at the Commonwealth/State waters boundary	RPS, 2023	Section 8.9

Stochastic modelling compensates for the uncertainty associated with any single hydrocarbon spill event, such that risk assessment and spill response planning are more robust and conservative by covering a wide range of possible scenarios. The footprint of an actual spill event is more accurately represented by only one of the simulations from the stochastic modelling, resulting in a much smaller spatial footprint.



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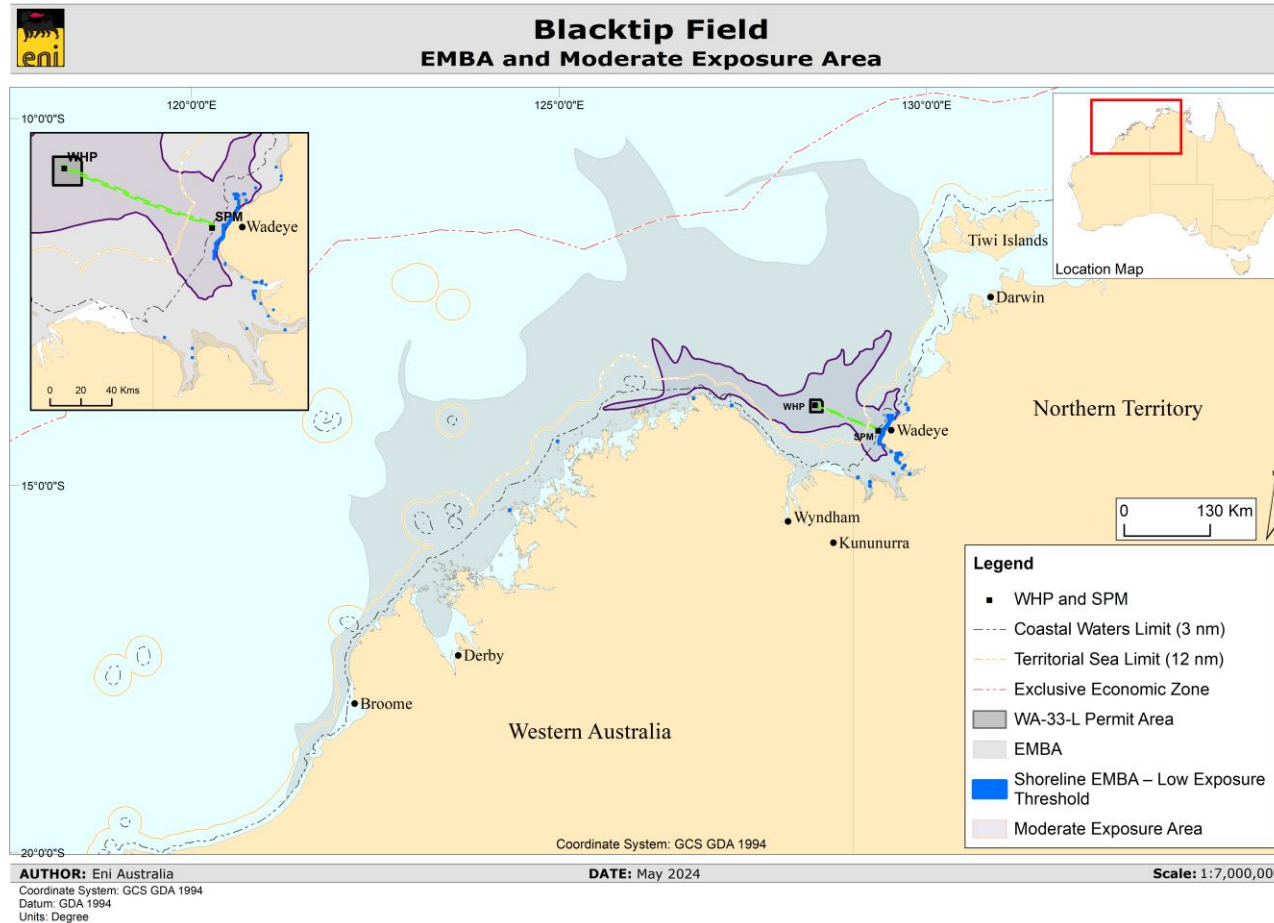



Figure 4.1: The environment that may be affected (EMBA) and moderate exposure area (ZPI) for the Blacktip operations

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4.2 Relevant Values and Sensitivities of the Environment

Table 4.2 and Table 4.3 summarise the MNES (EPBC Act) identified as potentially occurring within the Operational Area and EMBA, respectively, as determined by the PMST results (Appendix B).

Additional information about identified MNES is provided throughout this section and in Appendix B.

Table 4.2: Summary of matters of national environmental significance within the Operational Area

MNES	Number	Relevant section
World Heritage Properties	0	N/A
National Heritage Places	0	Section 4.5.2
Wetlands of International Importance (Ramsar)	0	Section 4.5.3
Commonwealth Marine Areas	1	Section 4.5.1
Listed Threatened Ecological Communities	0	N/A
Listed Threatened Species ¹	21	Section 4.4
Listed Migratory Species ^{1 2}	38	Section 4.4

Note 1: Terrestrial species (such as terrestrial mammals, reptiles and birds) that appear in the PMST results of the EMBA and do not have habitats along shorelines are not relevant to the activity impacts and risks and are, therefore, not discussed further in this EP.


Note 2: The EPBC Act categorises migratory and threatened species independently; therefore, migratory species can also be threatened.

Table 4.3: Summary of matters of national environmental significance within the environment that may be affected

MNES	Number	Relevant section
World Heritage Properties	0	N/A
National Heritage Places	1	Section 4.5.2
Wetlands of International Importance (Ramsar)	3	Section 4.5.3
Commonwealth Marine Areas	4	Section 4.5.1
Listed Threatened Ecological Communities	1	N/A
Listed Threatened Species ¹	36	Section 4.4
Listed Migratory Species ^{1 2}	77	Section 4.4

Note 1: Terrestrial species (such as terrestrial mammals, reptiles and birds) that appear in the PMST results of the EMBA and do not have habitats along shorelines are not relevant to the activity impacts and risks and are therefore, not discussed further in this EP.

Note 2: The EPBC Act categorises migratory and threatened species independently, therefore migratory species can also be threatened.

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4.3 Regional Setting

The Blacktip operations are within the JBG, which lies over the Sahul Shelf in the Timor Sea from west of Bathurst Island to the eastern boundary of the North-west Marine Region (Figure 4.2). The JBG is characterised by complex geomorphology, including:

- coastal, shelf and basin features
- dissected banks, shoals, valleys, and terraces on the Van Diemen Rise
- deeper areas on the shelf slope to the north of the Van Diemen Rise.

The JBG is an area of soft substrate expanses with localised rocky outcrops, gravel deposits, and raised features. Some areas contain high densities of pockmarks and sand waves; calcarenite subcrops occur in the far northwest in an 11km wide palaeochannel. Benthic communities are exposed to strong tidal currents, high turbidity and substantial sediment mobility, with disturbance decreasing offshore. The Operational Area is in the upper (outer) reaches of the JBG, in an area of relatively flat, featureless seabed. Sediments are predominantly very soft, grey-green, gravelly sand clays (Woodside, 2004).

The Bonaparte Basin, which dominates the western portion of the JBG system, was formed between 15,000 to 13,000 years ago after rapid sea level rise inundated most of the Sahul Shelf, creating fully open marine conditions within the area known as the Bonaparte Depression. During the Late Quaternary, the environment of the Bonaparte Depression varied with fluctuating sea levels and climatic conditions, from an estuarine embayment to a shallow, freshwater lake. Extensive palaeoriver channels, some up to 150km long, 5km wide and 240m deep, connect the present-day basin to the old shoreline at the edge of the shelf (Heyward *et al.*, 1997).

The JBG has been included in several continent scale habitat classifications. The most recent, the Commonwealth bioregionalisation (Integrated Marine and Coastal Regionalisation of Australia [IMCRA] 4.0), places most of the JBG into a single provincial bioregion: the Northwest Shelf Transition. IMCRA further classifies Australia's marine regions into smaller meso-scale bioregions, five of which overlap the JBG.

The seabed and benthic habitats relevant to the Operational Area and EMBA are described in Appendix B.



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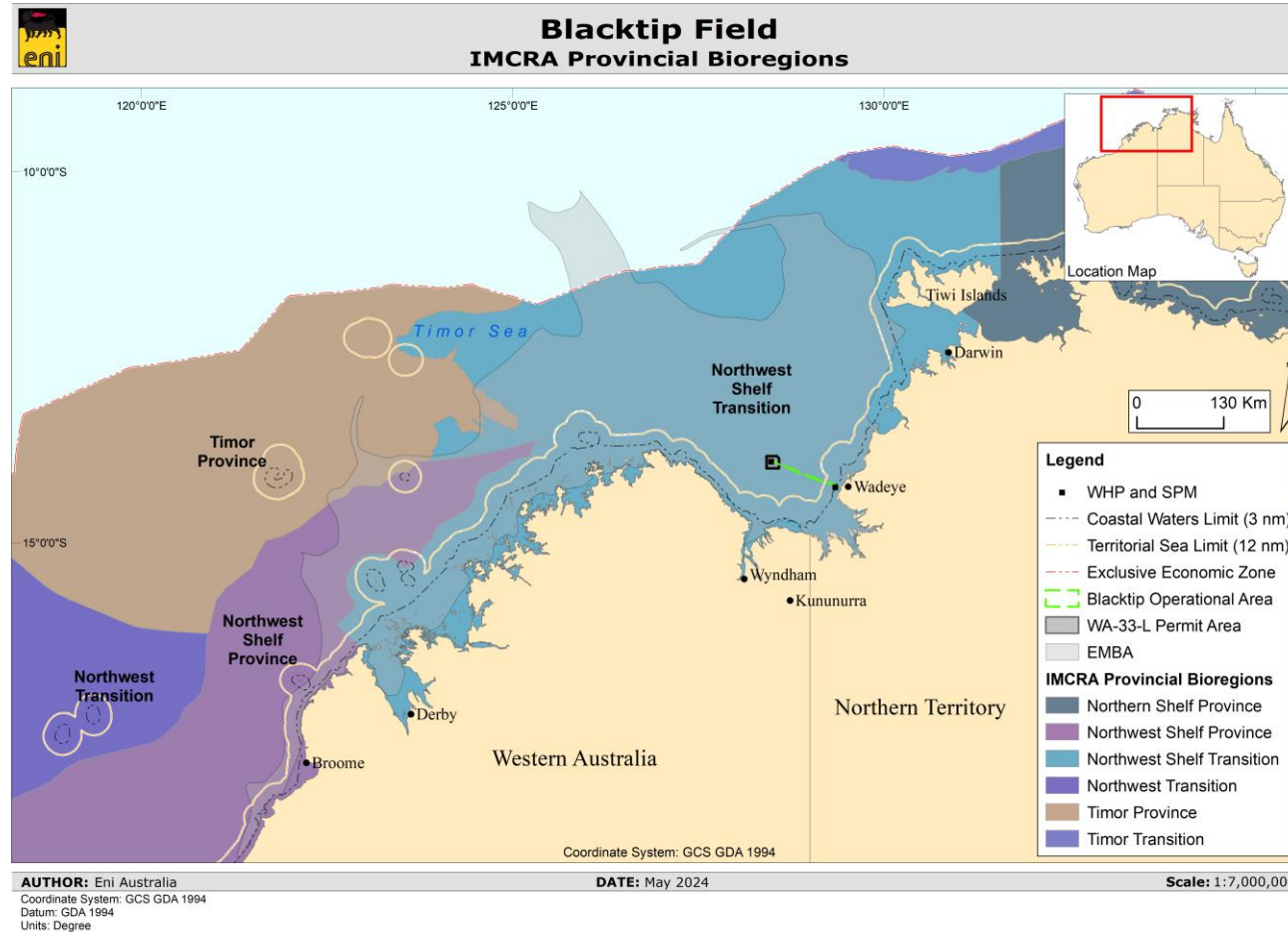



Figure 4.2: Provincial bioregions within the Operational Area and environment that may be affected

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4.4 Threatened and Migratory Species and Ecological Communities

The EPBC PMST was searched using areas that covered the full extent of the Operational Area and EMBA, respectively, to identify MNES under the EPBC Act. Full PMST Reports for the Operational Area and EMBA are included in Appendix B. The PMST results identified 21 marine fauna species listed as 'threatened' and 38 marine fauna species listed as 'migratory' within the Operational Area. In the EMBA there were 36 'threatened' and 77 'migratory' species identified, (Table 4.2). All the species listed as 'threatened' under the EPBC Act are also Protected under WA State legislation under the *Biodiversity Conservation Act 2016*. The identified threatened and migratory species are described in Appendix B.

An examination of the species profile and threats database (DCCEE, 2024a) showed some threatened species were not expected to occur in significant numbers in the marine and coastal environments (within the EMBA) due to their terrestrial distributions. Terrestrial species (such as terrestrial mammals, reptiles and birds) that appear in the PMST of the EMBA and do not have habitats along shorelines are not relevant to the Blacktip operations activities impacts and have been excluded from Table 4.2.

Species with designated BIAs and habitat critical to their survival (Habitat Critical) overlapping the EMBA and Operational Area have been identified in Section 4.4.1 and Section 4.4.2, respectively.


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Table 4.4: Commonwealth listed threatened and migratory species within the Operational Area and environment that may be affected

Scientific name	Common name	EPBC status	Presence in Operational Area	Presence in EMBA
Marine mammals				
<i>Balaenoptera borealis</i>	Sei whale	Migratory/Vulnerable	Species or species habitat may occur within area	Species or species habitat likely to occur within area
<i>Balaenoptera edeni</i>	Bryde's whale	Migratory	Species or species habitat may occur within area	Species or species habitat likely to occur within area
<i>Balaenoptera musculus</i>	Blue whale	Migratory/Endangered	Species or species habitat may occur within area	Migration route known to occur within area
<i>Balaenoptera physalus</i>	Fin whale	Migratory/Vulnerable	Species or species habitat may occur within area	Species or species habitat likely to occur within area
<i>Dugong dugon</i>	Dugong	Migratory	Species or species habitat may occur within area	Migration route known to occur within area
<i>Megaptera novaeangliae</i>	Humpback whale	Migratory	Species or species habitat likely to occur within area	Breeding known to occur within area
<i>Orcaella heinsohni</i>	Australian snubfin dolphin	Migratory	N/A	Species or species habitat known to occur within area
<i>Orcinus orca</i>	Killer whale	Migratory	Species or species habitat may occur within area	Species or species habitat may occur within area
<i>Physeter macrocephalus</i>	Sperm whale	Migratory	N/A	Species or species habitat may occur within area
<i>Sousa sahalensis</i>	Australian humpback dolphin	Migratory	N/A	Breeding known to occur within area
<i>Tursiops aduncus</i> (Arafura/Timor Sea populations)	Spotted bottlenose dolphin	Migratory	Species or species habitat likely to occur within area	Species or species habitat known to occur within area



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Scientific name	Common name	EPBC status	Presence in Operational Area	Presence in EMBA
Marine reptiles				
<i>Aipysurus apraefrontalis</i>	Short-nosed sea snake	Critically Endangered	N/A	Species or habitat likely to occur
<i>Aipysurus foliosquama</i>	Leaf-scaled sea snake	Critically Endangered	N/A	Species or species habitat may occur within area
<i>Aipysurus fuscus</i>	Dusky sea snake	Endangered	N/A	Species or species habitat may occur within area
<i>Caretta caretta</i>	Loggerhead turtle	Migratory/Endangered	Species or species habitat likely to occur within area	Foraging, feeding or related behaviour known to occur within area
<i>Chelonia mydas</i>	Green turtle	Vulnerable/Migratory	Species or species habitat known to occur within area	Breeding known to occur within area
<i>Crocodylus porosus</i>	Saltwater crocodile	Migratory	N/A	Species or habitat likely to occur
<i>Dermochelys coriacea</i>	Leatherback turtle	Migratory/Endangered	Species or species habitat likely to occur within area	Breeding likely to occur within area
<i>Eretmochelys imbricata</i>	Hawksbill turtle	Migratory/Vulnerable	Species or species habitat likely to occur within area	Foraging, feeding or related behaviour known to occur within area
<i>Lepidochelys olivacea</i>	Olive ridley turtle	Migratory/Endangered	Species or species habitat known to occur within area	Foraging, feeding or related behaviour known to occur within area
<i>Natator depressus</i>	Flatback turtle	Migratory/Vulnerable	Congregation or aggregation known to occur within area	Breeding known to occur within area
<i>Varanus Mitchcelli</i>	Mitchell's water monitor	Critically Endangered	N/A	Species or species habitat likely to occur within area
<i>Varanus mertensi</i>	Mertens' water monitor	Endangered	N/A	Species or species habitat known to occur within area



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Scientific name	Common name	EPBC status	Presence in Operational Area	Presence in EMBA
Fish, sharks and rays				
<i>Anoxypristis cuspidata</i>	Narrow sawfish	Migratory	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
<i>Carcharhinus longimanus</i>	Oceanic whitetip shark	Migratory	Species or species habitat may occur within area	Species or species habitat may occur within area
<i>Carcharodon carcharias</i>	Great white shark	Migratory/Vulnerable	Species or species habitat may occur within area	Species or species habitat may occur within area
<i>Carcharias taurus</i>	Grey nurse shark	Migratory	Species or species habitat may occur within area	Species or species habitat may occur within area
<i>Glyphis garricki</i>	Northern river shark	Endangered	Species or species habitat may occur within area	Breeding known to occur within area
<i>Glyphis glyphis</i>	Speartooth shark	Critically Endangered	Species or species habitat may occur within area	Species or species habitat may occur within area
<i>Isurus oxyrinchus</i>	Shortfin mako	Migratory	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
<i>Isurus paucus</i>	Longfin mako	Migratory	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
<i>Mobula alfredi</i>	Reef manta ray	Migratory	Species or species habitat likely to occur within area	Species or species habitat known to occur within area
<i>Mobula birostris</i>	Giant manta ray	Migratory	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
<i>Pristis clavata</i>	Dwarf sawfish	Migratory/Vulnerable	Species or species habitat known to occur within area	Breeding known to occur within area
<i>Pristis pristis</i>	Freshwater sawfish	Migratory/Vulnerable	Species or species habitat may occur within area	Species or species habitat known to occur within area
<i>Pristis zijsron</i>	Green sawfish	Migratory/Vulnerable	Species or species habitat known to occur within area	Breeding known to occur within area



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<i>Rhincodon typus</i>	Whale shark	Migratory/Vulnerable	Species or species habitat may occur within area	Foraging, feeding or related behaviour known to occur within area
<i>Sphyrna lewini</i>	Scalloped hammerhead	Conservation Dependent	Species or species habitat likely to occur within area	Species or species habitat known to occur within area
Birds				
<i>Acrocephalus orientalis</i>	Oriental reed-warbler	Migratory	N/A	Species or species habitat known to occur within area
<i>Actitis hypoleucos</i>	Common sandpiper	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
<i>Anous stolidus</i>	Common noddy	Migratory	Species or species habitat may occur within area	Species or species habitat likely to occur within area
<i>Anous tenuirostris melanops</i>	Australian lesser noddy	Vulnerable	N/A	Breeding known to occur within area
<i>Apus pacificus</i>	Fork-tailed swift	Migratory	Species or species habitat likely to occur within area	Species or species habitat likely to occur within area
<i>Arena interpres</i>	Ruddy Turnstone	Migratory/vulnerable	N/A	Roosting known to occur within area
<i>Calidris acuminata</i>	Sharp-tailed sandpiper	Migratory	Species or species habitat may occur within area	Roosting known to occur within area
<i>Calidris alba</i>	Sanderling	Migratory	N/A	Roosting known to occur within area
<i>Calidris canutus</i>	Red knot	Migratory/Endangered	Species or species habitat may occur within area	Species or species habitat known to occur within area
<i>Calidris ferruginea</i>	Curlew sandpiper	Migratory/Critically Endangered	Species or species habitat may occur within area	Species or species habitat known to occur within area



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<i>Calidris melanotos</i>	Pectoral sandpiper	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
<i>Calidris ruficollis</i>	Red-necked stint	Migratory	N/A	Roosting known to occur within area
<i>Calidris tenuirostris</i>	Great knot	Migratory/Critically Endangered	N/A	Roosting known to occur within area
<i>Calonectris leucomelas</i>	Streaked shearwater	Migratory	Species or species habitat likely to occur within area	Species or species habitat known to occur within area
<i>Cecropis daurica</i>	Red-rumped swallow	Migratory	N/A	Species or species habitat may occur within area
<i>Charadrius leschenaultii</i>	Greater sand plover	Migratory/Vulnerable	N/A	Species or species habitat known to occur within area
<i>Charadrius mongolus</i>	Lesser sand plover	Migratory/Endangered	N/A	Roosting known to occur within area
<i>Charadrius veredus</i>	Oriental plover	Migratory	N/A	Roosting known to occur within area
<i>Erythrotriorchis radiatus</i>	Red goshawk	Vulnerable	N/A	Species or species habitat known to occur within area
<i>Fregata ariel</i>	Lesser frigatebird	Migratory	Species or species habitat likely to occur within area	Breeding known to occur within area
<i>Fregata minor</i>	Great frigatebird	Migratory	Species or species habitat may occur within area	Species or species habitat likely to occur within area
<i>Gallinago megala</i>	Swinhoe's snipe	Migratory	N/A	Roosting likely to occur within area
<i>Gallinago stenura</i>	Pin-tailed snipe	Migratory	N/A	Roosting likely to occur within area
<i>Glareola maldivarum</i>	Oriental pratincole	Migratory	N/A	Roosting known to occur within area
<i>Hydroprogne caspia</i>	Caspian tern	Migratory	N/A	Breeding known to occur within area

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<i>Limicola falcinellus</i>	Broad-billed sandpiper	Migratory	N/A	Roosting known to occur within area
<i>Limnodromus semipalmatus</i>	Asian dowitcher	Migratory	N/A	Species or species habitat known to occur within area
<i>Limosa lapponica</i>	Bar-tailed godwit	Migratory	N/A	Species or species habitat known to occur within area
<i>Limosa lapponica baueri</i>	Nunivak bar-tailed godwit	Vulnerable	N/A	Species or species habitat may occur within area
<i>Limosa lapponica menzbieri</i>	Northern Siberian bar-tailed godwit	Critically Endangered	N/A	Species or species habitat known to occur within area
<i>Limosa limosa</i>	Black-tailed godwit	Migratory	N/A	Roosting known to occur within area
<i>Numenius madagascariensis</i>	Eastern curlew	Migratory/Critically Endangered	Species or species habitat may occur within area	Species or species habitat known to occur within area
<i>Numenius minutus</i>	Little curlew	Migratory	N/A	Roosting known to occur within area
<i>Numenius phaeopus</i>	Whimbrel	Migratory	N/A	Roosting known to occur within area
<i>Onychoprion anaethetus</i>	Bridled tern	Migratory	N/A	Breeding known to occur within area
<i>Pandion haliaetus</i>	Osprey	Migratory	N/A	Breeding known to occur within area
<i>Papasula abbotti</i>	Abbott's booby	Endangered	N/A	Species or species habitat may occur within area
<i>Phaethon lepturus</i>	White-tailed tropicbird	Migratory	Species or species habitat may occur within area	Species or species habitat known to occur within area
<i>Phaethon rubricauda westralis</i>	Red-tailed Tropicbird (Indian Ocean)	Endangered	Species or species habitat may occur within area	Species or species habitat known to occur within area



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Scientific name	Common name	EPBC status	Presence in Operational Area	Presence in EMBA
<i>Calidris pugnax</i>	Ruff	Migratory	N/A	Roosting known to occur within area
<i>Pluvialis fulva</i>	Pacific golden plover	Migratory	N/A	Roosting known to occur within area
<i>Pluvialis squatarola</i>	Grey plover	Migratory	N/A	Roosting known to occur within area
<i>Rostratula australis</i>	Australian painted snipe	Endangered	N/A	Species or species habitat likely to occur within area
<i>Sterna dougallii</i>	Roseate tern	Migratory	N/A	Breeding known to occur within area
<i>Sternula albifrons</i>	Little tern	Migratory	N/A	Breeding known to occur within area
<i>Sula dactylatra</i>	Masked booby	Migratory	N/A	Breeding known to occur within area
<i>Sula leucogaster</i>	Brown booby	Migratory	N/A	Breeding known to occur within area
<i>Sula sula</i>	Red-footed booby	Migratory	N/A	Breeding known to occur within area
<i>Thalasseus bergii</i>	Greater crested tern	Migratory	N/A	Breeding known to occur within area
<i>Tringa brevipes</i>	Grey-tailed tattler	Migratory	N/A	Roosting known to occur within area
<i>Tringa nebularia</i>	Common greenshank	Migratory	N/A	Species or species habitat known to occur within area
<i>Tringa stagnatilis</i>	Marsh sandpiper	Migratory	N/A	Roosting known to occur within area
<i>Tringa totanus</i>	Common redshank	Migratory	N/A	Roosting known to occur within area

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Scientific name	Common name	EPBC status	Presence in Operational Area	Presence in EMBA
<i>Xenus cinereus</i>	Terek sandpiper	Migratory	N/A	Roosting known to occur within area

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4.4.1 Biologically Important Areas

BIA's are those locations where aggregations of members of a species are known to undertake biologically important behaviours, such as breeding, resting, foraging or migration. BIA's have been identified using expert scientific knowledge about species' abundance, distribution and behaviours. BIA's identified within the Operational Area and EMBA are identified in Table 4.5.



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Table 4.5: Biologically important areas within the Operational Area and environment that may be affected

Species	BIA type	Overlaps Operational Area	Overlaps EMBA	Distance from Operational Area (km)	Figure
Marine mammals					
Australian snubfin dolphin	Reproduction (breeding)	No	Yes	100km west	Figure 4.3
	Reproduction (calving)	No	Yes	85km south	
	Foraging	No	Yes	100km west	
	Resting	No	Yes	130km west	
Indo-Pacific humpback dolphin	Foraging	No	Yes	270km west	Figure 4.4
	Reproduction (breeding)	No	Yes	385km south-west	
Indo-Pacific/spotted bottlenose dolphin	Reproduction (calving)	No	Yes	430km south-west	Figure 4.5
	Foraging	No	Yes	560km south-west	
Dugong	Foraging	No	Yes	640km south-west	-
Humpback whale	Reproduction (nursing)	No	Yes	370km south west-west	Figure 4.6
	Migration	No	Yes	750km south-west	
Pygmy blue whale	Migration	No	Yes	430km north west-west	Figure 4.7
Marine reptiles					
Green turtle	Foraging	Yes	Yes	Overlaps	Figure 4.8
	Reproduction (nesting)	No	Yes	300km west	
	Reproduction (internesting buffer)	No	Yes	285km west	
Flatback turtle	Reproduction (internesting buffer)	No	Yes	8km south	Figure 4.9
	Reproduction (internesting)	No	Yes	160km north-west	
	Foraging	No	Yes	95km north	
Loggerhead turtle	Foraging	No	Yes	100km north	Figure 4.10



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Species	BIA type	Overlaps Operational Area	Overlaps EMBA	Distance from Operational Area (km)	Figure
Olive ridley turtle	Foraging	Yes	Yes	Overlaps	Figure 4.11
Fish, sharks and rays					
Dwarf sawfish	Foraging	No	Yes	470km south-west	-
	Reproduction (nursing)	No	Yes	600km south-west	-
Freshwater sawfish	Foraging	No	Yes	614km south-west	-
Green sawfish	Foraging	No	Yes	470km south-west	-
	Reproduction (pupping)	No	Yes	650km south-west	-
	Reproduction (nursing)	No	Yes	900km south-west	-
Whale shark	Foraging	No	Yes	280km west	Figure 4.12
Seabirds and shorebirds					
Lesser crested tern	Reproduction	No	Yes	55km south west-west	Figure 4.13
Lesser frigate bird	Reproduction	No	Yes	180km west	
Roseate tern	Reproduction	No	Yes	180km west	
Brown booby	Reproduction	No	Yes	400km south west-west	
Greater frigatebird	Reproduction	No	Yes	490km south west-west	
Little tern	Reproduction	No	Yes	270km west	
	Resting	No	Yes	560km south-west	
Red-footed booby	Reproduction	No	Yes	500km south west-west	
Wedge-tailed shearwater	Reproduction	No	Yes	600km north west-west	
White-tailed tropicbird	Reproduction	No	Yes	600km north west-west	



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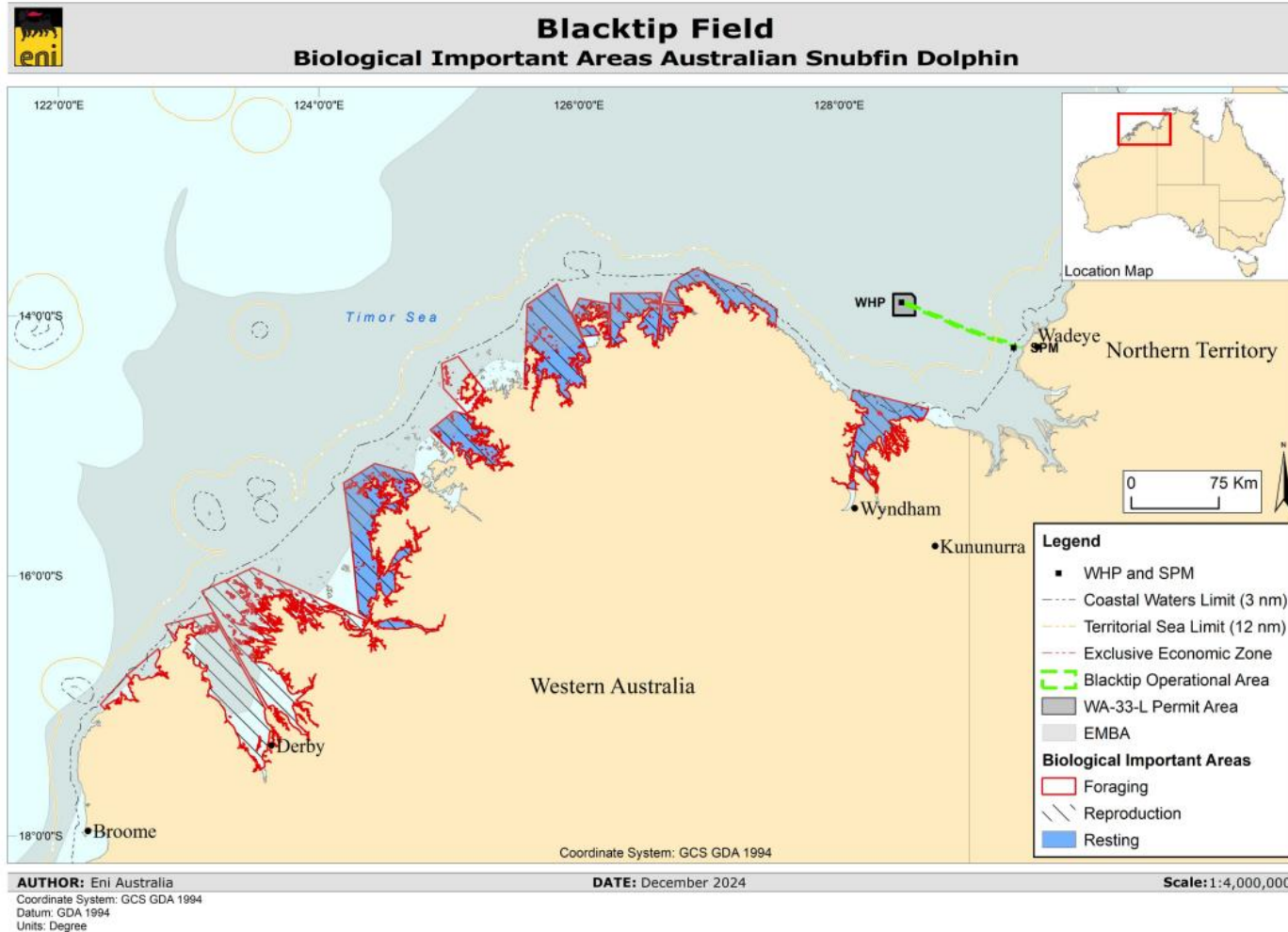



Figure 4.3: Biologically important areas for the Australian snubfin dolphin within the environment that may be affected

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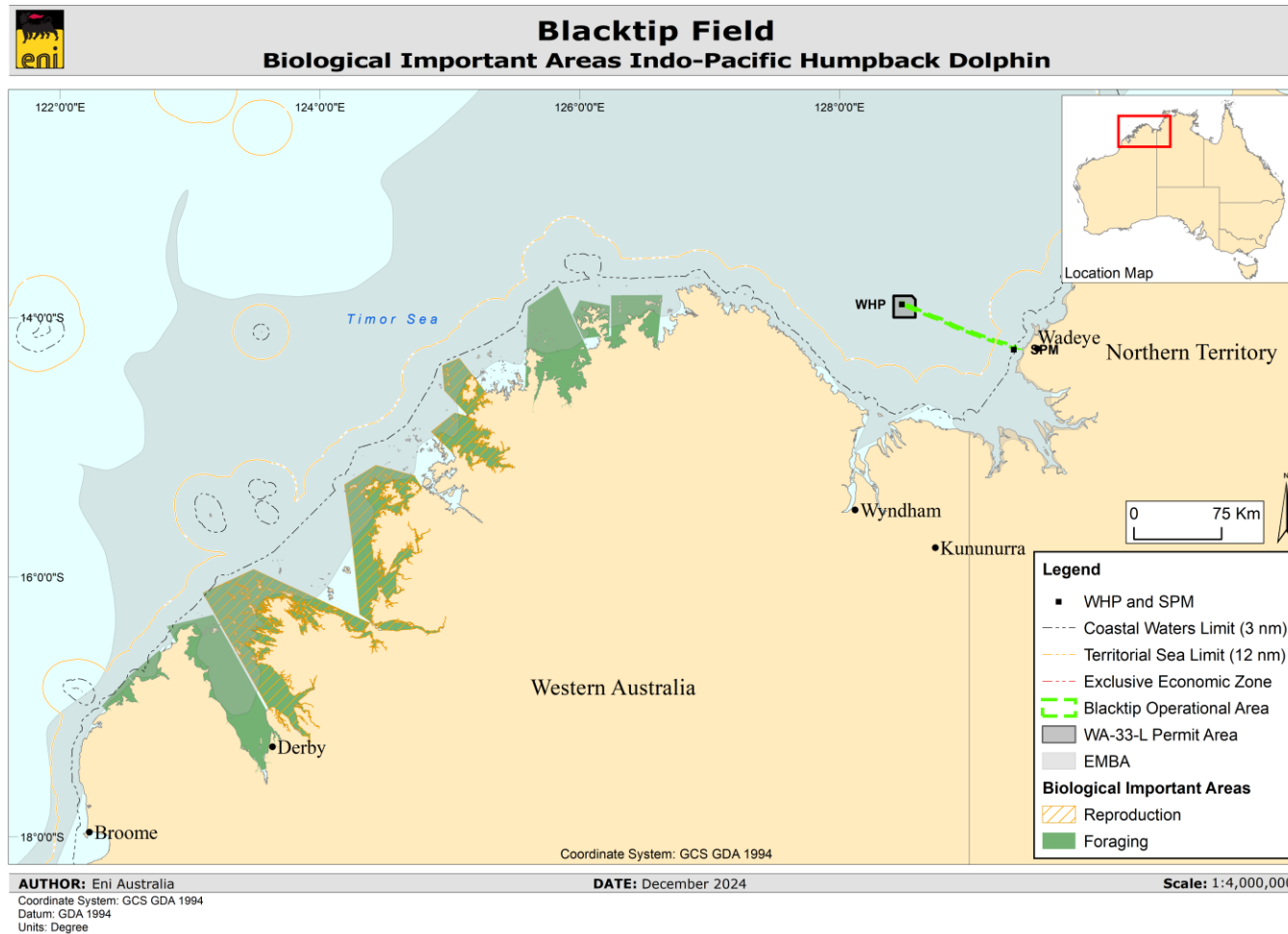


Figure 4.4: Biologically important areas for the Indo-Pacific humpback dolphin within the environment that may be affected



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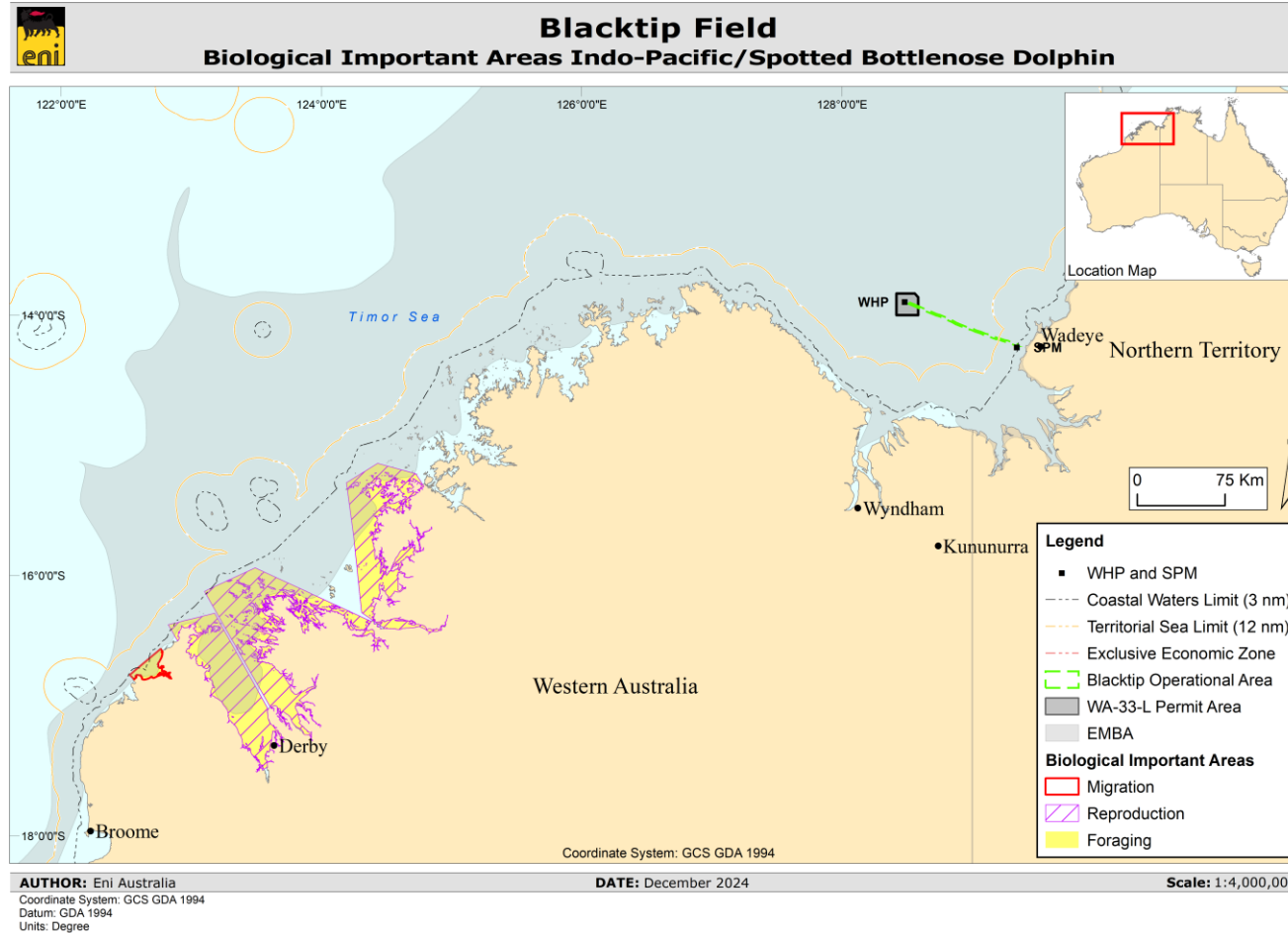



Figure 4.5: Biologically important areas for the spotted bottlenose dolphin

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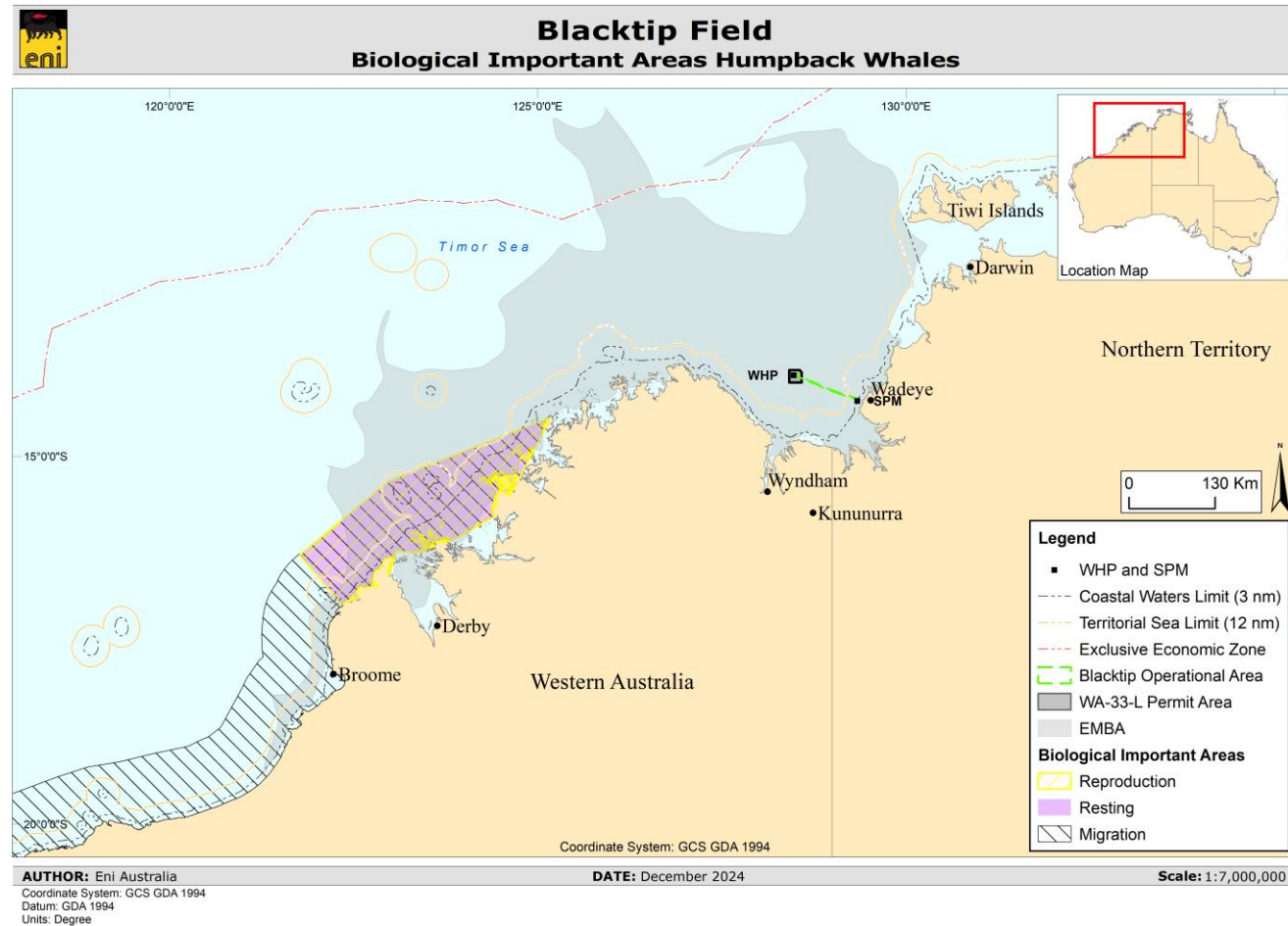


Figure 4.6: Biologically important areas for the humpback whale within the environment that may be affected



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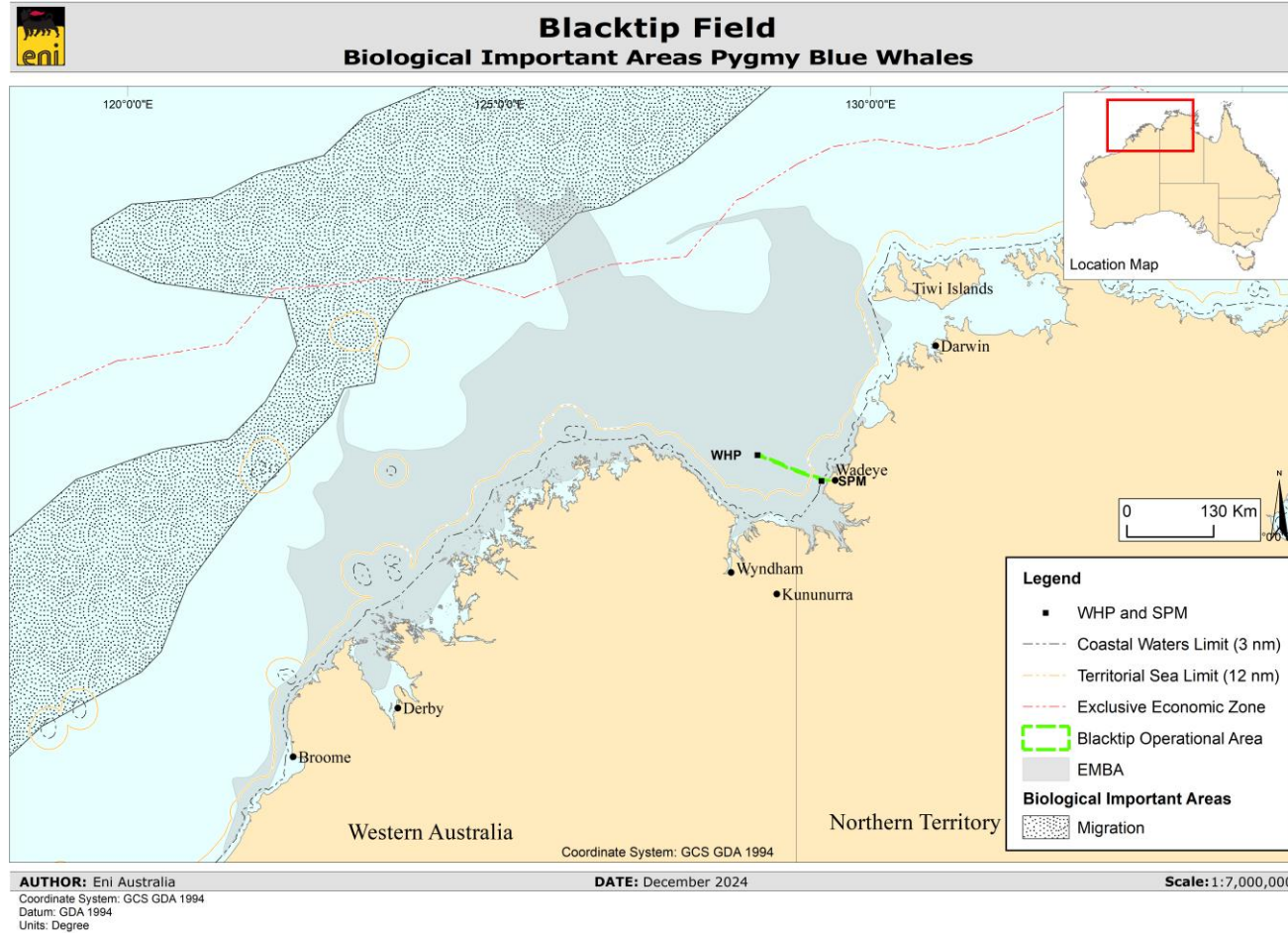



Figure 4.7: Biologically important areas for pygmy blue whales within the environment that may be affected

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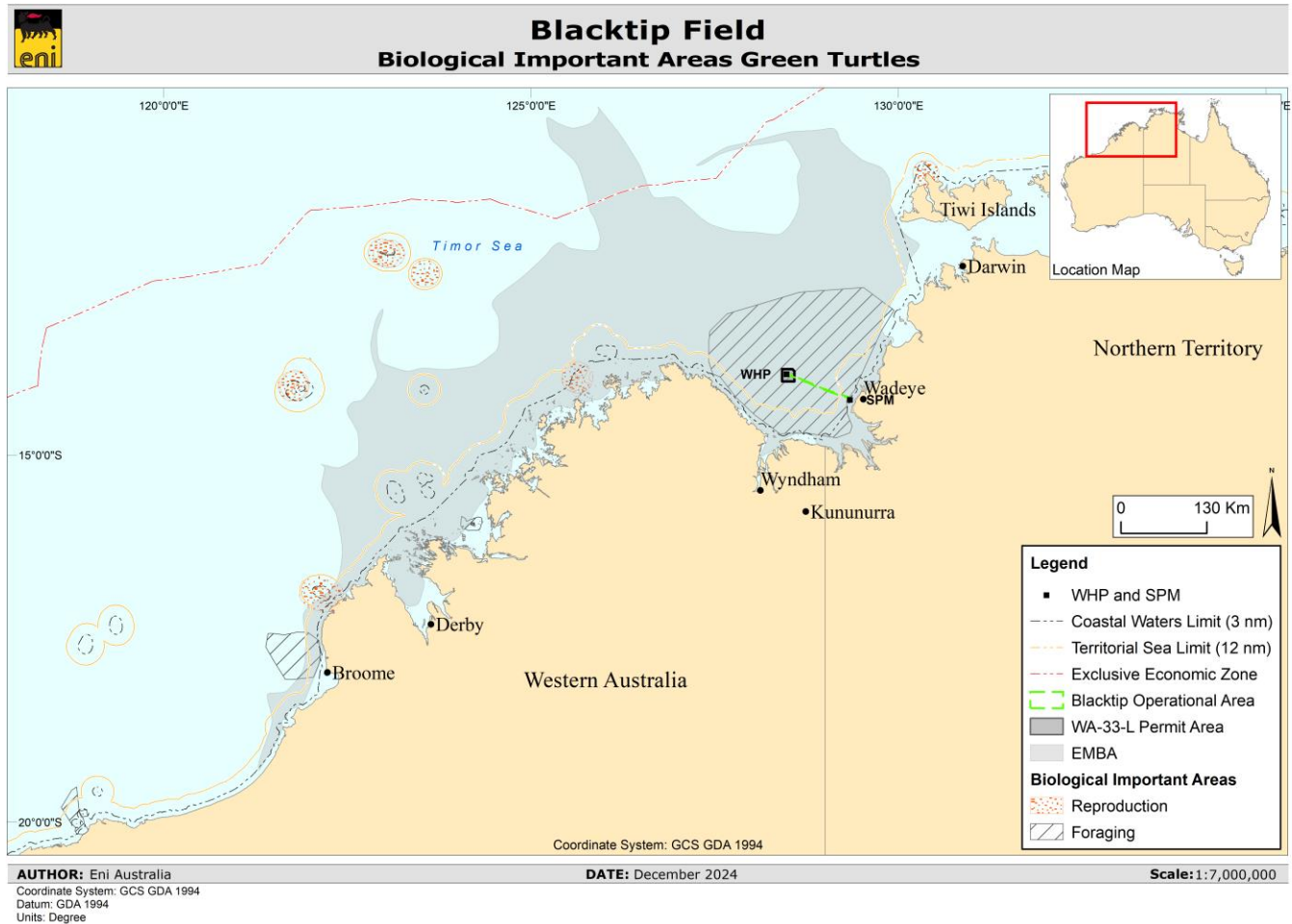



Figure 4.8: Biologically important areas for the green turtle within the environment that may be affected

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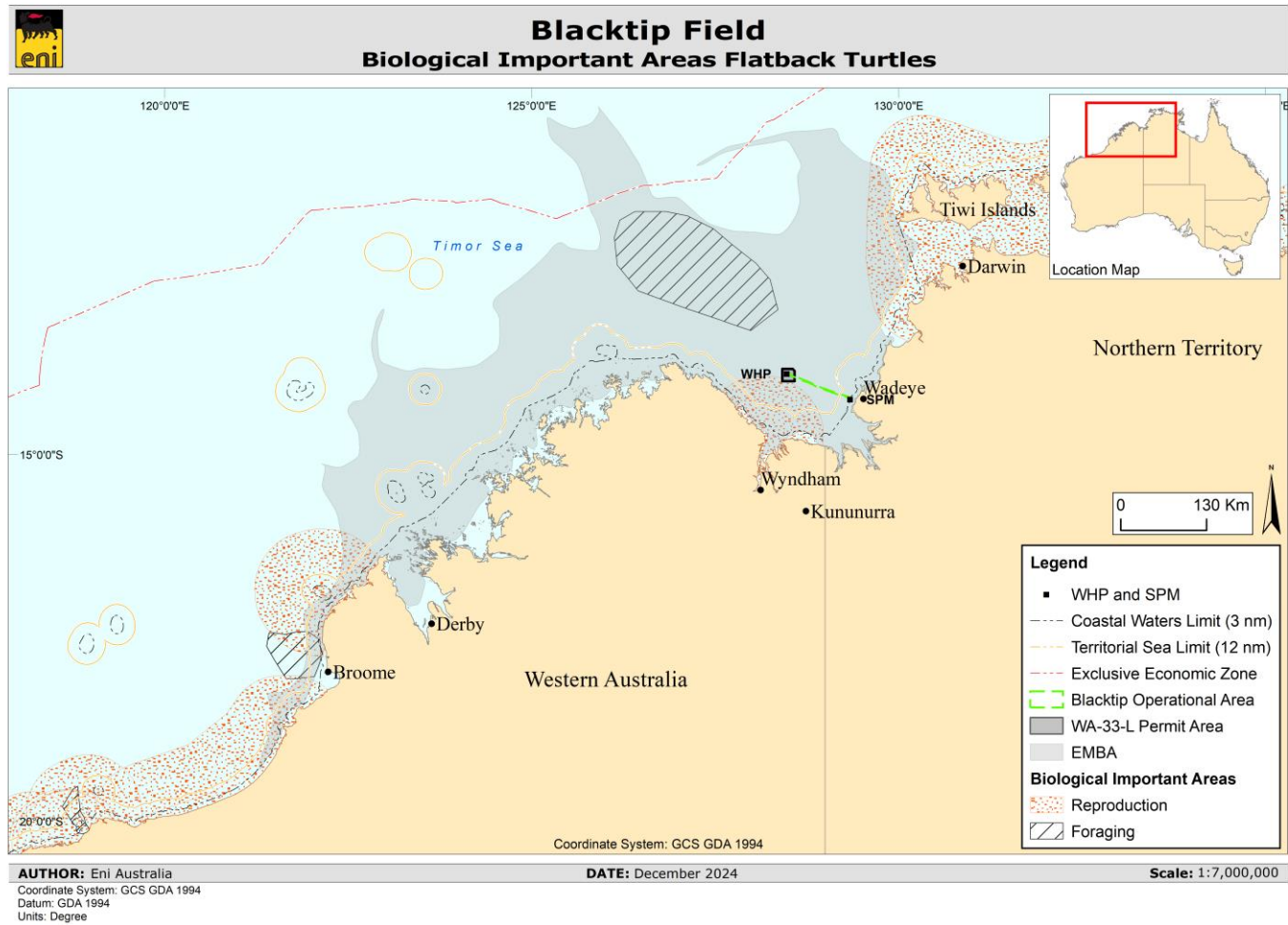



Figure 4.9: Biologically important areas for the flatback turtle within the environment that may be affected

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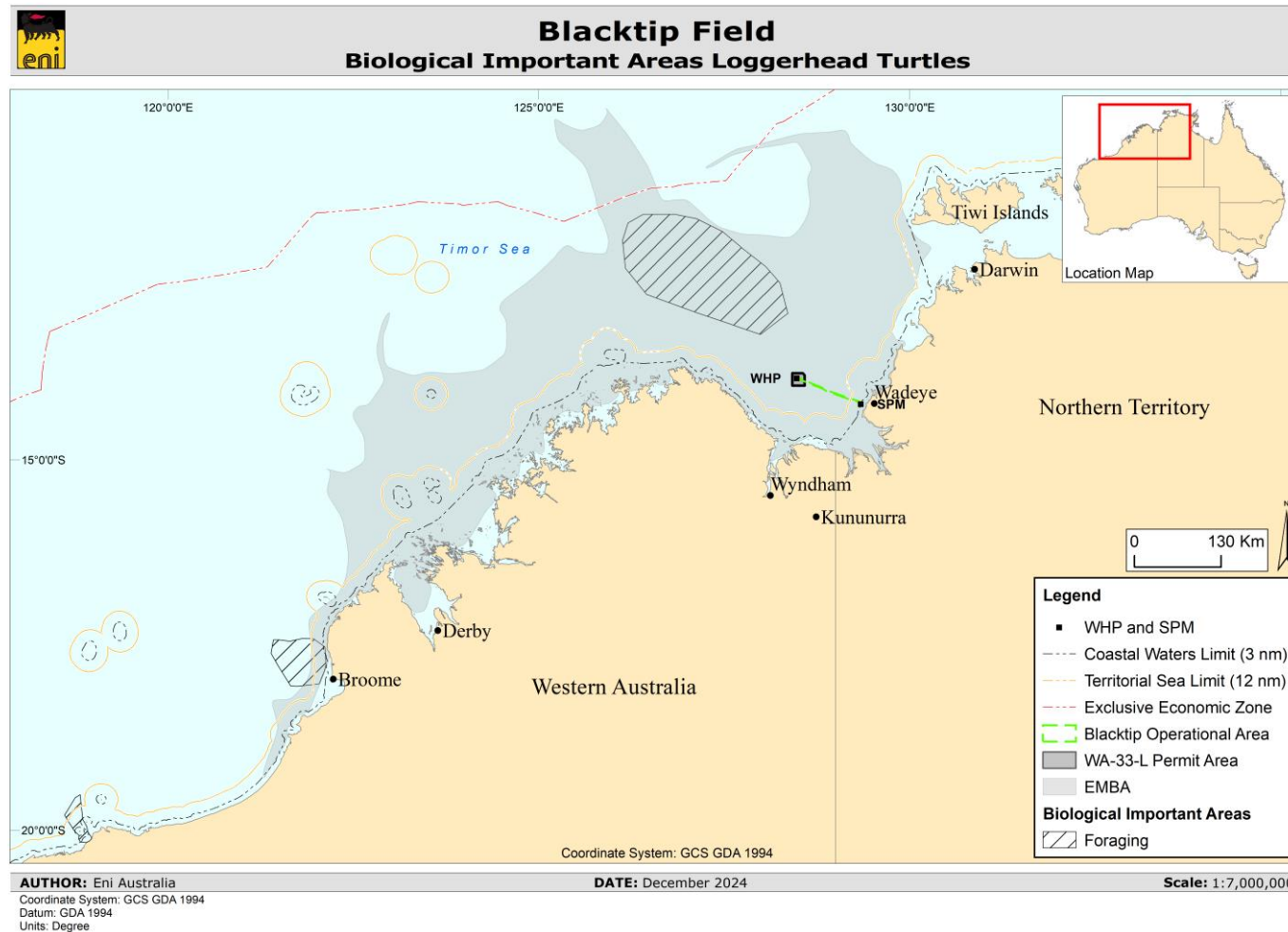


Figure 4.10: Biologically important areas for the loggerhead turtle within the environment that may be affected



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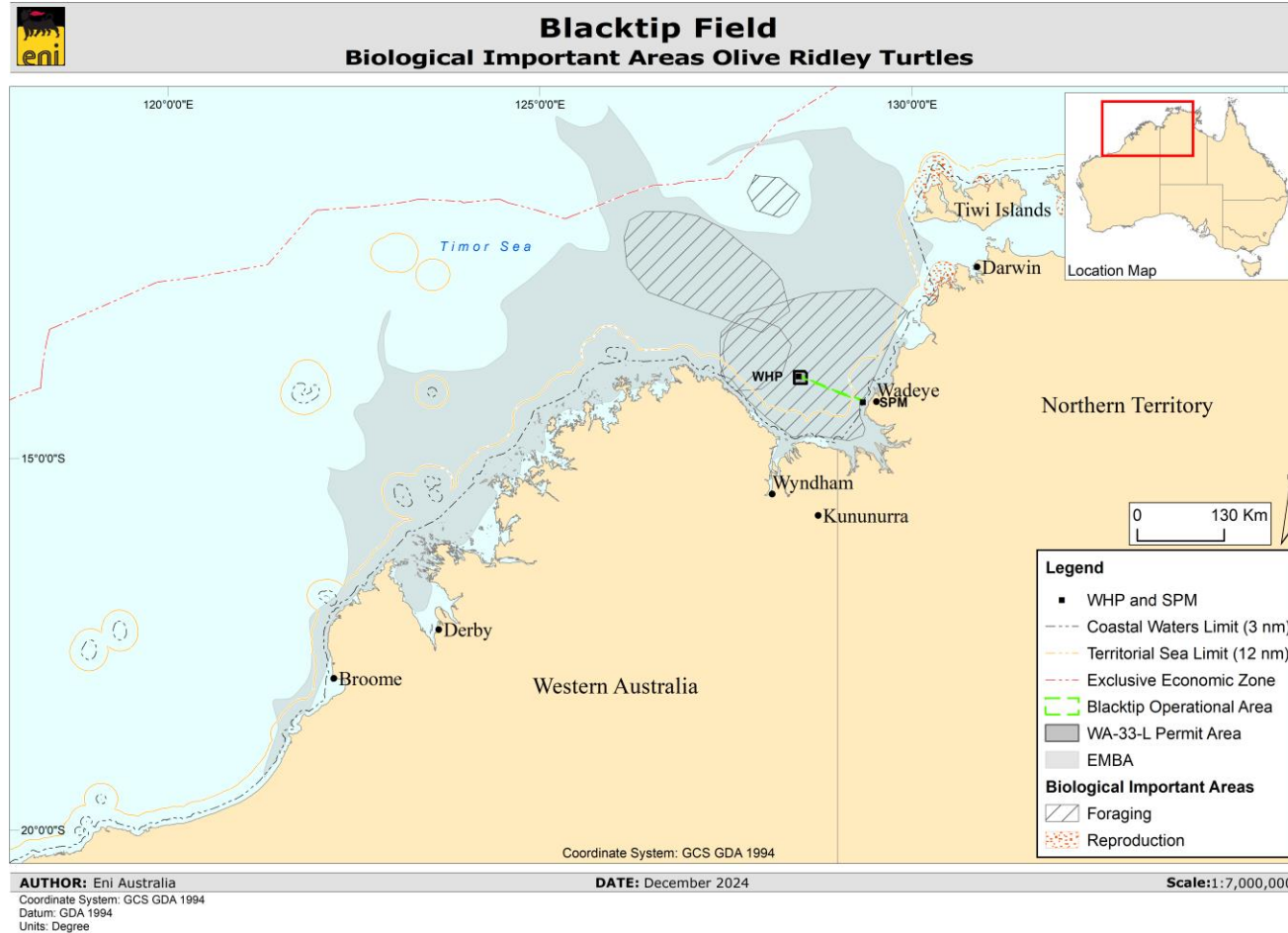


Figure 4.11: Biologically important areas for the olive ridley turtle within the environment that may be affected



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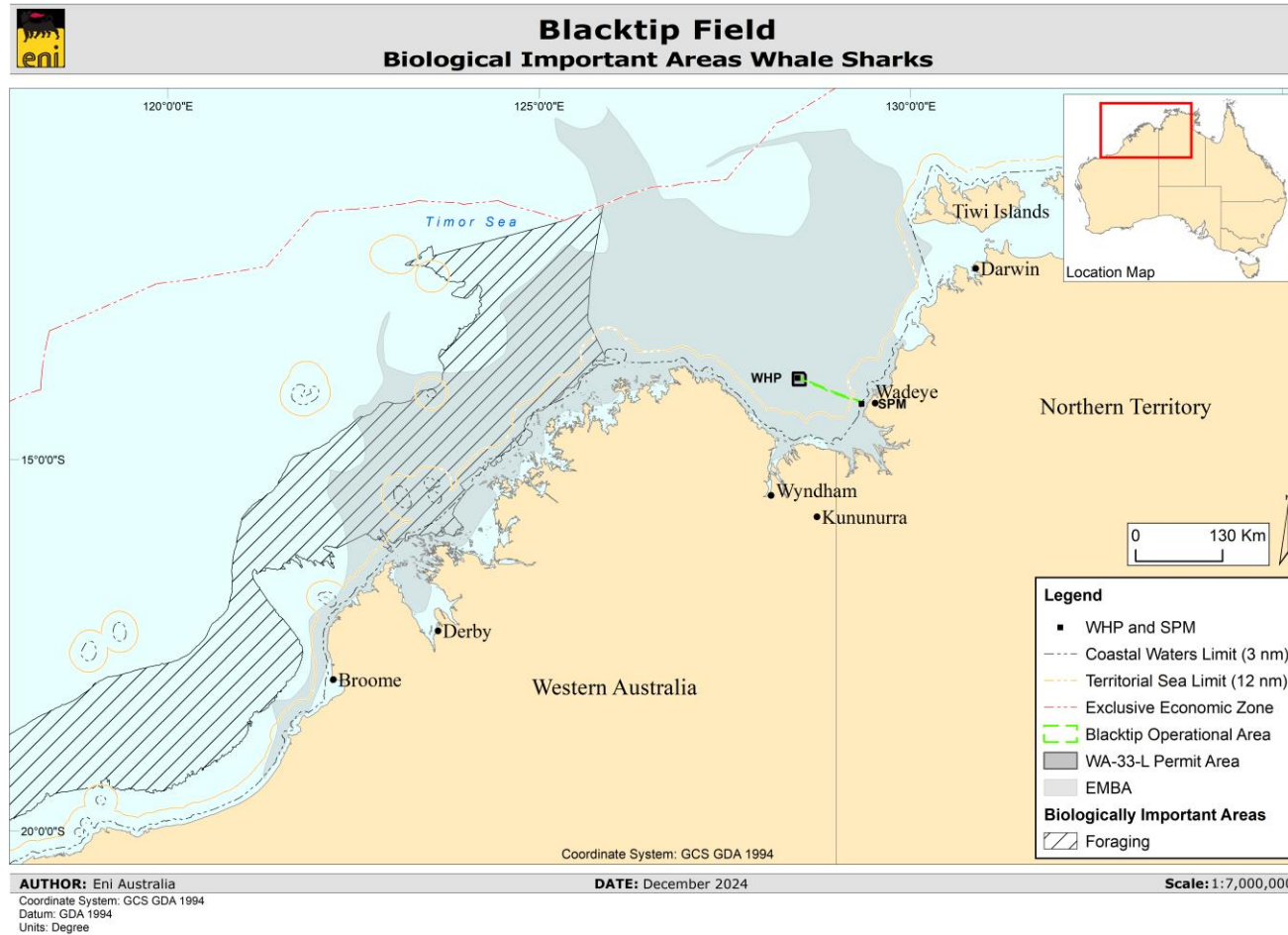


Figure 4.12: Biologically important areas for whale shark within the environment that may be affected



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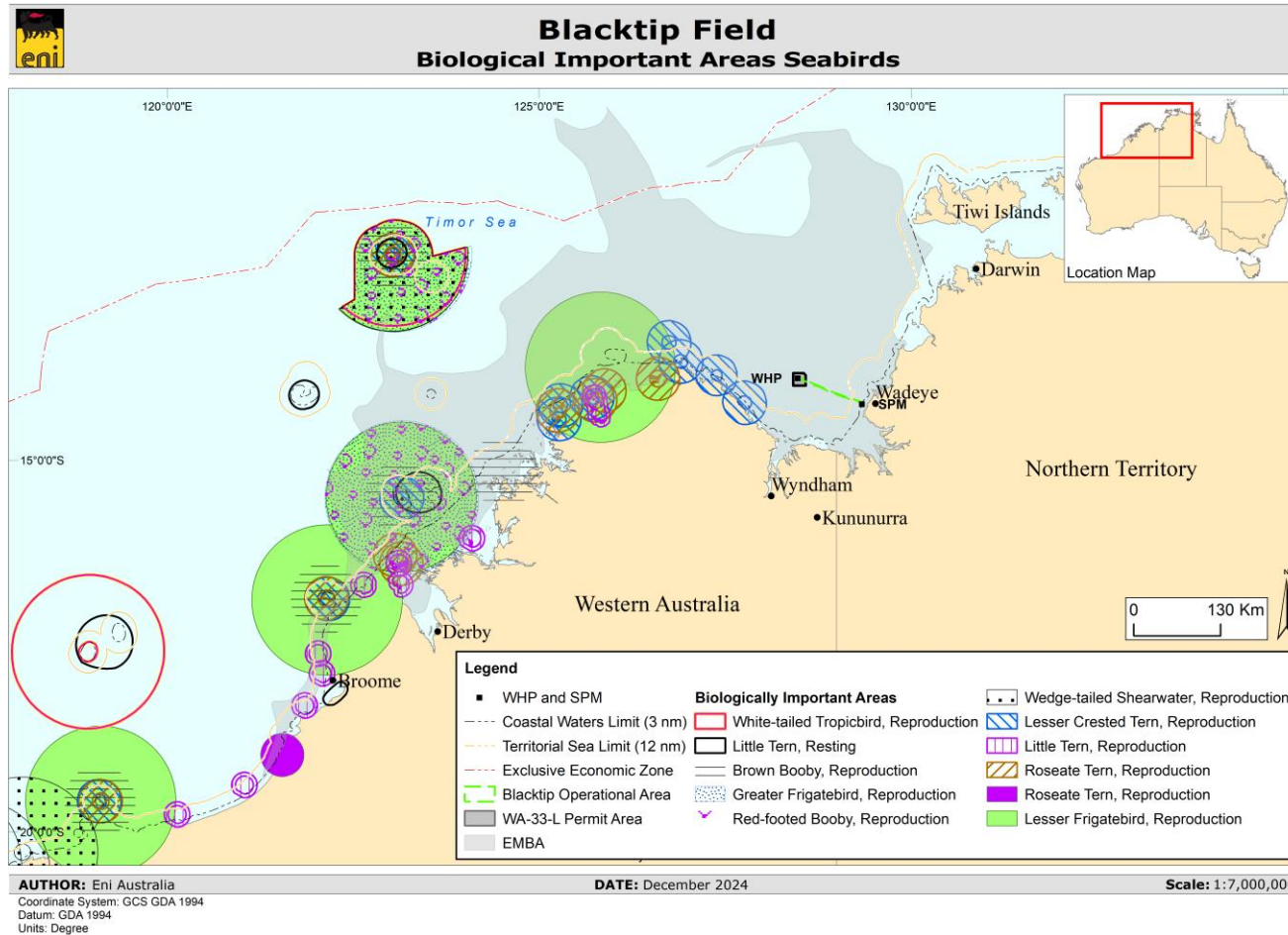



Figure 4.13: Biologically important areas for seabird species within the environment that may be affected


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4.4.2 Habitat Critical to the Survival of Marine Turtles

Habitat Critical areas identified in the Operational Area and EMBA are listed in Table 4.6 and shown in Figure 4.14.

Table 4.6: Habitat critical to the survival of marine turtles within the environment that may be affected

Species	Habitat type	Overlaps Operational Area	Overlaps EMBA	Distance from Operational Area (km)
Marine reptiles				
Green turtle	Nesting	No	Yes	220km west
Flatback turtle	Nesting	No	Yes	30km south
Olive ridley	Nesting	No	Yes	445km south-west

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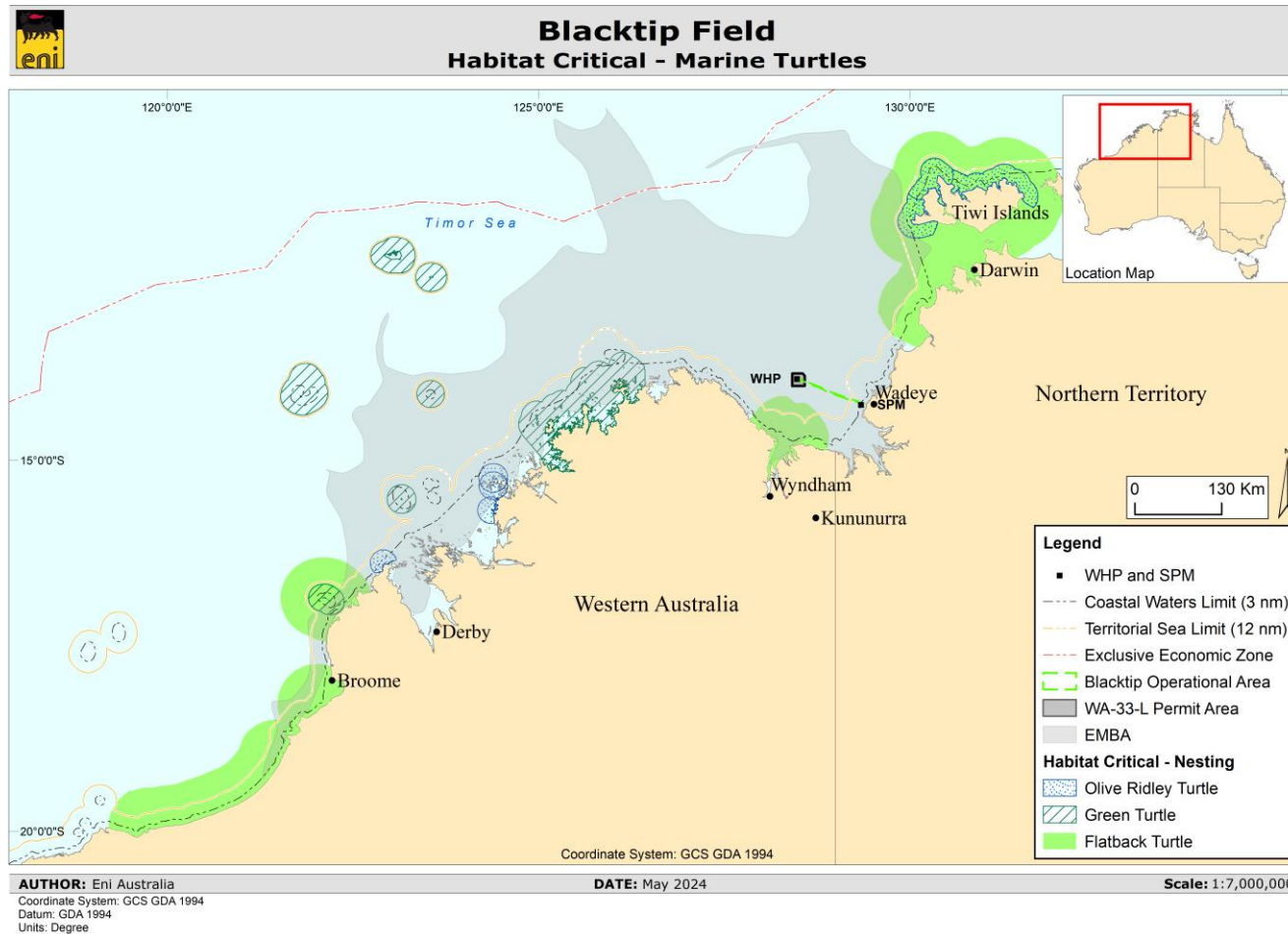



Figure 4.14: Critical habitat for the olive ridley, green and flatback turtle within the environment that may be affected

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4.5 Protected Areas and Key Ecological Features


The Operational Area overlaps the Joseph Bonaparte Gulf AMP Multiple Use Zone. There are also protected areas and key ecological features (KEFs) within the EMBA (refer to Table 4.7). Protected Areas and KEFs are outlined in the subsections below, with full descriptions in Appendix B.

No threatened ecological communities are overlapped by the Operational Area or EMBA.

No World Heritage Properties are overlapped by the Operational Area or EMBA.

Table 4.7: Protected areas and key ecological features within the Operational Area and EMBA

Key sensitive area	IUCN category	Operational Area	EMBA	Distance from Operational Area (km)
Australian Marine Parks				
Joseph Bonaparte Gulf Marine Park	VI	Yes	Yes	GEP, CEP and the SPM overlap the Multiple Use Zone
Kimberley Marine Park	II, IV and VI	No	Yes	220km west
Oceanic Shoals Marine Park	IV and VI	No	Yes	140km north
Roebuck Marine Park	VI	No	Yes	815km south-west
Eighty Mile Beach Marine Park	VI	No	Yes	910km south-west
State Marine Protected Areas				
North Kimberley Marine Park	VI	No	Yes	90km south
North Lalang-garram Marine Park	N/A	No	Yes	430km south-west
Lalang-garram/Camden Sound	N/A	No	Yes	430km south-west
Lalang-garram/Horizontal Falls Marine Park	N/A	No	Yes	530km south-west
Eighty Mile Beach Marine Park	N/A	No	Yes	965km south-west
Bardi Jawi Gaarra Marine Park	N/A	No	Yes	500km south-west
Mayala Marine Park	N/A	No	Yes	500km south-west
Key Ecological Features				
Carbonate bank and terrace system of the Sahul Shelf	N/A	No	Yes	22km west
Carbonate bank and terrace system of the Van Diemen Rise	N/A	No	Yes	215km north
Pinnacles of the Bonaparte Basin	N/A	No	Yes	100km northwest-west
Ancient coastline at 125m depth contour	N/A	No	Yes	400km northwest-west
Continental slope demersal fish communities	N/A	No	Yes	530km west

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4.5.1 State, Territory and Australian Marine Parks

A portion of the GEP and the CEP and the SPM overlap the Joseph Bonaparte Gulf AMP Multiple Use Zone (IUCN category VI) (Figure 3.1, Section 3.2.1). The AMP was established after construction of the Blacktip offshore. A number of AMPs and State or Territory Marine Parks are within the EMBA, as presented in Figure 4.15 and Figure 4.16, further described in Appendix B.

Australian marine parks in the EMBA are divided into management zones and managed in accordance with the North Marine Parks Network Management Plan (DNP, 2018a) and Parks Network Management Plan (DNP, 2018b), as are the KEFs identified in the North Marine Region and the North-west Marine Region. Table 4.8 presents prescriptions and conditions from the North-West and North Marine Parks network management plans relevant to the activity.

Table 4.8: Prescription and condition from the North-West and North Marine Parks Network management plans relevant to the Blacktip operations

Prescription/ condition number	Prescription/condition	Relevant section of EP
4.2.9.8	...actions required to respond to oil pollution incidents, including environmental monitoring and remediation, in connection with mining operations authorised under the OPGGS Act, may be conducted in all zones without an authorisation issued by DNP, provided that the actions are taken in accordance with an environment plan that has been accepted by NOPSEMA, and DNP is notified in the event of oil pollution within a marine park, or where an oil spill response action must be taken within a marine park, so far as reasonably practicable, prior to response action being taken.	Section 5 (Stakeholder Consultation) Section 10.8 (External Reporting)

Given the Operational Area overlaps the Joseph Bonaparte Gulf AMP, an assessment of the consistency of the Blacktip operations against the values of the Joseph Bonaparte Gulf AMP, as identified in the Australian Marine Parks North Network Management Plan (DNP, 2018a), has been made in Table 4.9. Appendix B further describes the cultural, socioeconomic, and natural values of the Joseph Bonaparte AMP and those of other AMPs within the EMBA with reference to relevant State or Joint Marine Park Management Plans.


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Table 4.9: Assessment of Blacktip operations against the values of the Joseph Bonaparte Marine Park

Value	Assessment
Natural	<p>The key ecological feature in the AMP is the carbonate bank and terrace system of the Sahul Shelf, characterised by terraces, banks, channels, and valleys supporting sponges, soft corals, sessile filter feeders, polychaetes and ascidians. However, these features have not been observed within the Operational Area. The Operational Area is in the upper (outer) reaches of the JBG, in an area of relatively flat, featureless seabed. Sediments are predominantly very soft, grey-green, gravelly sand clays (Woodside, 2004). The nearest feature of the carbonate bank and terrace system of the Sahul Shelf KEF is 20km to the south-east of the Operational Area.</p> <p>In the event of a hydrocarbon release, the features may be impacted from entrained hydrocarbons; however, the high evaporation and light components of the condensate and MDO will reduce the entrainment volume within the water column.</p> <p>The JBG experiences a mixed semidiurnal tide with a very large range in tidal elevations and correspondingly strong tidal currents (Przeslawski <i>et al.</i>, 2011). High-energy tidal currents along much of the coastline stimulate mixing and sediment movement throughout the year, contributing to the highly turbid environment which will further evaporation and dispersion of hydrocarbons (refer to Section 8.6).</p> <p>The AMP supports a range of species, including species listed as threatened, migratory, marine or cetacean under the EPBC Act. BIAs within the AMP include foraging habitat for marine turtles and the Australian snubfin dolphin. Impacts to the range of species which the AMP supports has been discussed throughout Sections 7 and 8.</p>
Cultural	<p>The Miriuwung, Gajerrong, Doolboong, Wardenybeng and Gija and Balangarra people have responsibilities for Sea Country in the AMP (DNP, 2018a). Sea Country is valued for First Nation cultural identity, health and wellbeing. Across Australia, First Nation people have been sustainably using and managing their Sea Country for tens of thousands of years.</p> <p>As described in Section 4.6.9, Eni has worked with the Traditional Owners in mapping the Sea Country of the JBG. Routine Blacktip operations will not significantly impact cultural value of the AMP, discussed where relevant throughout Sections 7 and 8.</p> <p>Eni has consulted Traditional Owner groups when developing this EP (refer to Section 5).</p> <p>In the event of a large-scale spill, there will be an impact to Sea Country within the AMP for a period, while the spill disperses and weathers. Impacts to the range of species to which Traditional Owner groups may have cultural connections has been discussed within Table 8.14, refer to Section 8.6. Lasting impact is not anticipated.</p>
Socio-economic	<p>Tourism, commercial fishing and recreation including fishing are important activities in the AMP. Routine Blacktip operations will not impact the ability of others to use the AMP (refer to Section 7.1).</p> <p>As described above, a large-scale spill will impact the AMP for a short period, while the hydrocarbon disperses and weathers; however, lasting impact is not anticipated.</p> <p>Impacts have been discussed further in Table 8.14, refer to Section 8.6.</p>



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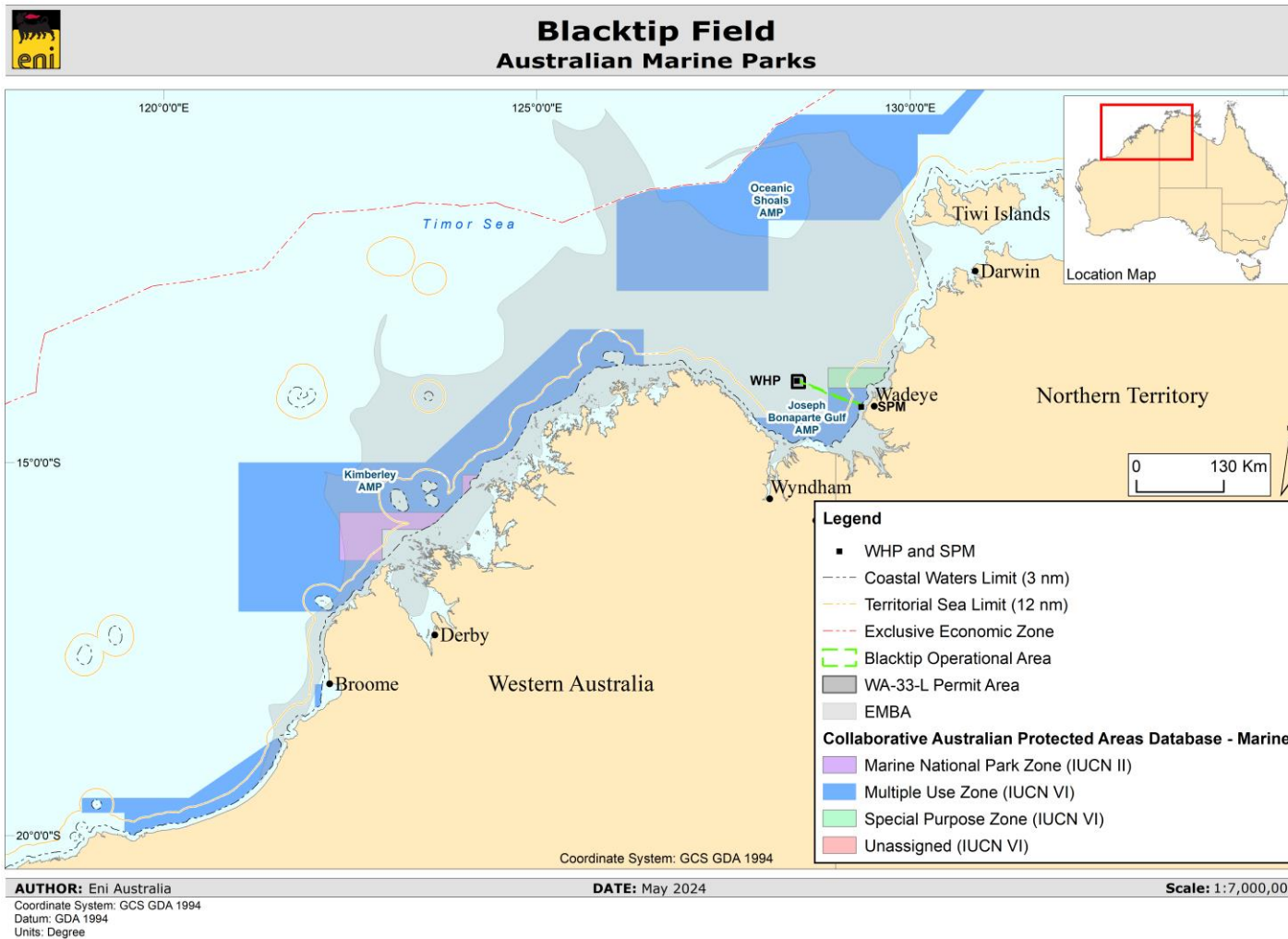


Figure 4.15: Australian Marine Parks within the Operational Area and environment that may be affected



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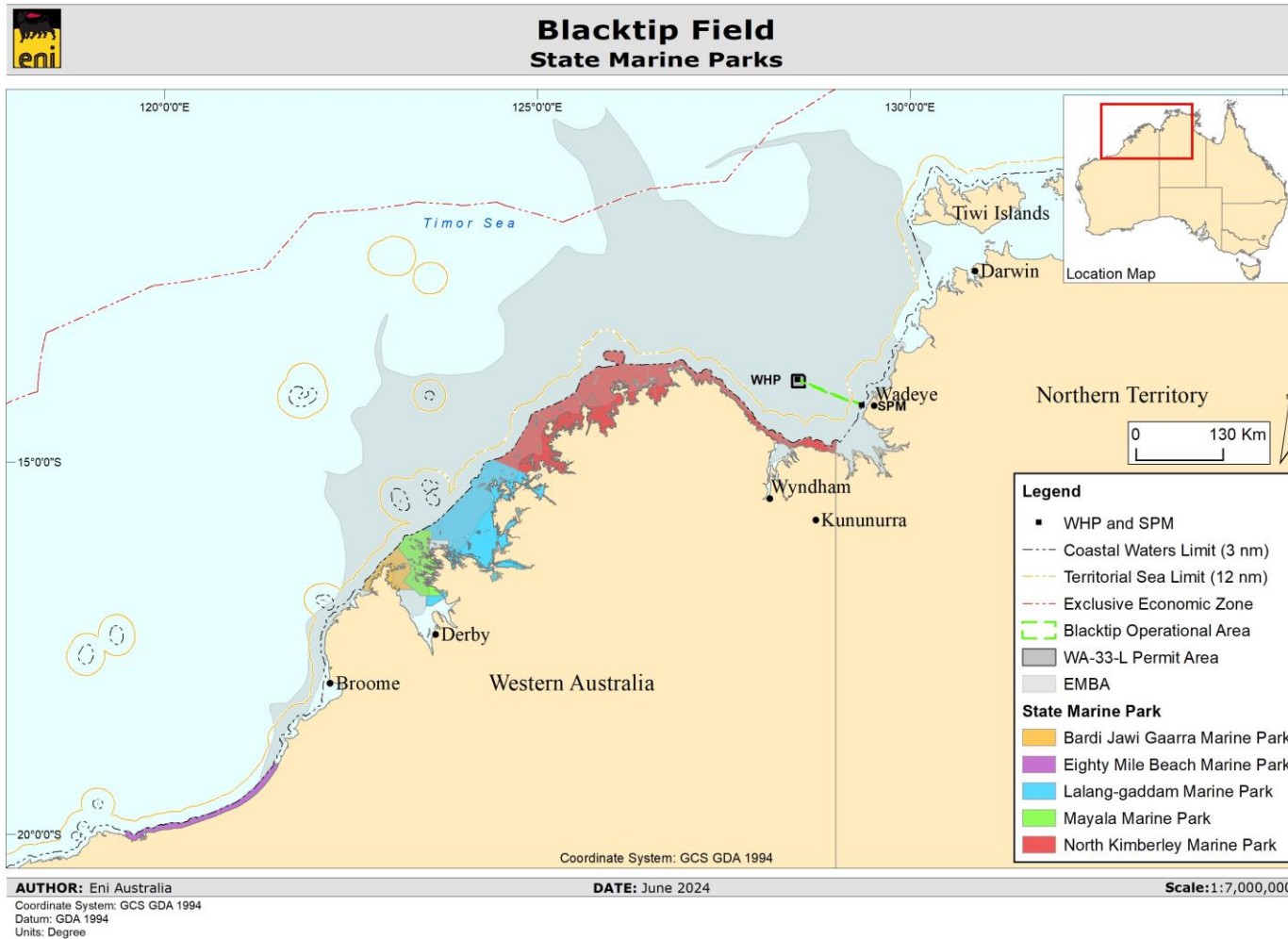



Figure 4.16: State Marine Parks within the Operational Area and environment that may be affected

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4.5.2 National Heritage Places

The West Kimberley National Heritage Place is 80km south-west of the Operational Area. The West Kimberley is listed as a National Heritage Place as it includes natural landscape features, ancient geology, biological richness, Aboriginal and European heritage, historical pastoral values, and Aboriginal and European pearling values. The Kimberley intertidal shoreline, which is part of the Heritage Place, is described further in Appendix B.

4.5.3 Wetlands of International and National Importance


While the EMBA PMST search returned three RAMSAR wetlands (Eighty-mile Beach, Ord River floodplain, Roebuck Bay), these have been determined as outside the EMBA.

4.5.4 Key Ecological Features

KEFs are those components of the marine ecosystem that are important for biodiversity or the ecosystem function and integrity of a Commonwealth marine area. The Operational Area does not overlap any KEFs. The EMBA overlaps five KEFs:

1. carbonate bank and terrace system of the Sahul Shelf
2. pinnacles of the Bonaparte Basin
3. carbonate bank and terrace system of the Van Diemen Rise
4. ancient coastline at 125m depth contour
5. continental slope demersal fish communities.

All KEFs within the EMBA are shown in Figure 4.17 and described in Appendix B.

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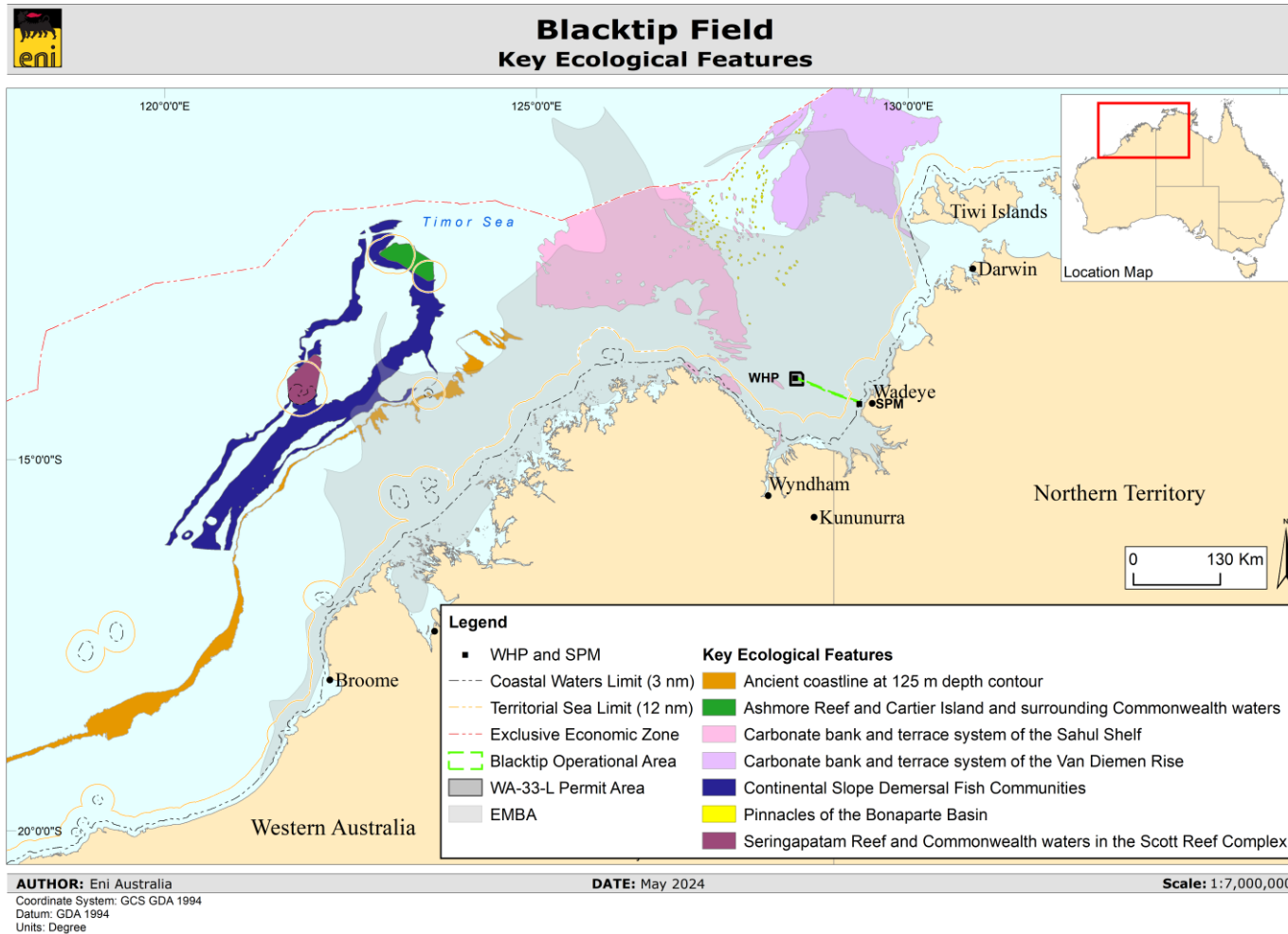



Figure 4.17: Key ecological features within the Operational Area and environment that may be affected

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4.6 Cultural and Socio-economic Environment

4.6.1 Commercial Fisheries

Table 4.10 identifies the Commonwealth and State commercial fisheries overlapping the Operational Area and EMBA and provides an assessment of the potential interaction based on the nature of the fishery, historic Department of Primary Industries and Regional Development (DPIRD) catch data and consultation with Relevant Persons. Information about fisheries within Table 4.10 has been supplemented with information from the Status reports of the fisheries and aquatic resources of Western Australia (Newman *et al.*, 2023), Commonwealth Fishery Status Reports (Patterson *et al.*, 2023) and the Northern Prawn Fishery data summary 2022 (Meteyard, 2023).

A commercial land-based prawn aquaculture project (Project Sea Dragon) is being progressed by Seafarms Group at Forsyth Creek, approximately 160km from the Operational Area. The EMBA reaches the offshore waters of this location only and shoreline hydrocarbon accumulation is not predicted.

The Blacktip WHP is within the 500m PSZ, limiting any potential for interaction with commercial fisheries who will avoid the area.

While it is recognised the DPIRD catch data referenced does not preclude the possibility for future catch, it is highly unlikely the catch effort will significantly increase in the vicinity of the Operational Area over the life of this EP.


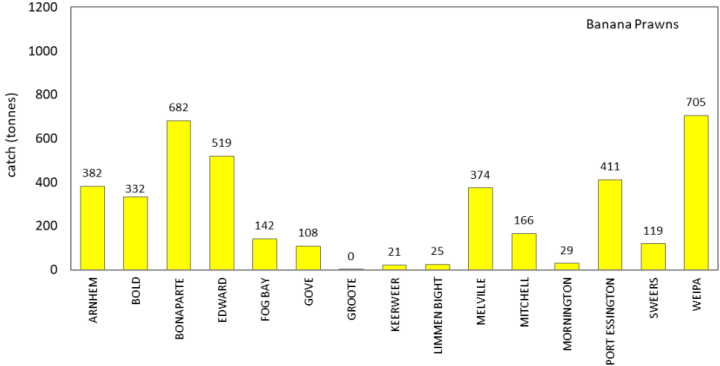
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Table 4.10: Commonwealth, Territory and State fisheries within the Operational Area and EMBA

Fishery	Potential for interaction		Description		
	Operational Area	EMBA	✓ = overlap with fishery	shading = possibility for interaction with the Operational Area.	× = no spatial overlap
Commonwealth Managed Fisheries					
Northern Prawn Fishery (NPF)	✓	✓	<p>The Northern Prawn Fishery (NPF) overlaps the Operational Area and EMBA and extends from Cape Londonderry, eastward throughout the EEZ and NT waters, to approximately the Cape York peninsula. The majority of the fishing during the 2020-2022 seasons took place in the inshore coastal NT waters (ABARES, 2023).</p> <p>The Operational Area is located in the Fog Bay area of the Northern Prawn Fishery, which encompasses the eastern part of the JBG. In the Fog Bay over 98% of the catch was banana prawn in 2022 (Meteyard, 2023). Historically effort and catch has been low compared to other areas of the fishery (catch data for 2022 detailed in the figure below). Effort for Banana Prawn was 101 days in 2022 in the Fog Bay area.</p>  <p><i>Source: Meteyard, 2023</i></p> <p>Blacktip operations have operated within the Northern Prawn Fishery area since production started in 2009. Fishing effort occurs within the EMBA, particularly around the western areas of the JBG (Bonaparte area of the fishery).</p>		



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Fishery	Potential for interaction		Description	
	Operational Area	EMBA	✓ = overlap with fishery	shading = possibility for interaction with the Operational Area. × = no spatial overlap
North-West Slope Trawl Fishery	×	✓	The North-West Slope Trawl Fishery management area overlaps the EMBA. The fishery has been active since the 1990's targeting scampi (<i>Metanephrops</i> spp. and <i>Nephropsis</i> spp.) using demersal trawl methods. Fishery Status Reports indicate fishing effort has decreased over the previous decade, with 3-4 vessels operating between 2020-2022. (ABARES, 2023). Accordingly, Eni considers it a possibility that interactions with the fishery may occur in the EMBA.	
Southern Bluefin Tuna Fishery	×	✓	The Southern Bluefin Tuna Fishery spans the Australian EEZ, however since 1992, the majority of Australian catch has concentrated in south-eastern Australia. (ABARES, 2023). Accordingly, Eni does not consider any potential for interaction with this fishery and Blacktip activities.	
Skipjack Tuna Fishery	×	✓	The Skipjack Tuna Fishery spans the Australian EEZ, consisting of the western and eastern fishery. Although the fishery appears to overlap with the EMBA, no fishing has occurred since 2009 (ABARES, 2023). Accordingly, Eni does not consider any potential for interaction with this fishery and Blacktip activities.	
Western Tuna and Billfish Fishery	×	✓	The Western Tuna and Billfish Fishery operates in the Australian EEZ and high seas of the Indian Ocean. In recent years, fishing effort has concentrated off south-west Western Australia, with occasional activity off South Australia (ABARES, 2023). Accordingly, Eni does not consider any potential for interaction with this fishery and Blacktip activities.	
West Australian State Managed Fisheries				
Broome Prawn Managed Fishery	×	✓	The Broome Prawn Fishery management area overlaps the EMBA. The fishery is only active within the EMBA and historically, this fishery operates with 5 NPF vessels. No fishing effort was recorded during the 2021-2022 season. (DPIRD, 2023). Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.	
Hermit Crab Fishery	×	✓	The Hermit Crab Fishery operates within the Marine Aquarium Managed Fishery and operates in all WA State waters, which overlaps the EMBA. The collection method for the fishery is hand-catch, on shorelines, and therefore the activity is limited to shallow coastal	



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Fishery	Potential for interaction		Description		
	Operational Area	EMBA	✓ = overlap with fishery	shading = possibility for interaction with the Operational Area.	* = no spatial overlap
			waters and shorelines. Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		
Joint Authority Northern Shark Fishery	*	*	Joint Authority of Northern Shark Fishery operated in the eastern Kimberly and has not been active since 2008-2009 season (DPIRD, 2023). Therefore, Eni does not consider any interaction with this fishery and the Blacktip activities.		
Kimberley Crab Managed Fishery (KCMF)	*	✓	The Kimberley Crab Fishery management area overlaps the EMBA. The fishery is active in the EMBA, with an allocation of 600 traps to license holders and an equivalent allocation of 600 traps to Traditional Owner groups. During 2022, two people were employed as a skipper and crew on vessels fishing for mud crab in the KCMF, with effort occurring between August and October (DIPRD 2023). Accordingly, Eni considers a possibility that interactions with the fishery may occur only in the EMBA.		
Kimberley Gillnet and Barramundi Fishery	*	✓	The Kimberley Gillnet and Barramundi Fishery management area overlaps the EMBA. The fishery is active within the EMBA, operating within the coastal rivers and tidal creek systems. The 60NM CAES reporting blocks recording between 3 to 8 vessels across the 2017-2022 seasons (DPIRD, 2023). Accordingly, Eni considers a possibility that interactions with the fishery may occur only in the EMBA.		
Kimberley Prawn Managed Fishery	*	✓	The Kimberley Prawn Fishery management area overlaps the EMBA. The fishery is active within the EMBA, with 60NM CAES reporting blocks, recording less than 3 active vessels across the 2017-2022 seasons (DPIRD, 2023). Accordingly, Eni considers a possibility that interactions with the fishery may occur only in the EMBA.		
Mackerel Managed Fishery	✓	✓	The Mackerel Managed Fishery overlaps the Operational Area and EMBA. FishCube data for the Mackerel Managed Fishery is not provided at the 10NM scale, however effort reported in the 60NM CAES reporting block indicate less than 3 vessels across the 2019-2022 seasons (DPIRD, 2023), with fishing effort consistent in the years since 2012. Eni considers there may be potential for interaction with the fishery in the Operational Area and EMBA.		

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Fishery	Potential for interaction		Description	
	Operational Area	EMBA	✓ = overlap with fishery	shading = possibility for interaction with the Operational Area. × = no spatial overlap
Marine Aquarium Fish Managed Fishery	×	✓	The Marine Aquarium Fish Managed Fishery overlaps the EMBA. Collection method for this fishery is limited to SCUBA or surface supplied air (hookah) from small vessels in water depths <30m (DPIRD, 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.	
Northern Demersal Scalefish Managed Fishery	×	✓	The Northern Demersal Scalefish Fishery management area overlaps the EMBA. The fishery is active within the EMBA, with 60NM CAES reporting block reporting between 3-7 active vessels across the 2017-2022 seasons (DPIRD, 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.	
Open Access in the North Coast	×	✓	The Open Access in the North Coast Fishery area overlaps the EMBA. The fishery is active within the EMBA, with 60NM CAES reporting block reporting between 3-7 active vessels across the 2017-2022 seasons (DPIRD, 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.	
Pearl Oyster Managed Fishery	×	✓	The Pearl Oyster Managed Fishery management area overlaps the EMBA. The fishery is active within the EMBA (DPIRD, 2023). The Pearl Oyster Managed Fishery fishing effort is mostly focused on coastal waters (10-15 m depth) with a maximum depth of 35m (DPIRD, 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.	
Specimen Shell Managed Fishery	×	✓	The Specimen Shell Managed Fishery management area overlaps the EMBA. The fishery operates in shallow coastal waters via hand-collection (DPIRD, 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.	
West Australian Sea Cucumber Fishery	×	✓	The West Australian Sea Cucumber Fishery management area overlaps the EMBA. Fishing primarily occurs from the Exmouth Gulf to the Northern Territory border (DPIRD, 2023). The fishery operates by diving and wading, occurring in shallow coastal waters (DPIRD, 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.	
West Australian Charter based fisheries.				

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Fishery	Potential for interaction		Description		
	Operational Area	EMBA	✓ = overlap with fishery	shading = possibility for interaction with the Operational Area.	* = no spatial overlap
Tour Operators	✓	✓	Fishing tour operators are permitted to operate across WA state waters and are required to report monthly logbook records of client fish catches. FishCube data reports indicate <3 licences were active in the 60 NM CAES reporting block overlapping the Operational Area (DPIRD, 2023). Within the wider EMBA, fishing effort was variable, with licence numbers ranging between <3-12 overall during the 2017-2022 seasons (DPIRD, 2023). Eni considers there may be potential for interaction with tour operators in the Operational Area and EMBA.		
Northern Territory Managed Fisheries					
Inshore Aquarium Fishery	*	✓	The Northern Territory Aquarium Fishery overlaps with the EMBA. The Aquarium Fishery is a small-scale, multi-species fishery and includes freshwater, estuarine and marine habitats to the outer boundary of the Australian EEZ. Freshwater and estuarine species are generally collected between the Adelaide and Daly rivers, while most marine species are collected within 100km of Nhulunbuy and Darwin (NT Government 2024a). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		
Bait Net Fishery	*	✓	The Bait Net Fishery overlaps with the EMBA. Commercial fishing for bait is allowed from the high-water mark to three nautical miles seaward of the low water mark but does not include Darwin Harbour and Shoal Bay. Analysis of five years of NT fishing effort data (2017-2021) shows one bait net fishery licence and two restricted bait licences operated in the vicinity of the EMBA during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		
Barramundi Fishery	*	✓	The Barramundi Fishery overlaps with the EMBA. The fishing area for the Barramundi Fishery is restricted to waters seaward from the coast, river mouths and legislated closed lines from the high-water mark to 3nm seaward of the low water mark. (NT Government 2024b). Historical fishing effort demonstrates, fishing has concentrated in the eastern Joseph Bonaparte Gulf and Van Diemen Gulf region of coastal NT waters. Analysis of five years of NT fishing effort data (2017-2021) shows up to three licences operated in the vicinity of the EMBA during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		



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	Operational Area	EMBA	✓ = overlap with fishery	shading = possibility for interaction with the Operational Area. × = no spatial overlap
Coastal Line Fishery	×	✓	The Coastal Line Fishery overlaps with the EMBA. The managed fisheries area for the Coastal Line Fishery is between the high-water mark to 15 nm (from the low water mark). The western zone of the fishery extends from the WA border to Vashon Head on Cobourg Peninsula. Previous fishing effort has been concentrated in the coastal waters of the Tiwi Islands and Daly River inlet. Analysis of five years of NT fishing effort data (2017-2021) shows up to six licences operated in the vicinity of the EMBA during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.	
Coastal Net Fishery	×	✓	The Coastal Net Fishery overlaps with the EMBA. The fishing area for the Coastal Line Fishery is between the high-water mark and 3 nm out from the low water mark and is concentrated in the inner coastal waters surrounding Darwin. Analysis of five years of NT fishing effort data (2017-2021) shows up to two licences operated in the vicinity of the EMBA during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.	
Demersal Fishery	✓	✓	The Demersal Fishery overlaps with the Operational Area and EMBA. Demersal fishing is allowed from 15 NM from the low water mark to the outer boundary of the Australian EEZ, excluding the area of the Timor Reef fishery. Analysis of five years of NT fishing effort data (2017-2021) shows one licence operating in the catch block over the Operational Area and two licences within the EMBA. (DITT, 2023). Eni considers there may be potential for interaction with the fishery in the Operational Area and EMBA.	
Development Fishery	×	✓	The Development Fishery overlaps with the EMBA. Development Fishery Licences are issued to existing fisheries intending to trial new fishing gear, fishing methods and / or catch new target species. Fishers who wish to conduct development trials are required to lodge written applications providing detailed information about their proposed activities. Performance criteria are assigned to each permit so that the feasibility of the trials may be assessed. Development licences may be issued to approved applicants for up to one licensing year and may be renewed a maximum of four times. Where licence holders meet all performance criteria and remain able to demonstrate that the fishery and/or gear is both	



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	Operational Area	EMBA	✓ = overlap with fishery	shading = possibility for interaction with the Operational Area.	* = no spatial overlap
			ecologically and economically sustainable, the fishery and/or gear in question may progress to a managed fishery. Analysis of five years of NT fishing effort data (2017-2021) shows two licences operated in the vicinity of the EMBA during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		
Jigging Fishery	*	✓	The Jigging Fishery overlaps with the EMBA. Analysis of five years of NT fishing effort data (2017-2021) shows one licence operated in the vicinity of the EMBA during this period (DITT 2023), concentrated in the eastern Joseph Bonaparte Gulf and Daly River inlet. Therefore, Eni does not consider it a possibility that interactions with this fishery occur within the EMBA.		
Mollusc Fishery	*	✓	The Mollusc Fishery overlaps with the EMBA. Commercial mollusc fishing is allowed in intertidal waters from the high-water mark out to the low water mark. NT fishing effort data from 2017-2021 does not show activity within the EMBA (DITT 2023). Therefore, Eni does not consider it a possibility that interactions with this fishery occur within the EMBA.		
Mud Crab Fishery	*	✓	The Mud Crab Fishery overlaps with the EMBA. Crabbing is generally confined to coastal mudflats and estuaries and commercial activity is concentrated in the Gulf of Carpentaria. Analysis of five years of NT fishing effort data (2017-2021) shows one licence operating in the vicinity of the EMBA during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		
Offshore Net and Line Fishery	✓	✓	The Offshore Net and Line Fishery overlaps with the Operational Area and EMBA. This fishery operates in all NT waters from the low water mark to the boundary of the Australian EEZ. Analysis of five years of NT fishing effort data (2017-2021) shows up to six licences operated in the vicinity of the EMBA and one licence within the vicinity of the Operational Area during this period (DITT, 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur within the Operational Area and EMBA.		
Pearl Oyster Fishery	*	✓	The Pearl Oyster Fishery overlaps with the EMBA. The Pearl Oyster Fishery operates from the high-water mark to the outer boundary of the Australian EEZ. Analysis of five years of NT fishing effort data (2017-2021) shows one licence operated in the vicinity of the EMBA		



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Fishery	Potential for interaction		Description		
	Operational Area	EMBA	✓ = overlap with fishery	shading = possibility for interaction with the Operational Area.	* = no spatial overlap
			during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		
Spanish Mackerel	✓	✓	The Spanish Mackerel fishery overlaps with the Operational Area and EMBA. Commercial fishing for Spanish Mackerel is allowed from the high-water mark to the outer boundary of the Australian EEZ. Fishing generally takes place around reefs, headlands and shoals. Analysis of five years of NT fishing effort data (2017-2021) shows one licence and up to eight licences operated in the vicinity of the Operational Area and EMBA, respectively (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur within the Operational Area and EMBA, however is likely limited to around reefs, headlands and shoals.		
Special Permits	*	✓	The Special Permits Area overlaps with the EMBA. This permit is for education activities, research or carrying out trials and experiments with fishing vessels or gear. It may also be issued for sport or recreation for a person who would otherwise be unable to fish due to disability. Analysis of five years of NT fishing effort data (2017-2021) shows up to two licences operated in the vicinity of the EMBA during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		
Timor Reef Fishery	*	✓	The Timor Reef Fishery overlaps with the EMBA. Commercial fishing is allowed north-west of Darwin to the WA / NT border and to the outer boundary of the Australian EEZ. Analysis of five years of NT fishing effort data (2017-2021) shows up to five licences operated in the vicinity of the EMBA during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		
Trepang Fishery	*	✓	The Trepang Fishery overlaps with the EMBA. Commercial fishing for sea cucumber is allowed from the high-water mark to three nautical miles seaward from the territorial sea baseline. However, most sea cucumbers are collected along the Arnhem Land coast, mainly around the Cobourg Peninsula and Groote Eylandt. Analysis of five years of NT fishing effort data (2017-2021) shows one licence operated in one reporting block in the vicinity of the EMBA during this period (DITT 2023). Therefore, Eni considers it a possibility that interactions with the fishery may occur only in the EMBA.		

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4.6.2 Traditional Indonesian Fisheries

The Australia-Indonesia MoU on the Operations of Indonesian Traditional Fishermen in Areas of the Australian Fishing Zone and Continental Shelf (1974) exists between the Australian and Indonesian governments to 'provide the framework for fisheries and marine cooperation between Australia and Indonesia, and facilitates information exchange on research, management and technological developments, complementary management of shared stocks, training and technical exchanges, aquaculture development, trade promotion and cooperation to deter illegal fishing' (Department of Agriculture, Fisheries and Forestry, 2024). The MoU enables traditional fishing to occur within sections of the Australian Exclusive Economic Zone. A traditional Indonesian fishing area (known as the MoU Box) is established approximately 500km northwest of the Operational Area and is partially within the northwest EMBA extent. Indonesian and Timorese fishermen are legally permitted to harvest marine products from within this area.

Trochus, sea cucumbers (holothurians), abalone, green snail, sponges, giant clams and finfish, including sharks, are targeted by the traditional Indonesia fishers. Scott Reef (outside EMBA) is currently the principal reef in the MOU Box and is utilised seasonally by Indonesian fishers. The peak season is July to October due to more favourable wind conditions, and to allow fishers to sun dry their catch on their boat decks. Given the shallow water target species, traditional Indonesian fishers are only likely to be found in areas of the EMBA during transit to and from the reef locations (particularly Scott Reef).

4.6.3 Tourism and Recreational Fishing


Charter fishing and tourism operate out of Darwin and the Kimberley (more than 150km from the Operational Area) and generally target areas of high scenic value or offshore coral reef areas. As these attributes are generally sparse in the JBG, the level of charter fishing and tourism is expected to be very low.

Expedition cruise boats operate between Broome and Wyndham and Darwin in the dry months (April to October). The boats remain in proximity to the coastline and are not likely to be in the Operational Area for any significant periods.

Any recreational and charter fishing from vessels is largely undertaken using lines. Given the distance from boating facilities and slipways and lack of natural attractions in the Operational Area, very little recreational or charter fishing is expected to occur.

4.6.4 Commercial Shipping

Under the Commonwealth *Navigation Act 2012*, all vessels operating in Australian waters are required to report their location daily to the Rescue Coordination Centre (RCC) in Canberra. This Australian Ship Reporting System is an integral part of the Australian Maritime Search and Rescue system and is operated by AMSA through the RCC.

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AMSA was consulted about Blacktip operations and its coordinate searches in 2023 have indicated there is no major commercial shipping in the vicinity of the Operational Area. The nearest shipping fairway designated by AMSA is more than 80km away (Figure 4.18). Traffic is infrequent in the JBG and primarily limited to infrequent visits by Northern Prawn Fishery (NPF) and other fisheries, whose boats are typically 13 to 25m long. Most NPF activity is south and southwest of the Operational Area.



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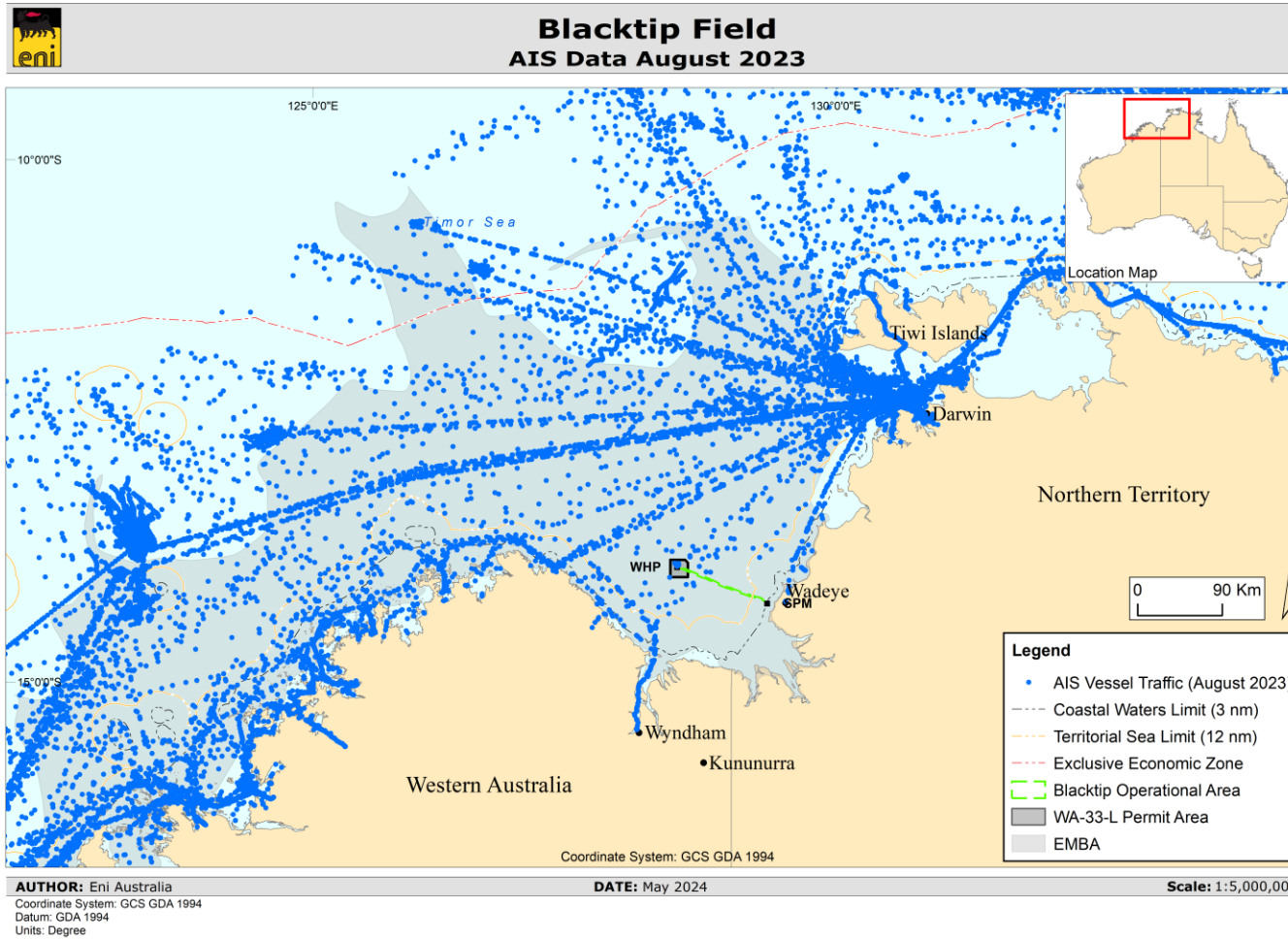



Figure 4.18: Commercial shipping within the region

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4.6.5 Defence Activities

There are two defence training areas in the North Marine Region (Figure 4.19). The Operational Area overlaps Training Area R202G and the North Australia Exercise Area. A Royal Australian Air Force base at Darwin lies approximately 300km to the northeast of the Operational Area.



Figure 4.19: Offshore military aerial exercise zones in the Joseph Bonaparte Gulf

4.6.6 Oil and Gas Infrastructure

There is no other active oil and gas infrastructure in the vicinity of the Operational Area. Figure 4.20 shows oil and gas infrastructure within the EMBA.



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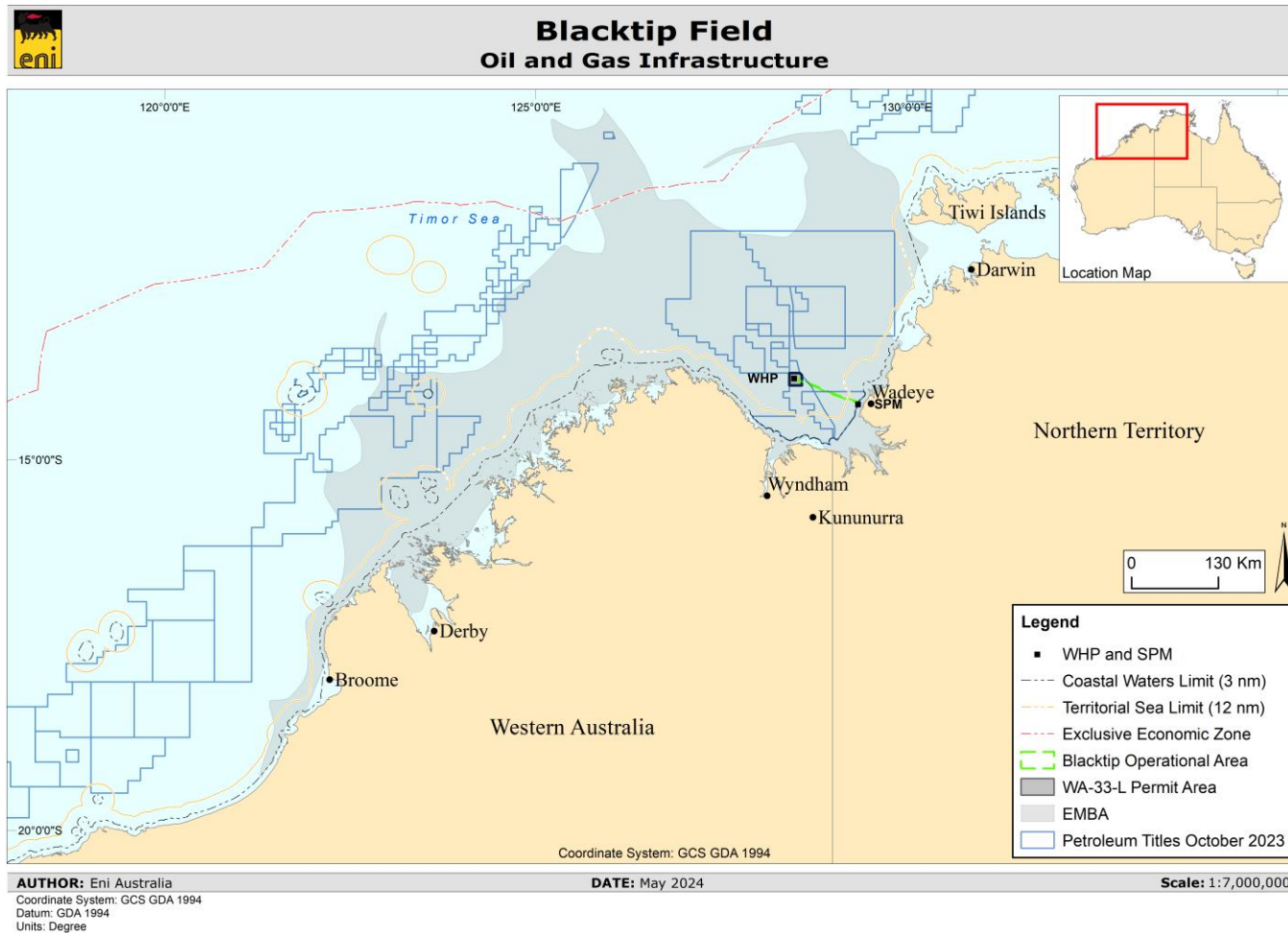



Figure 4.20: Oil and gas infrastructure within the environment that may be affected

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4.6.7 Submarine cables

Submarine cables are underwater infrastructure which transfer communications or electricity, linking one area of Australia to another, or Australia to other countries. No subsea cables intersect with the Operational Area. Those within the EMBA are listed below:

- North-West Cable System – connects Darwin to Port Headland. Located >250km from the Operational Area
- Asia Connect Cable-1 – connects Australia to South-East Asia and North America. Located >200km from the Operational Area.
- Hawaiki Nui – connects Australia to South-East Asia and North America. Located >200 km from the Operational Area.

4.6.8 Shipwrecks

Detailed geotechnical and geophysical surveys conducted for the Blacktip facilities, which included the use of a magnometer, have not detected any shipwrecks in the Operational Area (Woodside, 2004).

There are, however, shipwreck sites along the northern Kimberley coastline. The sites within the EMBA that are less than 300km from the Operational Area are listed in Table 4.11.


Table 4.11: Shipwrecks within the environment that may be affected that are less than 300km from the Operational Area

Shipwreck name	Distance from Operational Area (km)
SEDCO Helen	120km north
RAAF B-24 Liberator A-72 80 (aircraft)	225km west

4.6.9 First Nations

The YGP (approximately 108km to east of the Operational Area) is in the Thamarrurr region, owned by the Traditional Owner groups of the Daly River Port Keats Aboriginal Land Trust. The land is inalienable freehold land, held under the *Aboriginal Land Rights (Northern Territory) Act 1976*.

One hundred kilometres to the south of the Operational Area, the land comes under the Balangarra Aboriginal Corporation, who administers the land on behalf of the Balangarra People.

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Within the Thamarrurr region, there are seven language groups and more than 20 clan groups, as identified in Figure 4.21. The Thamarrurr Development Corporation Ltd (TDC) is a not-for-profit corporate entity owned by members of the four main ceremonial groups – the Wangka, Lirrga, Wulthirri and Tjanpa peoples – and established by the 20 clan groups of the Thamarrurr region. The TDC represents the interests of these clan groups which are patrilineal land-owning groups with clear estates and boundaries. Under Thamarrurr, all land-owning groups have traditional rights and responsibilities over their land, and can work together to resolve issues involving that land (TDC, 2023). Thamarrurr Rangers are an important part of the TDC, employing 20+ local Indigenous staff and four non-Indigenous support staff (TDC, 2023). The Thamarrurr Rangers actively engage with Traditional Owners and community members in natural and cultural resource management as they work across 18,000 sqkm of Country and 240km of coastline (TDC, 2023).

For the EMBA, three land councils represent Aboriginal communities: the Kimberley Land Council in WA, and the Northern Land Council and Tiwi Land Council in NT. There are also Prescribed Bodies Corporate (PBCs) that represent First Nations peoples in the NT and WA.

Aboriginal corporations on the shorelines of the EMBA and moderate exposure zone are shown in Figure 4.22. In coastal areas of the NT that overlap the EMBA, Native Title determinations are limited to an area around Darwin relating to Larrakia; however, no Native Title is in effect.


4.6.9.1 Culture, Songlines and Connection to Country

First Nations peoples have passed down their culture through generations for the past 65,000 years. This is demonstrated by ongoing cultural connections to their country, as well as by archaeological evidence of human occupation dated to be over 65,000 years old.

Historically, First Nations people lived in small family groups and were semi-nomadic, with each family group living in a defined territory, systematically moving across a defined area following seasonal changes. First Nations people built semi-permanent dwellings; as a nomadic society emphasis was on relationships to family, group and country.

Membership within each family or language group was based on birthright, shared language, and cultural obligations and responsibilities. Groups had their own distinct history and culture and at certain times, family groups would come together for social, ceremonial and trade purposes (WWIA 2023).

According to First Nations beliefs, the physical environment of each local area was created and shaped by the actions of spiritual ancestors who travelled across the landscape (WWIA 2023). Songlines are tied to the Australian landscape and provide important knowledge, cultural values and wisdom. Songlines trace the journeys of ancestral spirits as they created the land, animals and lore, and are integral to First Nations spirituality and connectedness to country.


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Unlike elsewhere in Australia, First Nations groups in northern Australia had several centuries of contact with foreign visitors before the arrival of Europeans (National Oceans Office 2004). Many coastal and island regions in WA and the NT were the scene of complex patterns of interaction, trade and exchange with outsiders including Macassan trepangers from Sulawesi from the late 1600s until early 1900s, European mariners from the mid- 1600s, and Japanese pearl divers after European arrival (McCarthy et al 2022).

There is strong indication Songlines exist along the coast of northern WA and the NT. There are often sacred sites entwined with the Songlines. Natural features within the EMBA (e.g., reefs and coastline features) may form core components of Dreaming stories for different Traditional Owners.

Totems connect First Nations people on a spiritual level, providing a deeper connectivity and understanding to their family groups, their Country, Dreaming and creation events. Marine animals and plants found in Sea Country can hold special cultural significance (including totemic value) to different First Nations people and may be important for subsistence and medicinal purposes. As described in Section 4.4.1, BIAs for marine fauna are located within EMBA, including those for marine turtles and whales.

Consultation with Traditional Owner groups did not identify any Songlines over the EMBA, ZPI or OA.

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Source: Image provided by the Thamarrurr Development Corporation in Streten *et al.*, 2020

Figure 4.21: Thamarrurr region and 20 clan regions



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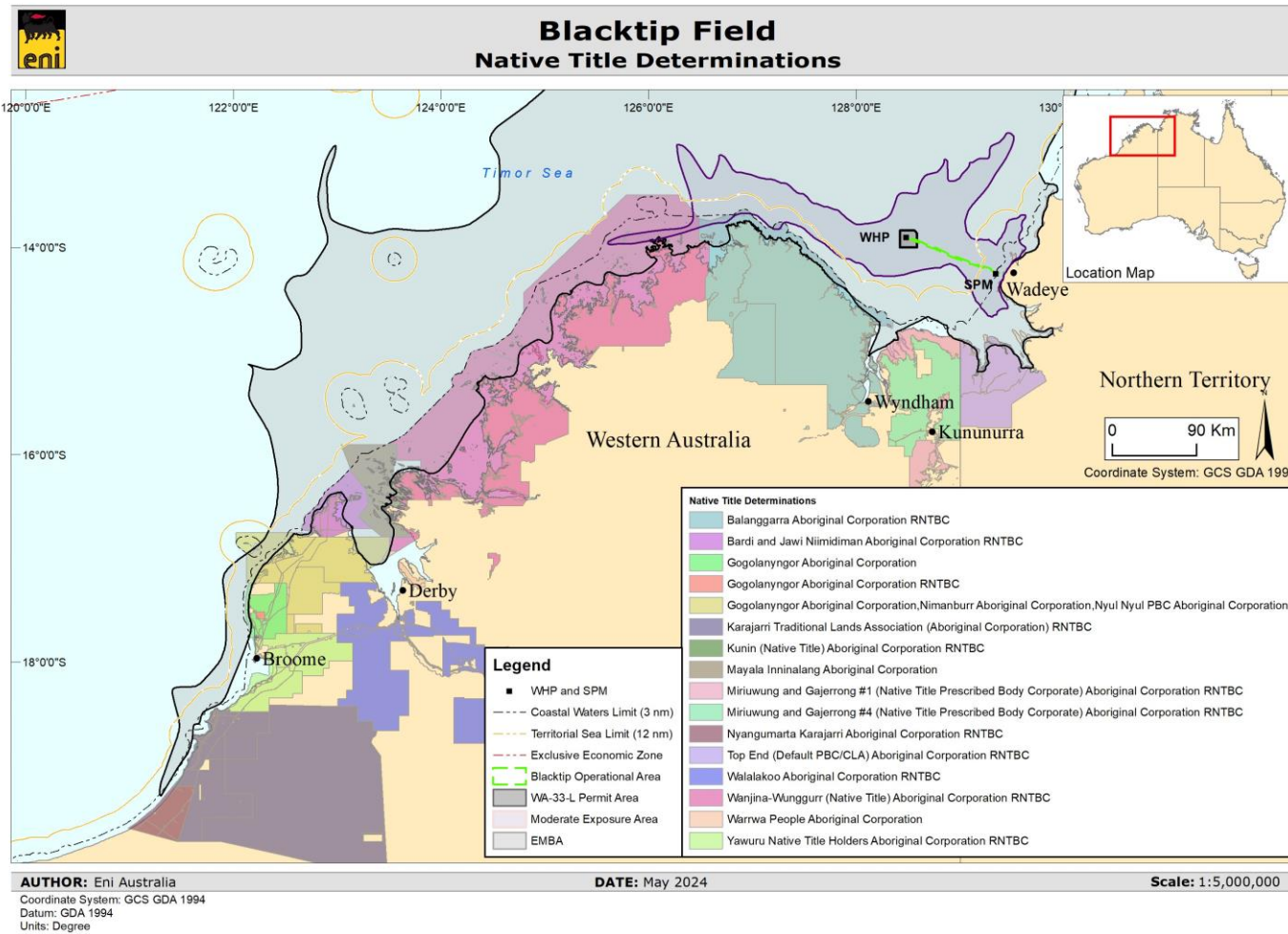



Figure 4.22: Native Title determinations in the vicinity of the environment that may be affected

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4.6.9.2 Sea country and submerged historic landscapes

Over the 65,000 years of First Nations occupation of Australia, sea levels have fluctuated, rising from a peak low of -120 m at around 21,000 years ago relative to present levels, which resulted in the inundation of vast areas the continental shelf (Ward et al 2022). First Nations peoples have been sustainably using and managing their sea country for tens of thousands of years, in some cases since before rising sea levels created these marine environments (DNP 2018b).


Sea country or saltwater country refers to the areas of the sea that First Nations peoples are particularly affiliated with. It is an estate of sea as well as land, containing sacred sites and inhabited by ancestral beings, existing in both the physical and spiritual world. Sea country is valued for First Nations cultural identity, health and wellbeing (DNP 2018a, 2018b).

There is a considerable body of literature describing the complexity of the cultural, spiritual, ceremonial, territorial and economic connection between First Nations peoples and the sea.

Although limited baseline surveys of submerged archaeology have been undertaken in Australia to date, submerged archaeological landscapes have recently been identified in WA through combined evidence of terrestrial ecology, coastal and marine geomorphology and sea-level studies (Benjamin et al 2020; McCarthy et al 2022). As some of the oldest dated terrestrial sites have been found in the NT, there is a potential for the existence of submerged landscapes with associated First Nations heritage values due to strong cultural connections between Traditional Owners and the sea (McCarthy et al 2022). Such relationships and the connections with sea country transcends the landscape/seascape divide and the sea is not only a physical and temporal space, but also a mental map of ancestral journeys and rituals to nurture and pass on to future generations (Ward et al 2022).

As described in Section 4.5.1, many AMPs are of important cultural significance with fishing, hunting and the maintenance of First Nations heritage through ritual and stories considered to be important uses of nearshore and adjacent areas (DNP 2018a). Australian and State Marine Park Management Plans offer a source of publicly available information regarding Sea Country in proximity to the EMBA and ZPI. Management Plans developed to protect these reserves have been used to inform some of the marine values and sensitivities related to Sea Country in this EP (Appendix B).

Documenting traditional knowledge initiates a conversation with Traditional Owners about their Sea Country and allows industry to gain further understanding about where the geographic areas of importance are and why they are important for Traditional Owners.

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4.6.9.3 Sacred sites and other recognised heritage places

Culturally important sites and places include a range of ceremonial and mythological sites, camps, quarries, artefacts and manmade structures. Some sites are located inland and therefore have limited potential for interaction with activities (unplanned) associated with this EP. Whereas other sites may be located directly on the coast or on offshore islands that have values associated with plant resources, water sources, hunting places/camps and spiritual and cultural history. Refer to figure 4.23 where some of these places have been identified in the JBG in consultation with Traditional Owners representing different clan groups of the Thamarrurr Region.


4.6.9.4 Seasonal calendars

First Nations have developed an understanding of the Australian environment over many thousands of years (BOM 2023; CSIRO 2022). First Nations knowledge of the seasons is highly localised and unique to each Traditional Owner group. As such, the number of seasons recognised in an annual cycle, the length of each season, and how they are locally defined and understood, differs significantly depending on where the seasonal knowledge of Country has developed (CSIRO 2022).

Within specific seasons certain activities occur; these include customary activities such as ceremonies and burn offs. Resource availability is also influenced by season such as the flowering of certain plants identifying when eggs are available for collection or specific bird calls which indicate that yams are ready to eat (BOM 2023).

Some examples of specific traditional activities that may occur in the EMBA that are influenced by season include:

- The Yawuru (Broome) calendar shows that during Barrgana (cold season; June to August) fish traps are used to catch salmon and mullet and dugong are also hunted (BOM 2023). Whereas in Laja (hot season; September to November) turtle eggs are collected, and stingrays hunted to provide food (BOM 2023)
- The Mayala (Buccaneer archipelago/West Kimberley) seasonal calendar shows fishing occurs in Barrgana (May to July) and turtle nesting in Jalalay (July to October) (Mayala Inninalang Aboriginal Corporation RNTBC 2019)
- The Bardi seasonal calendar shows that turtle eggs are collected during the wet season (Mankal; January to February) and dugong hunting occurs during Barrgan (May to August). Jalalay (September to October) marks the end of dugong hunts and the best time to catch stingray.

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4.6.9.5 Traditional use of resources

Traditional fishing occurs along the majority of the Kimberley and NT coastline. The practice of traditional fishing includes taking turtles, dugong, fish and other marine life (DCCEEW 2023g), with traditional fishing methods consisting of the use of lines, hand collection, nets and spears (National Oceans Office 2004). Several IPAs identified in Section 4.6.9.10 are found within the EMBA where it can be expected that traditional fishing activities will occur. Within the Northern Land Council region, approximately 55% of the NT's coastline is owned by Traditional Owner groups. These areas support a range of economies and livelihoods and contain many iconic fishing areas (NLC 2021).

A National Recreational and Indigenous Fishing Survey undertaken in 2000, reported that the greatest fishing effort focused on saltwater environments, including estuarine, coastal, inshore (less than 5 km from the coast) and offshore (greater than 5 km from the coast) with line fishing and hand gathering being the two most common fishing methods (National Oceans Office 2004). Data collected during the survey in 2000, showed that offshore fishing activities represented only 2% of total indigenous fishing effort with inshore (49%), coastal (23%), rivers (16%) and lakes/dams (10%) being more common (National Oceans Office 2004).


The traditional harvesting of marine resources (e.g. turtles, whale sharks and dugong) adjacent to the NWMR is a pressure of potential concern for the carbonate bank and terrace system of the Sahul Shelf, the pinnacles of the Bonaparte Basin, and the Commonwealth waters surrounding Ashmore Reef and Cartier Island (DSEWPaC 2012a).

As stated in Section 4.5.1, several Traditional Owner groups have responsibility for managing sea country in areas covered by the EMBA where they have deep spiritual connections to offshore landscapes and harvest marine resources for food and cultural purposes. Fish are a staple food source, and fishing a form of cultural expression, connecting people to their country modelled on tradition and based in traditional law (DNP 2018a).

Sea Country in the Thamarrurr region

A partnership project between Eni, the TDC – Thamarrurr Rangers and the Australian Institute of Marine Science (AIMS) was undertaken in 2019 to map the ecological and cultural values of Sea Country in the Thamarrurr region. The results of this mapping exercise were published by Streten *et al.* (2020) in the Australian Petroleum Production and Exploration Association Journal under the title 'Mapping traditional ecological knowledge of Sea Country to understand biodiversity and areas of cultural importance'. This section summarises the Sea Country mapping process and outcomes.

The conversation regarding a participatory mapping workshop was started through a proposal by AIMS that was provided to the Thamarrurr Rangers through Eni's community and environmental group. The Thamarrurr Rangers sought approval from the TDC, which represents the interests of the Traditional Owners of the Thamarrurr region.

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After receiving consent and agreement from the Traditional Owners, researchers (Eni and AIMS) travelled to Wadeye to hold the participatory mapping workshops. The first workshop was attended by 30 Traditional Owners and Rangers representing different clan groups of the Thamarrurr region. Attendance at the workshop by Traditional Owners representing many different clan groups in the area allowed the mapping exercise to cover a greater extent of the coastline, because Traditional Owners each have custodianship for their specific area and are restricted to speak only for that part of Country.


The workshop commenced with researchers explaining how the knowledge shared by the Traditional Owners and Rangers would be used to generate a benthic habitat map that could be used by the people of the Thamarrurr region to communicate with government and industry. The explanation was translated into local language by a member of the TDC.

From a Traditional Ecological Knowledge perspective, 'habitats' in the marine environment could be differentiated based on different ecological processes to those prioritised by scientists, and names often differ between language, community or dialect. As such, habitats were identified in the local languages first, with English descriptions fitted to the Traditional Ecological Knowledge classifications. The workshop commenced with developing a classification system for marine benthic habitats in three local languages – Murrinhpatha, Mari Amu and Marri Tjevin – and English (Table 4.12). The local language words for each habitat were confirmed by discussing photographs of potential habitats in the region and using local language dictionaries with workshop participants.


Table 4.12: Murrinhpatha, Mari Amu, Marri Tjevin and English words for marine habitat types

English	Murrinhpatha	Mari Amu	Marri Tjevin
Oysters	Ku wurldirr	Awu wundirr	Awu wundirr
Sea rocks, coral, rocky reef	Nanthi kalpa	Karrila	Karrila
Seagrass	Nanthi kurrukurrak	Thamurr munmurr	Thamurr munmurr
Sand	Da darrimurn	Munirrho	Munirrho
Macroalgae	Nanthi wemat	Thamurr murmur	Thamurr murmur
Mangrove	Da dara	Tha Tjindi (nidin wuri)	Tha Tjindi (nidin wuri)
Mud	Da Paldart	Pilak	Pilua

After the language discussion, Traditional Owners and Rangers separated into five groups based on their homeland. The smaller groups drew the location of coral, oysters, seagrass, mangroves, mud, rock, rocky reef and sand on topographic maps of their homeland. The mapping exercise was repeated on the second day with Traditional Owners and Rangers, to add information and check the outcomes from the first day of workshops. The information collected at the workshops was digitised in geographic information system software and a draft habitat map was generated. Researchers returned to Wadeye to discuss the draft habitat map of the Thamarrurr region.

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Rangers and Traditional Owners were invited to check the detail on the map to confirm its accuracy and to identify additional information for inclusion. This refinement step ensured the researchers' interpretation of the knowledge shared matches that of the participants. The classification system in local languages was also reviewed during the second visit to Wadeye. The draft map was refined and the final map identified eight different benthic habitats in three local languages plus English, covering a total area of more than 1000 km² along the Thamarrurr coastline (Figure 4.23). Other cultural information was also mapped, including totem and dreaming sites and other features of cultural and historical importance (Figure 4.24).

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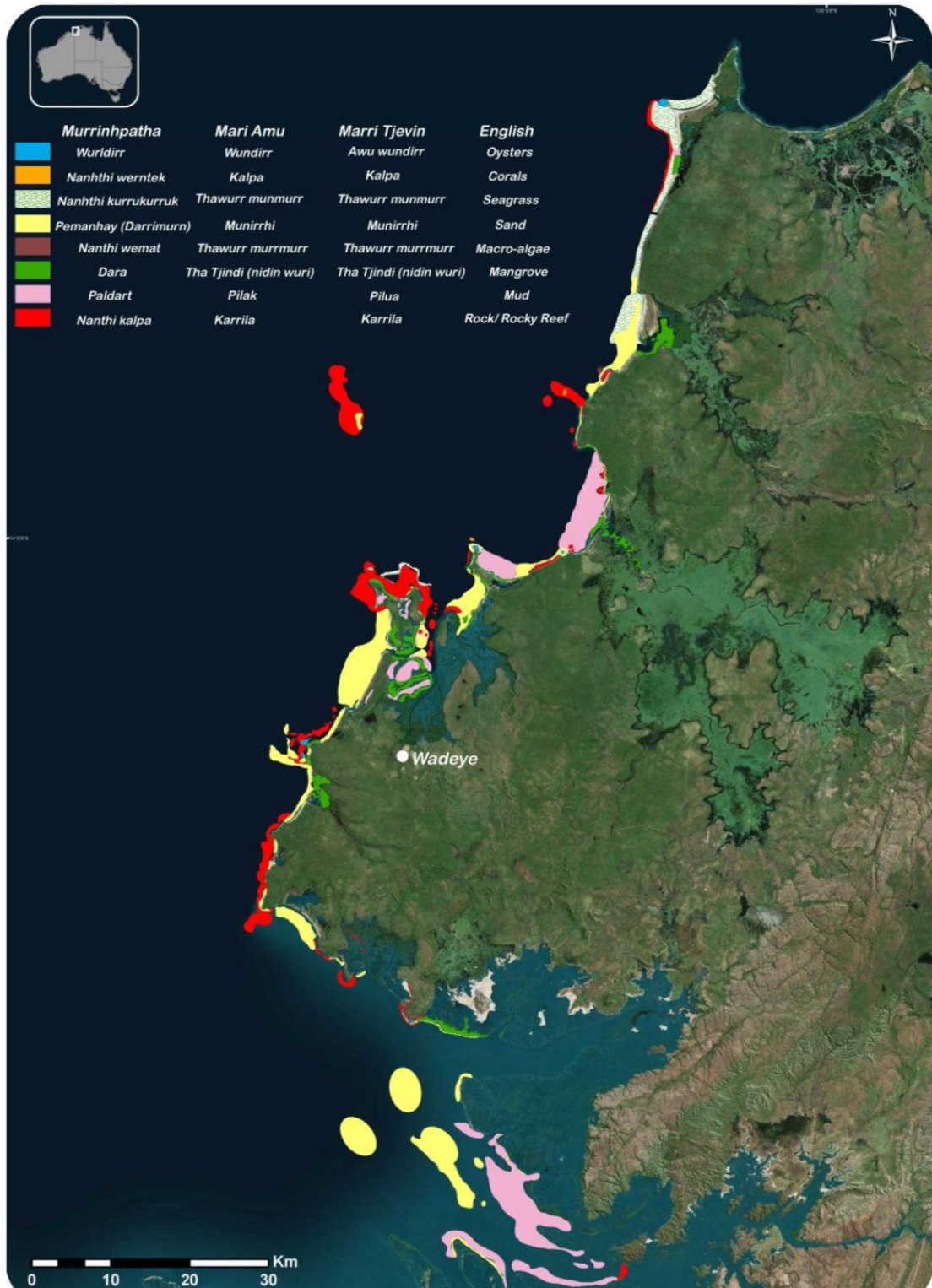



Figure 4.23: Habitat map for the Thamarrurr region based on participatory mapping workshop

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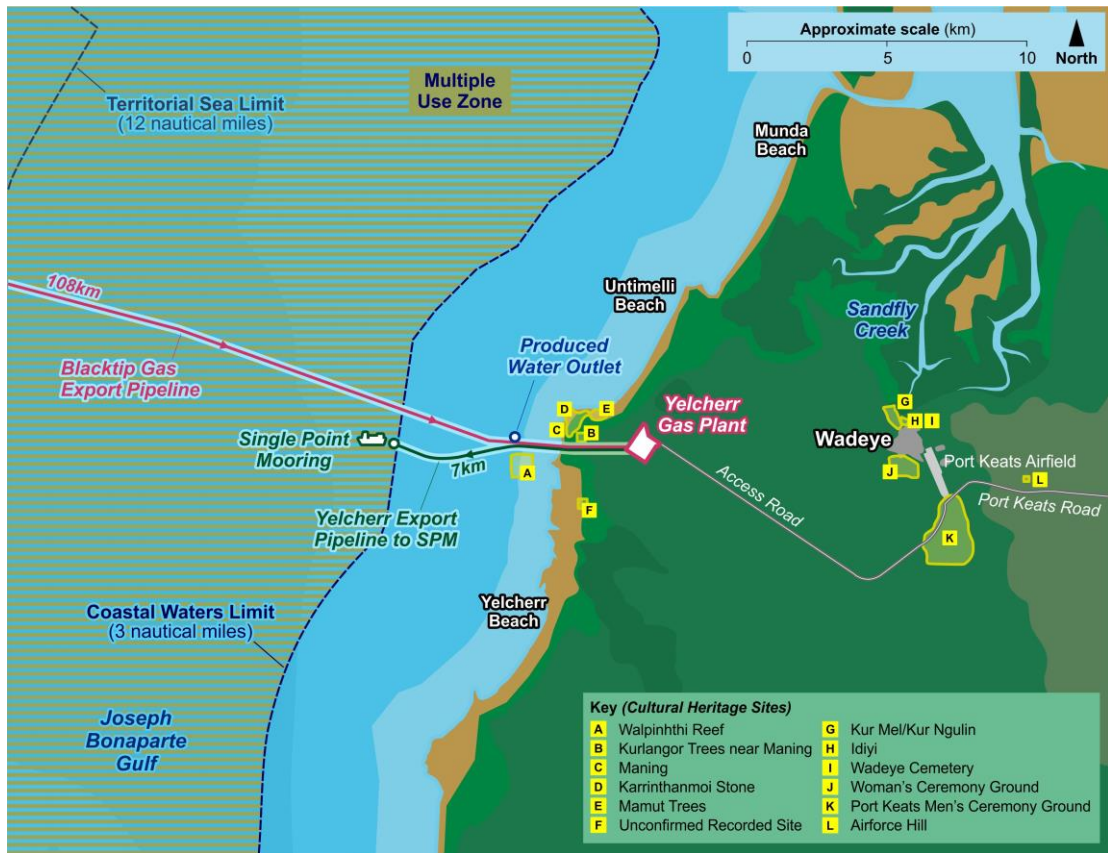


Figure 4.24: Key cultural sites in the vicinity of Yelcherr Gas Plant


Sea Country in the environment that may be affected

It is understood a fundamental aspect of First Nations peoples' past and ongoing relationship with the sea is that particular groups have a complexity of rights and interests over particular areas of the sea and adjoining coastal land (National Oceans Office, 2004). Such relationships and the connections with Sea Country transcend the landscape/seascape divide; the sea is not only a physical and temporal space, but also a mental map of ancestral journeys and rituals to nurture and pass on to future generations (Ward *et al.*, 2022).

Much of the land along the north Kimberley coastlines has Sea Country components and encompasses small islands near the coast. For example, the Balangarra lands include the Sir Graham Moore Islands, Adolphus Island and Reveley Island.

Given the NT has the oldest dated terrestrial sites, there is a potential for the existence of submerged landscapes with associated First Nations heritage values due to strong cultural connections between Traditional Owners and the sea (McCarthy *et al.*, 2022).

As described in Section 6.9.10, AMPs may have important cultural significance, with fishing, hunting and the maintenance of First Nations heritage through ritual and stories considered to be important uses of nearshore and adjacent areas (DNP, 2018a, 2018b).

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4.6.9.6 Blacktip Project and the Thamarrurr Rangers

The Thamarrurr Rangers were established in 2001 by the Traditional Owners of the Thamarrurr region to address land and sea management issues. The Rangers have grown from through Community Development and Employment Programs, to a well-resourced program through the Working on Country program (TDC, 2023).

The Thamarrurr Rangers actively engage with Traditional Owners and community members in natural and cultural resource management. They patrol more than 18,000 km² of land and around 240km of coastline (from the Daly River to the Fitzmaurice River), and do a range of work, including coastguard, pest control, monitoring wild animals, protecting cultural assets, education and managing the Marri-Jabin Indigenous Protected Area (IPA) (TDC, 2023), as well as activities for Eni.

Traditional Owners of the Thamarrurr region hold a close affinity with Sea Country and, together with Thamarrurr Rangers, have recognised the importance of maintaining an active presence on the water. As outlined in the previous sections, the 2019 Sea Country mapping workshops provided the opportunity for the Rangers and researchers (Eni and AIMS) to exchange scientific monitoring knowledge that could enhance the local community's management capabilities of Sea Country.

Eni, AIMS and Thamarrurr Rangers have worked together on multiple field-based projects at Blacktip, notably the following:

2020 Ecological data collection at Emu Reef in Wadeye, NT


Rocky reefs are important habitats and nursery areas for a diversity of marine species, such as golden snapper and black jewfish. Based on the participatory mapping workshop (discussed in previous sections), rocky reefs are a key ecological feature in the Thamarrurr region. The rocky reefs in the region include reef fish protection area, Emu Reef, and the sacred site of Walpinhti Reef (refer Figure 4.24). There is limited scientific data available about the nature of these ecologically important areas.

This project was conducted by AIMS, in collaboration with the Thamarrurr Rangers, during two field trips in the fourth quarter of 2020, and provided training to Rangers on how to use baited remote underwater videos and other marine surveying techniques to characterise reef habitats. The target locations included around an Eni PW release point and Emu Reef. The project not only increased the current knowledge of reefs in the area, but also provided field data to refine the details for the areas mapped during the initial participatory workshop. In addition, training of the Rangers provided them with the skills to routinely monitor the reefs in their Sea Country.

2023 water quality sampling at the Blacktip produced formation water release point

This project trained the Thamarrurr Rangers to undertake monthly PW outfall sampling following Eni verified sampling protocols.

AIMS trained the Thamarrurr Rangers in water sampling and conducting a dummy survey using a fluorometer on the subsequent day. A GoPro was used to record the training and fieldwork and may be used as reference and future training of new rangers.

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Eni and Thamarrurr Rangers arrangements continue in relation to monitoring and data collection and is expected to continue to grow with ongoing training in marine operations, with Rangers increasing their ability in monitoring for research and compliance purposes.

2023 fluorometer survey training in response to oil spill

After the water quality sampling training (detailed above), AIMS trained the Thamarrurr Rangers in fluorometer use so they can be first responders sampling water in the event of an oil spill. More details about using the Thamarrurr Rangers' skills in operational and scientific monitoring after an oil spill are included in the Blacktip Operational and Scientific Monitoring Plan (000036_DV_PR.HSE.0860.000).

Annual sediment and shellfish surveys

Sediment and shellfish are sampled annually around the Blacktip PW outfall and at references sites offshore of Wadeye region.

Other field-based projects in collaboration with the Thamarrurr Rangers may be completed in the future. These include:


1. Understanding mangrove habitat change in the Thamarrurr region

Mangroves play an important role in coastal ecosystem health because they limit coastal erosion and are important nursery grounds for demersal fish and sharks. A change in mangrove habitats along the west coast of the Gulf of Carpentaria, NT, has been identified.

The Traditional Owners of the Thamarrurr region have also identified this change along the east coast of the Bonaparte Gulf, NT. While studies are underway to understand the issue in the Gulf of Carpentaria, the cause, rate and extent of the decline of mangroves along the coast near Wadeye have not been examined. This project, in collaboration with Rangers and Traditional Owners, would use participatory mapping techniques to document the change identified by Traditional Owners, in combination with analysis of remote sensing satellite imagery, to elucidate the observed patterns and to assess other environmental variables that may have attributed to this change. Understanding the location of mangrove decline within the Thamarrurr region may facilitate the identification of factors driving the decline and to develop potential strategies for mangrove rehabilitation projects.

2. Interpreting megafauna data and designing monitoring program for Rangers

During the mapping exercise, Rangers and Traditional Owners identified foraging locations for turtles and dugongs as well as movement patterns of rays along the coast. This project may collate Traditional Owners' knowledge as well as data to provide information about the status of species in the area. The outcome from the project would be a monitoring program designed based on priority species and areas.

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4.6.9.7 Blacktip Project and the Development Phase First Nation Engagement


In 2004, while developing the Blacktip Project, surveys and consultation were undertaken with the Traditional Owners to determine cultural heritage values that need to be protected and conditions for the long-term use of the land by Eni. The methods and results of these surveys are included in the Social Impact Assessment of the Proposed Blacktip Project, an appendix to the Blacktip Project Environmental Impact Assessment (Woodside, 2004). Table 4.13 outlines concerns raised by Traditional Owners in 2004 relevant to the Blacktip operations and where they have been addressed in this EP.

An Authority Certificate (ref: D86/199;94/201) was issued by the Aboriginal Areas Protection Authority on 26 June 2006 and remains in force. The certificate includes conditions for operating the Blacktip Project, both onshore and offshore. A Principal Agreement has also been in place for the Blacktip Project since 2006 between Eni Australia B.V and the Northern Land Council and the Daly River Port Keats Aboriginal Land Trust.

Table 4.13: Concerns raised by Traditional Owners during Blacktip development

Concern	Where addressed in this EP
Pollution caused by ballast water being emptied into the ocean and polluting local waters	Risks from ballast water exchanges have been addressed in Section 8.3.
Eni not taking responsibility for gas, condensate and pollution leaking into the sea	Eni has in place the Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17) and Scientific Monitoring Plan (000036_DV_PR.HSE.0860.000) to manage any gas, condensate and pollution leaking into the sea. Eni is responsible for the full extent of any cost, expenses, liability and damages that occur, including any civil liability damages (e.g., in the event of a spill) that might be pursued through civil action in a court of law, or under the 'polluter pays' statutory duty under the OPGGS Act. Any entity who has been, or may be, financially disadvantaged as a direct result of planned operations or unplanned incidents associated with offshore petroleum activities, is entitled to seek compensation from the responsible party directly, or through civil proceedings via the courts.
The effect of Category 4 and 5 cyclones on the gas processing plant and the WHP in the ocean	As referenced in Section 10.13.8, the Eni Standard Adverse Weather (ENI-HSE-ST-031) and Eni Cyclone Preparation Plan (000036_DV_EX.OPS.0758.000) include detailed procedures for preparing for and responding to cyclone events. In the event a cyclone (or severe weather) is forecast and it has the potential to affect the Blacktip operations, the cyclone management plan will be actioned. If required, vessels can transit from the proposed track of the cyclone (or severe weather).

A range of other concerns were raised, relating to the onshore components of the Blacktip Project, and are noted and addressed in the Blacktip Project Environmental Impact Assessment (Woodside, 2004).

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4.6.9.8 Indigenous Protected Area

An IPA is an area of Indigenous-owned land or sea where Traditional Owners have entered into an agreement with the Australian Government to promote biodiversity and cultural resource conservation. IPAs are managed by First Nations groups in accordance with Traditional Owners' objectives. The boundaries of IPAs may be aligned with Native Title boundaries, or wholly contained within. In 2022, the Australian Government announced a program (the Sea Country IPA Program) to expand the IPA network to include coastal and marine areas.

The IPA program is jointly administered by DCCEEW and National Indigenous Australians Agency (NIAA).

IPA are shown in Figure 4.24. Two IPAs are in the vicinity of the EMBA in the JBG: the Marri-Jabin IPA and the Balanggarra IPA. The Bardi Jawi IPA is within the eastern extent of the EMBA. Whilst the EMBA does not contact the shore component of the Bardi Jawi IPA, it overlaps with the sea component of the IPA. Marri-Jabin IPA, Balanggarra IPA and Bardi Jawi IPA are described further in the subsections below.

IPAs outside of the EMBA, but on adjacent shorelines are the Uunguu IPA, Dambimangari IPA.

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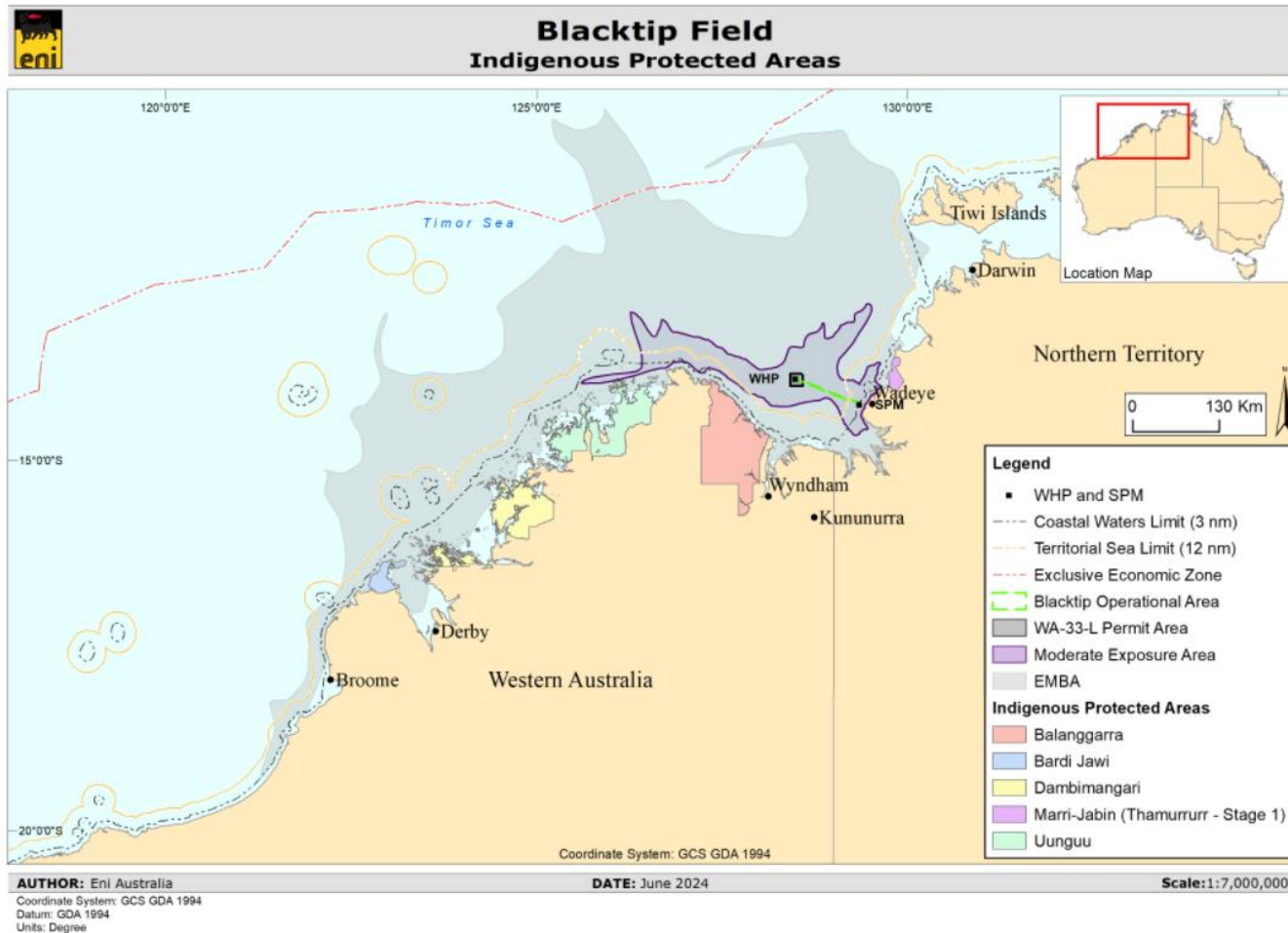



Figure 4.25: IPAs within the vicinity of the EMBA and moderate exposure area (ZPI)

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Marri-Jabin IPA

Dedicated in 2010, the first stage of the Marri-Jabin IPA covers around 71,200 hectares around the Moyle and Little Moyle River area (NIAA, 2023a). The IPA is located approximately 150km from the Blacktip WHP and is overlapped by the EMBA.

The Thamarrurr Rangers patrol the area of coastline and the IPA (NIAA, 2023a). The Rangers survey and manage invasive weeds, feral animals, marine invertebrates, and diseases. Other activities include monitoring sea turtles, other threatened species and their habitats; managing fire; documenting and maintaining significant cultural sites; and passing on cultural knowledge to the next generation (NIAA, 2023a).

Balanggarra IPA

Located in the Kimberley region near the WA border is the Balanggarra IPA. Dedicated in 2013, it covers more than one million hectares of land and Sea Country (NIAA, 2023b). The IPA is located 133km from the Operational Area.


The northern part of Balanggarra country is 'blue water' country and includes Cape Londonderry, several rivers such as the lower Drysdale and King George, saltwater, reefs, and offshore islands, like Sir Graham Moore and the Governor Islands. The southern part is 'brown water' country and includes land drained by the Forrest River system, the muddy waters of the Cambridge Gulf and Adolphus Island (NIAA, 2023b).

The Balanggarra Rangers look after Country using traditional knowledge and western scientific methods: walking in both worlds with their knowledge allows Balanggarra Rangers to do 'right-way-fire management', look after cultural sites, survey wildlife and conduct weed-management activities (NIAA, 2023b).

Bardi Jawi IPA

Declared in 2013, the Bardi Jawi IPA is located 160km north of Broome and includes over 126,990 ha of land and sea territory (DCCEEW, 2020). The IPA is located 626km from the Operational Area and the eastern extent of the EMBA overlaps the sea component of the IPA. As defined by hydrocarbon modelling (Section 8.6), no shoreline contact occurs with the land component of the IPA and the contact with the sea component is entrained hydrocarbon at the low threshold (thresholds defined in Section 8.5.3).

The IPA is dedicated under IUCN Categories IV (for the coastal section) and VI (for the inland and island areas). The coastal areas are of high conservation value because of their biodiversity and high cultural values. Management of the IPA is undertaken by the Bardi Jawi Rangers and the Bardi Jawi Oorany Rangers (provides opportunities for women to participate in on Country management).

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4.6.9.9 Aboriginal Heritage Sites

There are Aboriginal heritage sites under applicable Aboriginal heritage legislation along the northern Kimberley coastline; however, these are outside the EMBA. Cassini Island is within the EMBA, 300km to the west of the Operational Area. On the island are two registered Aboriginal Sites – the Cassini Stone Line and Cassini Stone Circles, both human-made structures. Cassini Island itself is a registered Heritage Place.

4.6.9.10 Australian Marine Parks

Eni acknowledges the EMBA for this EP overlaps with features of the North Marine Parks Network Management Plan (DNP, 2018a) and the North-west Marine Parks Network Management Plan (DNP, 2018b) and other State managed Marine Park Management Plans, which identify natural, cultural and spiritual values associated with AMPs in the EMBA. The Joseph Bonaparte Gulf AMP is referred to in the North Marine Parks Network Management Plan (DNP, 2018a).

Eni acknowledges Commonwealth and State Marine Park Management Plans recognise cultural features of Traditional Owner groups. AMPs describe taking 'values into account' when making decisions and acting in relation to AMPs. Natural, cultural, heritage and socio-economic values are associated with the AMPs and are detailed in Appendix B.

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5 RELEVANT PERSON CONSULTATION

5.1 Overview

This section of the EP, in conjunction with Appendix C, describes consultation undertaken in 2023/24 by in preparation for the Blacktip operations activities.

In accordance with Regulation 24 of the OPGGS Regulations, the EP must contain:


- b) a report on all consultations between the titleholder and any relevant person, that contains:
 - i) a summary of each response made by a relevant person, and
 - ii) an assessment of the merits of any objection or claim about the adverse impact of each activity to which the environment plan relates, and
 - iii) a statement of the titleholder's response, or proposed response, if any, to each objection or claim.

Since the Blacktip facilities have been operational since 2009, Eni is familiar with local communities and other users of the marine environment in the region. Relevant persons previously identified have been continually informed of Blacktip activities and operations over the life of the asset, including those activities covered by the in-force Blacktip Operations EP (000036_DV_PR.HSE.0677.000).

Appendix C4 includes the outcomes of consultation undertaken in 2023/24 and include all information received from relevant persons up to 14 June 2024.

For the consultation described in this section of the EP and further presented in Appendix C1, the guidelines considered were:

- NOPSEMA Guideline: Consultation in the course of preparing an environment plan (NOPSEMA, 2023)
- NOPSEMA Guideline: Consultation with Commonwealth agencies with responsibilities in the marine area (NOPSEMA, 2022b)
- NOPSEMA Guidance Note: Responding to public comment on environment plans (NOPSEMA, 2022c)
- NOPSEMA Guidance Note: Petroleum activities and Australian Marine Parks (NOPSEMA, 2020)
- NOPSEMA Guideline: Environment Plan Decision Making (NOPSEMA, 2024)
- Interim Engaging with First Nations People and Communities on Assessments and Approvals Under the *Environment Protection and Biodiversity Conservation Act 1999* (DCCEEW, 2023b)
- Consultation approach for unplanned events (WAFIC, 2023)
- Australian Fisheries Management Authority: Petroleum industry consultation with the commercial fishing industry (AFMA, 2023).

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5.2 Identified Relevant Persons

Through the processes described in the Blacktip SMP Bridging Document (Appendix C1), Eni identified relevant persons.

Eni conducted initial review of the Blacktip SMP Stakeholder Register through desktop analysis to confirm data about relevant prescribed bodies corporate (PBCs), regional councils (NT and WA), potential community leaders, and other stakeholders that may have an interest in the proposed activities. Further to the process described above, another opportunity for identifying the relevant person was done through in person meetings, based on further identification proposed by local connections.

Whilst the process for relevant person identification is outlined in Part 3 of the Blacktip SMP Bridging Document (Appendix C1), a complete list of relevant persons applicable to the Blacktip operations is presented in Appendix C2 (Relevant Persons Register).


5.3 Consultation Approaches and Activities

Following identification of relevant persons, and as outlined in Part 5.1 of the Blacktip SMP Bridging Document (Appendix C1), Eni's process for consultation was:

1. Issuance of emails to all relevant persons providing summary of activity and seeking a response should they wish to consult.
2. Email and high-level information pack distribution to all stakeholders with initial default response period of 30 business days.
3. Mail-out of high-level information pack distribution to selected stakeholders upon receipt of direct addresses – default response period of 30 business days.
4. Phone calls as a follow up to initial email to all relevant persons with functions, interests or activities that overlap with the EMBA (predominantly low exposure zone) and the ZPI (moderate exposure zone).
5. Where phone numbers were available, further phone/email/text messages were sent to follow up calls & emails to identified relevant persons.
6. Review of Relevant Persons Consultations Log (Appendix C4a) to ensure appropriate consultation with relevant persons had taken place.

A range of other engagement methods were considered and offered as appropriate, including:

- Announcement, ahead of time, of visits to relevant persons, through subject matter experts / associations that relate to regional stakeholders.
- Targeted materials (e.g., slides & handouts), distributed via meetings/roadshows with question-and-answer sessions (both in person and online).

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- In person meetings/roadshows with support from subject matter experts / associations where targeted materials were distributed alongside the opportunity for question-and-answer sessions.
- Online meetings where targeted materials were issued and discussed alongside the opportunity for question-and-answer sessions.

Where there was still no response received, further tailored emails, direct phone calls and texts by the Eni stakeholder focal point to directly engage with relevant persons with functions, interests or activities that overlap the ZPI (moderate exposure zone) and with the EMBA (predominantly low exposure zone).

Eni used a range of tools to consult with relevant persons in the most appropriate and effective manner. As described in Appendix C1, specific consultation approaches are required for certain groups of relevant persons.

Prior to consultation, slides and handout materials were prepared with the intention of summarising the content of the Environment Plan prepared for Blacktip operations in the format most suitable for the public and align with Regulation 25(2) (and NOPSEMA's Guideline: Consultation in the course of preparing an environment plan).

The flyers or handout materials were tailored to convey information such as:

- description of the activity, including location, timing and duration
- description and map of EMBA
- detail list of potential risks, potential impacts and mitigations and controls measures
- description of NOPSEMA's requirements
- Eni's contact details.


Upon request from some relevant persons, other engagement methods were used to exchange information, being:

- written documentation (e.g., presentation of materials/slides)
- verbal communication during phone calls (pre-emptory, in response or follow up),
- targeted meetings and/or information sessions.

The set of consultation approaches and materials that were used for the consultation for this EP, and examples, are presented in Appendix C3.

5.3.1 Consultation Requirements

Specific requirements for consultation were considered for each relevant person to ensure they received appropriate consultation information and materials.

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Over the course of consultation for the EP, some relevant persons requested and/or required a different level of engagement. In these instances, additional information was provided to allow that relevant person to make an informed decision as to potential consequences or impacts to their specific functions, interests or activities with regards to the Blacktip operations activities. Similarly, other relevant persons requested a lower level of engagement, such as indicating a preference for email rather than in-person meetings.


In most circumstances, initial engagement was through email, with the Blacktip Operations Factsheet (as per Appendix C3) attached. This material contained a summary of the activity, location map, coordinates, water depth, distance to key regional features, exclusion zone details, potential risks and impacts and management measures, and estimated timing and duration.

Eni also sent a consultation team on two occasions to travel directly to locations in NT (including Tiwi Islands), the East Kimberley and the Dampier Peninsula in order to hold face to face meetings and/or roadshow visits with relevant persons. During the visits, Eni's consultation team took the liberty of, prior to the visits, firstly contacting all relevant persons in the respective locations via text, phone, email and third parties to announce of the visit and seek meetings, and then also both formally and informally approaching for targeted consultation.

5.3.1.1 Commercial Fishers Approaches

As mentioned in Appendix C1, the designated licenced areas of many of the fisheries are extensive over the Australian coast, including within the EMBA. The EP provides an assessment of the potential interaction of the various fisheries with the petroleum activities, based on the nature of the fishery and historic effort and catch data. Based on this data and historic consultation efforts for the Blacktip Project petroleum activities, it was initially determined that the only commercial fishery with active effort in proximity (approximately 50km) to the petroleum activities was the Northern Prawn Fishery. The Northern Prawn Fishery peak body was hence provided with more detailed specific information about the proposed activities. Note that Eni has also established consultation with the Northern Prawn Fishery peak body for historic Blacktip Project petroleum activities.

Given the WHP and SPM operational activities occur within the already in place 500m petroleum safety zone around the WHP, interaction with commercial fisheries is not anticipated. Nevertheless, Eni approached the peak bodies representing the commercial fisheries for Commonwealth, WA and NT, and provided consultation materials. Eni considered the peak bodies to be established representatives of the fishing licence holders, however this could not be established for the NT fisheries. Whilst some peak bodies replied on behalf of those fisheries that they represented, Eni went further to ensure direct engagement with individual license holders where peak body representation could not be established. Eni sent NT individual license holders whose fishing management or licence area overlap the EMBA the consultation factsheet via mail..

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5.3.1.2 Traditional Indonesian Fishers Approaches

As described in Section 4.6.2, the EMBA overlaps the MoU Box. However, Indonesian traditional fishing effort is largely focused on shallow waters (e.g. banks and shoals), particularly around Scott Reef (outside of the EMBA). Given the traditional nature of the fishery and there is no requirement for the fishery to be licensed, a register of contact details is not maintained (either by Indonesian or Australian government) or publicly available, as such there is no way to identify these individuals. Eni therefore has no reasonable means of identifying or contacting these individuals. Eni has inferred that the interest of these persons is similar as those licensed commercial fisheries (referred to in the above section).

5.3.1.3 First Nations Engagement Approaches


As described in Appendix C1, in the first instance, Eni has used Land Councils and registered PBCs to facilitate consultation with First Nations relevant persons. Since July 2023, Eni has made considerable efforts to engage with the Kimberley Land Council, the Northern Land Council and the Tiwi Land Council. Some of these Land Councils expressed a lack of resources and shared that they could not facilitate Eni in the consultation process. These Land Councils, although relevant persons in their own right, have indicated the importance of engaging with Traditional Owners through the PBCs. As such, Eni engaged directly with PBCs through extended enquiry notifications, broader, focused higher-level consultation, and where required, targeted and tailored information sharing.

In consideration of advice by Land Councils, Eni commenced engagement through contacting PBCs directly, distributing a flyers and information pack via emails and as additional support, engaging third parties to facilitate direct meetings and roadshow planning.

Eni is aware there may be potentially relevant persons for this EP based in remote areas of WA and NT, as such, Eni opted to use third parties with its connections to the Traditional Owners and PBCs to be able to distribute the information pack as well as organising in-person meetings and roadshows. In respect of hierarchy within First Nations, Eni's approach focused on meetings with the authorised decision makers within the community, such as Traditional Owners, language groups, clans and/or community leaders.

At completion of in-person and roadshow meetings across First Nation communities, Eni sent follow up emails to individuals who had been engaged with directly, to provide them with digital versions of flyers and slides. The emails were another opportunity, and a further alternative means of communication for relevant person to provide their feedback.

In parallel to the above steps, Eni also used other broader consultation methods to engage with First Nations, as presented in Appendix C3 (consultation material) and Appendix C4 (2023/24 relevant person consultation records).

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Even following the Consultation Period, although consultation for the purposes of compliance with Section 25 of the OPGGS(E) Regulations has been completed, Eni will continue to maintain, its efforts to engage in continued dialogue with these Land Councils and PBCs to allow for relevant interested persons engagement throughout the execution of the planned activities, as per section 22(15) of the OPGGS(E) Regulations.

Thamarrurr Region Engagement

As presented in Section 4.6.9, Eni already has a partnership with the Thamarrurr Development Commission (TDC) – Thamarrurr Rangers and has partnered them in a Marine Park Management Plan exercise to map the ecological and cultural values of Sea Country in the Thamarrurr Region. The results of this mapping exercise were published by Streten et al. (2020) in the APPEA Journal under the title 'Mapping traditional ecological knowledge of Sea Country to understand biodiversity and areas of cultural importance'. Eni continues to maintain a good relationship with the Thamarrurr Rangers.

Eni advertised in the Wadeye TDC Newsletter with the aim for relevant persons to attend a community booth set up in Wadeye on August 31, 2023. During the booth meetings of direct communication, Eni distributed flyers to ensure opportunity for self-identification of relevant persons within the community.


Further to this, Eni initiated engagement through Wadeye Regional Council and provided information about Eni's activity.

Eni considers that consultation has concluded following the Wadeye/TDC engagements and Roadshow meeting, including follow-up emails sent to relevant persons. That said, and as outlined in Appendix C1, an ongoing engagement process is occurring in the Thamarrurr Region through Eni's attendance at monthly community meetings, and Eni will continue to maintain efforts to engage in continued dialogue with TDC and Thamarrurr Rangers to allow for relevant interested persons engagement throughout the execution of the planned activities, as per section 22(15) of the OPGGS(E) Regulations.

Kimberley Region Engagement

After several unsuccessful attempts of engaging with, and seeking support from Kimberley Land Council, Eni engaged KRED Enterprises (<https://www.kred.org.au/>) to facilitate engagement with First Nations people within the Kimberley. KRED Enterprises was selected due to:

- KRED's expertise and unique knowledge of the Traditional Owner groups and PBC's across the Kimberley Region.
- KRED's experience/connection of and to the Native Title Act
- KRED's abilities to facilitate meetings with Traditional Owner groups linked to the EMBA
- referrals from other offshore oil and gas titleholders.

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Eni, held a workshop with KRED, to identify PBCs that fall within the EMBA (through the process outlined in Appendix C1 and noting KRED's expertise and unique knowledge of the Traditional Owner groups in the Kimberley) and then commenced initial engagement through emails. Emails were sent by KRED, which included flyers with summary information about Eni's process to prepare the EP, as well as invitations for relevant persons to identify themselves.

Information packs or flyers were also distributed by KRED directly to CEOs and/or Chairpersons of PBCs and explicitly sought their support to organise information sessions with their members.

KRED then informed PBCs on Eni's visit dates to the East Kimberley and Dampier Peninsula and arranged for roadshow / site visits to all the relevant PBCs (affected by the EMBA) to hold public gatherings or targeted meetings.

During the roadshow and site visits, Eni was accompanied by a Liaison Officer assigned through EHSIS (Environmental Heritage & Social Impact Services Pty Ltd), which is a subsidiary of KRED. The presence of the Liaison Officer allowed for ease in relating to and connecting with to the local community. The extensive network of connections of the Liaison Officer supported the information sharing process. With the presence of the Liaison Officer, most community leaders or Traditional Owners expressed comfort in entering into conversations with Eni's consultation team.

Throughout each meeting, Eni presented the prepared slides, handed over flyers and followed up with emails to each person. Eni also posted flyers on notice boards in locations with high traffic of people and greater opportunity to be noticed, including police stations and community centres.


Eni considers that consultation has concluded following the Kimberley engagements and Roadshow meetings, including follow-up emails sent to relevant persons. That said, and as outlined in Appendix C1, Eni will continue to maintain efforts to engage in continued dialogue with the KLC and Kimberley PBC's to allow for relevant interested persons engagement throughout the execution of the planned activities, as per section 22(15) of the OPGGS(E) Regulations.

Broader NT Engagement Including Tiwi Islands

Engagement with Northern Land Council (NLC) was initiated with meetings and sharing of information through emails, mainly seeking support with the community engagement. Eni was advised by NLC to proceed with the community engagements without the involvement of NLC.

In respect of hierarchy within the local community within the Tiwi Islands, Eni sought the support of, and direction from, the Tiwi Land Council in engaging with Traditional Owners or other relevant persons within the Tiwi Islands.

Several meetings were held with the Tiwi Land Council (TLC) and an information pack was distributed to TLC via emails.

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Eni considers that consultation has concluded following the broader NT engagements (including Tiwi Islands) and meetings, including follow-up emails sent to relevant persons. That said, and as outlined in Appendix C1, Eni will continue to maintain efforts to engage in continued dialogue with the broader NT and Tiwi Islands to allow for relevant interested persons engagement throughout the execution of the planned activities, as per section 22(15) of the OPGGS(E) Regulations.

5.3.2 Consultation during Environment Plan Development

In Q3 2023 Eni commenced consultation with relevant persons for the proposed planned activities described in this EP. As described above, material was sent to each relevant person (Relevant Persons Register, Appendix C2) on the Relevant Persons Register in July 2023.

As described in Appendix C1, the consultation period with relevant persons during development of the EP was outlined within the consultation material (2023 Blacktip Operations Material Factsheet) at initially 31 July (approximately six weeks). However, subsequent deadlines for receiving comments were set when no response was received and communicated to the relevant persons. Eni continued to follow up with and receive feedback from relevant persons until 14 June 2024 and consultation process was considered concluded at this point (further described in Section 5.3.4- Consultation Outcomes). This is considered as a reasonable period for comments to be submitted to Eni and represents a 11-month duration from the first consultation materials being provided to most relevant persons. It should also be noted that since the Blacktip facilities have been operational since 2009, Eni is familiar with local communities and other users of the marine environment in the region. Previously identified relevant persons have been regularly informed of Blacktip activities and operations over the life of the asset.


Multiple attempts were made to contact all relevant persons during the consultation period, and in instances where no response was received, other targeted mechanisms in different forms (i.e., phone calls, text messages, face-to face visits) were used to facilitate Eni's requirement to consult with relevant persons on the activities.

Per Section 26(8) of the OPGGS (E) Regulations, the full records of all correspondence and interactions with relevant persons are discretely provided in the sensitive information part of this Environmental Plan.

5.3.3 Extended Enquiry (Broader Consultation)

Eni recognises there may be instances where other persons, organisations, departments or agencies may consider themselves relevant and wish to be included in the consultation process. Therefore, as an additional proactive step, Eni undertook:

- leafletting during roadshows or site visits, such as leaving consultation material leaflets in community centres and high-traffic areas
- local newspaper advertisement campaigns
- advertisements on local radio stations.

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The objective of this approach was to help identify any other new relevant persons that may not have already been identified. The extended enquiry activities also provided another means of broadcasting information to existing relevant persons.

Table 5.1 outlines the broader enquiry efforts, including the papers, radio stations and classified adverts where the consultation material was broadcasted.

Table 5.1: Broader enquiry efforts

Method	Broadcast company	Dates
Newspaper	NT News	20, 22, 23, 27, 29 and 30 December 2023
	The West	20, 22, 23, 27, 29 and 30 December 2023
	Kimberley Echo	21 December 2023
Radio	Darwin's mix 104.9	22 to 30 December 2023, twice per day at one minute in length
	First Nations Radio	17 and 24 December 2023
	Palmerston FM 88	17 and 24 December 2023
TDC Monthly Newsletter	Thamarrur Devt. Corporation	August 2023

Whilst Eni have undertaken a range of approaches to capture a board audience and recognise the benefits of this, Eni has focused on in person efforts during the site visits, which Eni considers has yielded greater results compared with the efforts made through advertisement campaigns.


5.3.4 Consultation Outcomes

In accordance with Section 24(b) of the OPGGS(E) Regulations, a report on all consultations from the 2023/24 consultation campaigns are presented as Appendix C4. Appendix C4 is deconstructed into Appendix C4a and C4b to reflect the *Relevant Persons Consultations Log* and *Relevant Persons Consultations Feedback Assessment* respectively.

Appendix C4b (Relevant Persons Consultations Feedback Assessment) also outlines Eni's statements of responses to objections or claims.

As outlined in Section 6.3 of the Blacktip SMP Bridging Document (Appendix C1), and in alignment with OPGGS(E) Regulation 24, application, interpretation and responsiveness with regards to all feedback received from relevant persons was undertaken at all times. For relevant persons who provided feedback, and following assessment of the merits of their objection or claim, Eni provided a response to the relevant person advising them of the assessment and invited them to further respond. This is reflected in the *Relevant Persons Consultations Feedback Assessment* (Appendix C4b). For statements issued by Eni of both acceptance and rejection of objections and/or claims, there were numerous relevant persons that chose not to further respond.

Numerous relevant persons chose not to reply or engage with Eni at all, and as described in Appendix C1, where no response or acknowledgement of receipt of consultation materials was received by Eni, the actions undertaken were:

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- follow-up emails post issue of initial consultation materials
- alternative methods of contact where appropriate and available (e.g., phone call, in person visits).

Eni sought to consult all relevant persons since issuing initial information regarding this EP, and then made subsequent consultation efforts in accordance with its consultation approach (outlined in Appendix C1). Eni ensured provision of sufficient information to allow relevant persons to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests, or activities, and provided a reasonable period for relevant person to provide objections or claims in relation to the EP and for consultation to occur.

After multiple attempts were exhausted and the consultation period was extended and then closed, under these circumstances, Eni deemed consultation in the course of the preparation of the EP has been completed in accordance with OPGGS[E] regulations.


There were some instances where Eni attempted to identify relevant persons, but were unable to confirm individual contact details within the initial consultation period (contact details of individual commercial fishers were an example of this). Eni undertook the following best endeavours to ensure contact with relevant persons:

- contacting government departments who may have had contact details of individual relevant persons;
- contacting associated organisations and/or advocacy groups who may have had contact details of individual relevant persons;
- leveraging off other relevant persons who had contact details of certain individual relevant persons.

To conclude, the in-total 10-month duration with appropriate follow-up of relevant persons since the second consultation period commenced in June 2023, is considered a reasonable time for relevant persons to have had opportunity to make an informed assessment of the possible consequences of the petroleum activities on their functions, interests or activities, in accordance with the requirements of subregulation 25(3) of the OPGGS(E) Regulations and provide a response.

5.3.5 Ongoing Consultation

Relevant and interested person consultation for the Blacktip operations activities will be ongoing, post-acceptance of this EP in accordance with section 22(15) of the OPGGS(E) Regulations. Eni will work with relevant and interested persons and organisations to develop and maintain a current and comprehensive view of relevant persons' and organisations' functions, interests and activities, and provide opportunity for enquiries, objections or claims by relevant persons and organisations in the lead up to and during the conduct of the planned activities. As outlined in part 3.1 of the Blacktip SMP Bridging Document (Appendix C1), should any new relevant persons and/or organisations be identified, they will be added to the Blacktip Stakeholder Register and included in all future correspondence as required, including specific activity notifications.

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Notably, Eni's intention is to now consistently plan multiple visits to NT (including Tiwi Islands), the East Kimberley and Dampier Peninsula communities. The purpose of this will be to engage in an ongoing way, with interested and relevant persons and organisations. Where the opportunity arises, Eni will seek to consistently engage with the various groups in order to:

- continue to provide bi-monthly updates about the progress of the activities
- respond in person to clarifications raised in collaboratively coordinated meetings across the three regions
- respond in person to informal clarifications; and
- invite and respond to feedback from relevant persons and where necessary adjust the EP through the management of change processes.


Given the proximity of Wadeye Community to Blacktip Operations, an engagement process will be occurring in an ongoing fashion in the Thamarrurr Region through both Eni's attendance to monthly community service meetings, as well as following up with collaboratively coordinated meetings (with Thamarrurr Development Corporation) between Eni and the broader Wadeye Community. Eni continues to work with the Thamarrurr Rangers in the provision of services that will support Blacktip activities.

Eni will continue to accept feedback from all relevant and interested persons and organisations during the assessment of this EP and throughout the duration of the accepted EP. Where any new information is received, that is assessed as a new relevant matter or objection/claim with merit, the EP will be updated in accordance with the management of change (MoC) process described in Section 10.12 ensuring risks remain managed to ALARP and acceptable levels.

Additional consultation with relevant persons will occur in the event there is a significant change to the proposed activities.

It should be noted that as outlined in Part 7 of the Blacktip SMP Bridging Document (Appendix C1) outside of regulatory compliance, and hence outside of this 'preparation of EP' consultation, Eni conducts external relations engagement as a matter of best practice. Eni sees that it is good corporate social responsibility to engage with stakeholders within or near our footprint; we look to build partnerships and potential long-term value proposition opportunities; and by continuing to talk to stakeholders, we gain better knowledge of the context, needs and interests of these stakeholders.

Whilst Eni has been conducting 'meet and greets' across the Kimberley and Northern Territory regions, and whilst this may assist in building and maintaining of relationships, it is not considered a part of any Environment Plan consultation process.

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6 ENVIRONMENTAL RISK ASSESSMENT METHODOLOGY

6.1 Risk Assessment


In accordance with OPGGS(E) Regulation 21(5), the EP must include:

- details about the environmental impacts and risks for the activity
- an evaluation of all the impacts and risks, appropriate to the nature and scale of each impact or risk
- details about the control measures that will be used to reduce the impacts and risks of the activity to ALARP and an acceptable level.

To meet this requirement, Eni has implemented its HSE Risk Management and Hazard Identification Procedure (ENI-HSE-PR-001). The purpose of the procedure is to ensure the HSE, asset and reputational hazards are identified, risk-assessed and managed in a systematic and consistent way. In this way, risks associated with projects and operational changes are effectively managed and addressed in compliance with company and legislative requirements.

The procedure is based on Eni's philosophy that to manage environmental risks is to eliminate or mitigate the risk during the planning phase. Managing risks through design is contingent upon identifying, at an early stage in the project, the sources and pathways by which environmental impacts can occur and the sensitivities of the receiving environment in which the project is situated. Where risks and impacts are unable to be eliminated at the project planning phase, the HSE Risk Management and Hazard Identification Procedure provides a robust framework that must be applied to understand the residual risk and impact from the key project activities covered in this EP.

The procedure is consistent with the Australian Standard for Risk Management: ISO 31000:2018 Risk Management – Principles and Guidelines and ISO 14001:2015 Environmental Management Systems. A general outline of the formal risk management process is provided in Figure 6.1.

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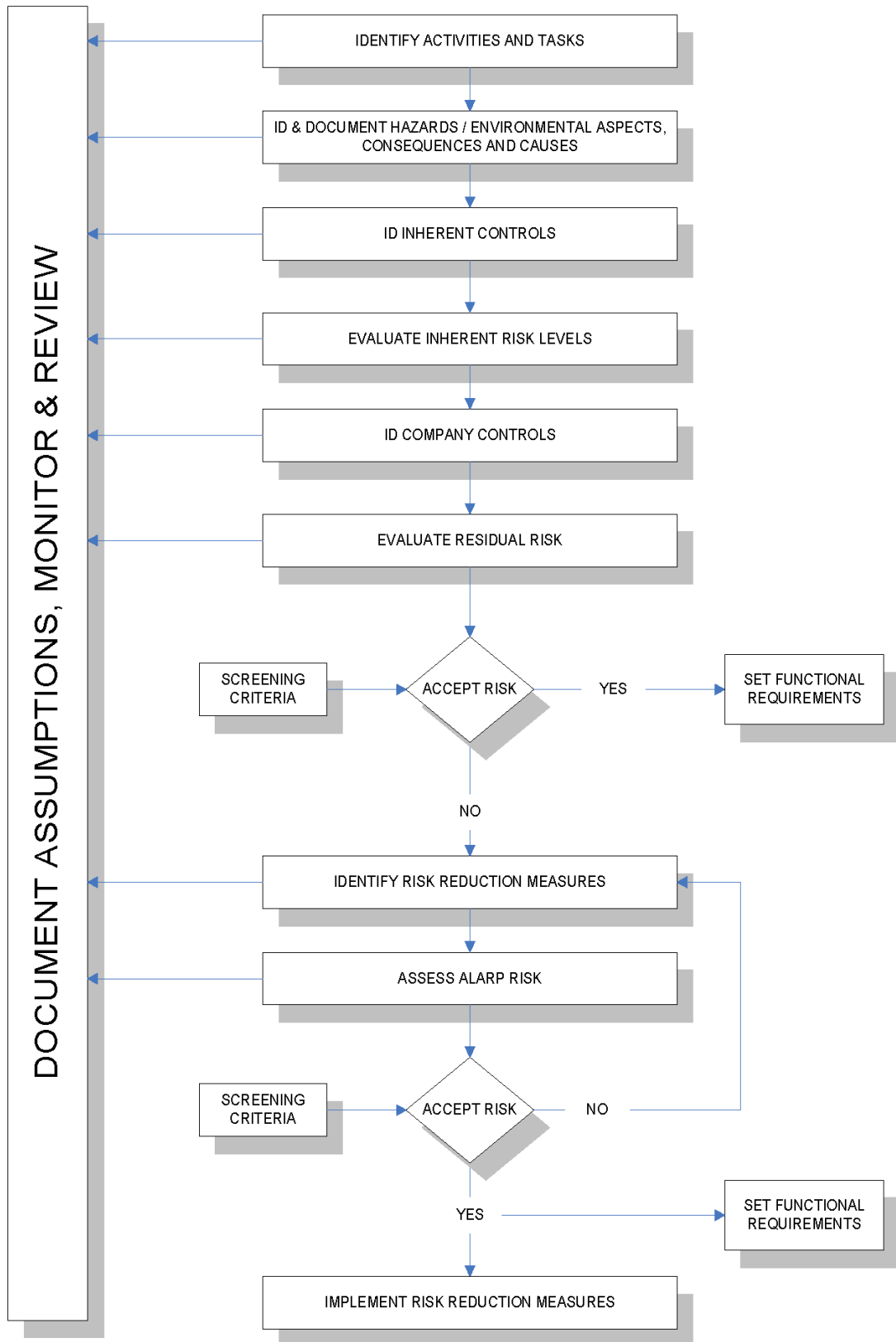



Figure 6.1: Overview of the risk management process

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Before commencing a systematic risk assessment process, it is essential to ensure the context of the risk assessment (why, when, who, what, where) is fully understood. This is achieved by:

1. identifying project activities and tasks, the sources of impact and risk, and the associated environmental aspects
2. identifying the environmental values and sensitivities within and adjacent to the Operational Area and the EMBA.

Using that information, the process continues by:

1. defining the potential environmental effects (impacts and risks) of aspects identified in Step 1 on the values and sensitivities identified in Step 2
2. identifying the potential environmental consequences and severity of the impact (Table 6.1)
3. identifying the likelihood of occurrence of the consequence, according to a six-level scale (Table 6.2)
4. evaluating overall inherent and residual environmental risk levels using the Eni environmental risk matrix (Figure 6.2)
5. identifying mitigation measures, assigning management actions and further recommended risk reduction measures according to the hierarchy of controls (Table 6.3), with consideration of the risk management actions (Table 6.4), to reduce the risk to an acceptable level.

Inherent risk levels assume inherent controls are in place. Residual risk levels are based on the inherent controls and the application of additional risk reduction measures.


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Table 6.1: Environmental consequence descriptors

Descriptor	Description
(1) Slight	<p>No stakeholder impact OR temporary impact on the area. Involved area is less than 0.1 sq mile. Spill is less than 1 m³ – no sensitive impact on ground. Small discharges with confined and temporary impact on the area. No noticeable impact on water, air, soil and biodiversity. Negligible impact due to GHG emissions. Good materials, energy and water selection and use. Negligible financial consequences.</p>
(2) Minor	<p>Some local stakeholder concern or less than one week for clean-up OR one year for natural recovery OR impact on a small number of uncompromised species. Involved area is less than 1 sq mile. Spill is less than 10m³ – impact on localised ground. Sufficiently large discharges to impact the environment, but no long-lasting effect. Short-term, localised impact on water, air and soil and biodiversity (on a limited number of non-threatened species). Slight impact due to GHG emissions. Adequate materials, energy and water selection and use. Single breach of statutory or prescribed limit, or single complaint.</p>
(3) Local	<p>Regional stakeholder concern OR one to two years for natural recovery OR one week for clean-up OR threatening to some species or impact on protected natural areas. Involved area < 10 sq miles. Spill is less than 100m³. Limited discharges affecting the neighbourhood and damaging the environment with longer effects. Short-term, more widespread impact on water, air and soil and biodiversity (on a higher number of non-threatened species). Limited impact due to GHG emissions. Inadequate materials, energy and water selection and use. Repeated breaches of statutory or prescribed limit, or many complaints.</p>
(4) Major	<p>National stakeholder concern OR impact on licences OR two to five years for natural recovery OR up to five months for clean-up OR threatening to biodiversity or impact on interesting areas for science. Involved area is less than 100 sq miles. Spill is less than 1000m³. Large discharges with severe and long-lasting environmental damage. Medium-term, widespread impact on water, air and soil and biodiversity (on some threatened species or one ecosystem function). Extensive measures (financially significant) required to restore the impacted area Significant impact due to GHG emissions. Poor materials, energy and water selection and use. Extended breaches of statutory or prescribed limits, or widespread nuisance.</p>
(5) Extensive	<p>International stakeholder concern OR impact on licences and acquisitions OR more than five years for natural recovery OR less than five months for clean-up OR reduction of biodiversity OR impact on special conservation areas. Involved area is greater than 100 sq miles. Spill is greater than 1000m³. Large discharges with severe and persistent environmental damage. Long-term, broad-scale impact on water, air and soil and biodiversity (likely permanent species loss and impact on ecosystem function). Very poor materials, energy and water selection and use. Extensive impact due to GHG emissions. Major financial consequences for the Company. Ongoing breaches well above statutory or prescribed limits.</p>


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Table 6.2: Likelihood scale

ID	Likelihood	Frequency (occurrence per year)	Description
0	Non-credible	$<10^{-6}$ occ/y	Theoretically possible but not known or reasonably expected to have occurred in the exploration and production industry
A	Rare	$10^{-6} \leq \text{occ/y} < 10^{-4}$	Known or reasonably expected to have occurred in the exploration and production industry under similar circumstances
B	Unlikely	$10^{-4} \leq \text{occ/y} < 10^{-3}$	Known or reasonably expected to have occurred in company under similar circumstances
C	Possible	$10^{-3} \leq \text{occ/y} < 10^{-1}$	Known or reasonably expected to have occurred in the company more than once under similar circumstances
D	Likely	$10^{-1} \leq \text{occ/y} < 1$	Known or reasonably expected to have occurred in the company more than once a year under similar circumstances
E	Almost certain	≥ 1 occ/y	Known or reasonably expected to have occurred at the considered location, more than once a year under similar circumstances

Table 6.3: Hierarchy of controls

Control category	Description
Elimination	The causes of the hazardous event are removed such that it is no longer credible it will occur
Substitution (alternatives)	Replace with a less hazardous substance or method; for example, use a wet method instead of dry and introduce a non-dusting powder for one that is friable
Engineering (plant and equipment)	Physical controls; for example, containment, exhaust ventilation, mechanical aids
Procedural (signage, warnings or administrative)	Human controls; for example, supervision, work methods, housekeeping, personal hygiene, information, instruction and training
Personal protective equipment	In all cases, use of personal protective equipment should be considered as the only barrier only when control measures within the above categories are not practicable


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Table 6.4: Risk management actions

Risk rating	Significance	Risk management actions
Low (blue)	Continuous improvement	The level of risk is broadly acceptable and generic control measures are required, aimed at avoiding deterioration ¹ .
Medium (yellow)	Risk reduction measure	The level of risk can be tolerable only once a structured review of the risk reduction measures has been performed; where necessary, the relevant guidance from the local authorities should be adopted for application of ALARP. ALARP is a concept that applies well to personnel and environmental risk. Asset risk is often most easily judged on a basis of costs and benefits alone.
Medium-High (orange)	Risk reduction measure	The level of risk can be tolerable only once a structured review of the risk reduction measures has been performed; where necessary, the relevant guidance from the local authorities should be adopted for application of ALARP. ALARP is a concept that applies well to personnel and environmental risk. Asset risk is often most easily judged on a basis of costs and benefits alone ² .
High (red)	Intolerable risk	The level of risk is not acceptable and risk control measures are required to lower the risk to another level of significance.

Note 1: The exception to the appropriate risk management actions for the Low risks are where a low risk to people is identified on the matrix position A3, then risk reduction measures are required.

Note 2 The exception to the appropriate risk management actions for Medium-High risk is the case of a 4B risk where the impact is on third parties onshore and is considered intolerable.



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Consequence					Likelihood or Annual Frequency					
Severity	Company Reputation	People (Health & Safety)	Environment	Assets / Project	0	A	B	C	D	E
					0 - Non credible / Could happen in E&P industry (Freq <10-6 /y)	A - Rare / Reported for E&P industry (Freq 10-6 to 10-4 /y)	B - Unlikely / Has occurred at least once in Company (Freq 10-4 to 10-3 /y)	C - Credible / Has occurred several times in Company (Freq 10-3 to 10-1 /y)	D - Probable / Happens several times per year in Company (Freq 10-1 to 1 /y)	E - Frequent / Several times per year at one location (Freq >1 /y)
1	1-Slight impact	1-Slight health effect / injury	1-Slight effect	1-Slight damage	Low	Low	Low	Low	Low	Low
2	2-Minor impact	2-Minor health effect / injury	2-Minor effect	2-Minor damage	Low	Low	Low	Medium	Medium	Medium
3	3-Local impact	3-Major health effect / injury	3-Local effect	3-Local damage	Low	Low	Medium	Medium - High	High	High
4	4-National impact	4-PTD or single fatality	4-Major effect	4-Major damage	Low	Medium	Medium - High	High	High	High
5	5-International impact	5-Multiple fatalities	5-Extensive effect	5-Extensive damage	Medium	Medium - High	High	High	High	High

Figure 6.2: Eni risk matrix

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6.1.1 Environmental Risk Identification Workshops

An environmental risk identification and assessment workshop (ENVID) for the Blacktip operations was undertaken in July 2023 and again reviewed October 2023. The ENVID was attended by a representative cross-section of the Blacktip operations workforce, including Eni production engineers and HSE personnel.

All the credible risks from the Blacktip operations were assessed and environmental performance objectives (EPOs), environmental performance standards (EPSs) and measurement criteria (MC) were developed to reduce impacts and risks to ALARP and acceptable levels, as detailed in Sections 7 and 8 and summarised in Table 9.2.

6.2 Risk Reduction

Impacts or risks identified as requiring additional controls – the application of mitigation and management measures beyond what is standard practice for offshore petroleum activities – are subject to further review to identify the controls that must be provided or modified to reduce the residual risk.

Risk assessment is an iterative process of:

- identifying a risk
- assessing a risk
- deciding whether residual risk is tolerable
- if not tolerable, generating a new risk or mitigation measures, and
- assessing the effectiveness of the mitigation measures.

The acceptability of a risk, after controls and mitigation measures have been applied, is determined in accordance with ratings and associated management actions outlined in Table 6.4.


6.3 As Low as Reasonably Practicable and Acceptance Criteria

6.3.1 As Low as Reasonably Practicable Criteria

The ALARP principle recognises that no industrial activity is entirely risk free. ALARP is defined as a level of impact and risk that is not unacceptable and cannot be reduced further without expending costs that are disproportionate to the benefit gained. Cost may be in terms of financial, health, safety and schedule implications.

OPGGs(E) Regulation 34 requires a demonstration that environmental impacts will be reduced to ALARP. For risks to be considered reduced to ALARP, the following criteria must apply:

- There are no reasonable practicable alternatives to the activity.
- The cost (in other words sacrifice) for implementing further measures is disproportionate to the reduction in risk.

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When deciding whether risks are managed to ALARP, the items considered were:

- risk level
- existing layers of protection, including both preventive and mitigative controls
- feasibility of additional controls or alternative arrangements
- practicality of additional controls or alternative arrangements
- cost of additional controls or alternative arrangements
- effectiveness of additional controls or alternative arrangements
- impact on risks from additional controls or alternative arrangements.


6.3.2 Acceptance Criteria

OPGGS(E) Regulation 34 requires a demonstration that environmental impacts are of an acceptable level.

Eni considers a range of factors when evaluating the acceptability of environmental impacts associated with its activities. The evaluation criteria are outlined in Table 6.5.


Table 6.5: Eni acceptability factors

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	Considers the legal aspect, particularly compliance with applicable legislative prescriptions and regulations in force, which imply specific procedures to be performed by the Titleholder to control the environmental aspect.
Policy compliance	The risk or impact must comply with the objectives of Eni policies.
Social acceptability	Considers the 'social' aspects that can alter stakeholder perception of the Titleholder's commitment regarding the safeguard and protection of the environment and that can cause serious harm to the Titleholder's public image.
Area sensitivity and biodiversity	The proposed risk or impact controls, EPOs and EPSs must be consistent with the nature of the receiving environment.
Environmentally sustainable development principles	The overall activity is consistent with principles of ESD. Refer to Section 2.1.2.1 for definition of these principles.
ALARP	There is a consensus among the risk assessment team that risks or impacts are ALARP.

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To support the demonstration of acceptability, a separate assessment is undertaken to demonstrate the EP is not inconsistent with any relevant recovery plans or threat abatement plans. The process is:

- Identify relevant listed threatened species and ecological communities (Section 4.4).
- Identify relevant recovery plans and threat abatement plans (Table 2.3).
- List all objectives and (where relevant) the action areas of these plans, then assess how these objectives and action areas apply to the activities (Table 2.3).
- For those objectives and action areas applicable to the petroleum activities, identify the relevant actions of each plan, and evaluate whether impacts and risks resulting from the activity are clearly not inconsistent with that action (Section 7 and 8).

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7 ENVIRONMENTAL RISK ASSESSMENT – PLANNED OPERATIONS

7.1 Interaction with Other Marine Users (Risk ID P1)

7.1.1 Summary of Environmental Risk Assessment

Hazard	Interference with other marine users		
	Frequency	Severity	Risk
Inherent Risk	B	1	L
Residual Risk	A	1	L

7.1.2 Description of Hazard

The ongoing presence of the WHP and SPM and the associated 500m PSZs, which are maintained around them, have the potential to exclude or displace some activities by other marine users.

The ongoing presence of the GEP and CEP on the seabed may present a hazard to marine users due to the potential for snagging; for example, trawl net snagging. However historical fishing effort is very low over these locations (refer to Section 4.6.1)

Blacktip vessel operations are not constant within the Operational Area. Therefore, the potential of vessels interacting with or displacing other marine users is limited to specific periods, such as:


- support vessel activities associated with routine and non-routine IMR activities, as presented in Table 3.11, and any exclusion zones established
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

7.1.3 Potential Environmental Impact

7.1.3.1 Commercial Shipping

To reduce the likelihood of interactions between commercial vessels and offshore facilities, AMSA has introduced shipping fairways within which commercial vessels are advised to navigate. The fairways are not mandatory, but AMSA strongly recommends commercial vessels remain within the fairway when transiting the region. As presented in Section 4.6.4, the nearest shipping fairway is 100km from the Operational Area; therefore, the presence of the Blacktip offshore infrastructure and any Blacktip vessel operations are unlikely to cause any disturbance or significant displacement of shipping traffic.

The WHP, SPM, CEP and GEP have been operational since 2009 and no incidence of interactions with other marine users has been recorded. The WHP and SPM are marked on nautical charts surrounded by a 500m PSZ and shipping activities are excluded from this area; therefore, interaction between commercial vessels and this infrastructure is unlikely.

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Given all shipping vessels and Blacktip operations vessels must comply with the International Regulations for Preventing Collisions at Sea, the *Navigation Act 2012* and associated Marine Orders, it is expected navigational and communicative aids are sufficient to prevent any negative interactions beyond basic avoidance. The risk to commercial shipping is considered slight.

7.1.3.2 Commercial Fishing

A number of Commonwealth and State (WA and NT) fishery management areas are located within the Operational Area and wider EMBA (Section 4.6.1). The Annual Fishery Status Reports published by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) were used to identify if Commonwealth managed fisheries have fished and were active within the Operational Area and EMBA in the last five years. FishCube data was also requested from the WA Department of Primary Industries and Regional Development (DPIRD) for the most recently available five-year period of fishery catch and effort data (2018--2022) to analyse the potential for interaction of fisheries with the Operational Area. Data was reviewed from the last complete five years data, as an indication of past fishing effort. This was deemed an appropriate period to represent potential future fishing effort during this EP. Based on an analysis of the current fishery closures, depth range of activity, historical fishing effort data, fishing methods and consultation feedback (refer to Section 5), there is a low potential for interaction with commercial fisheries in the Operational Area.

The Northern Prawn Fishery is the only Commonwealth managed fishery that may interact with the Operational Area. This fishery extends from Cape Londonderry, eastward throughout the EEZ and Northern Territory waters, to approximately the Cape York peninsula. Highest intensity fishing efforts during the 2020-2022 seasons took place in the nearshore coastal NT waters (ABARES, 2023). The Operational Area falls within the low effort fishing intensity area (<0.1 days/km²), as indicated through the Commonwealth Fishery Status Reports (ABARES, 2023). The fishery is closed from 16 June to 31 July and from 1 December to 1 April each year.

The West Australian, Mackerel Managed Fishery is active within the 60 NM CAES reporting block overlapping the Operational Area, recording <3 active vessels across the 2019-2022 seasons (DPIRD, 2023). The fishery consists of three management sectors (Kimberley, Pilbara and Gascoyne/West Coast), which encompass the entire coastline of Western Australia from the Northern Territory border to Cape Leeuwin in the Southwest.

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Three Northern Territory managed fisheries are active in the environment surrounding and including the Operational Area and may interact with activities. The Northern Territory Offshore Demersal Fishery overlaps with the Operational Area. The fishery is permitted 15 NM from the low water mark to the outer boundary of the Australian EEZ, excluding the area of the Timor Reef fishery. Analysis of five years of NT fishing effort data (2017-2021) shows one licence operating in environment surrounding the Operational Area. The Offshore Net and Line Fishery overlaps with the Operational Area and operates in all NT waters from the low water mark to the boundary of the Australian EEZ. Analysis of five years of NT fishing effort data (2017-2021) shows one licence within the vicinity of the Operational Area (NT DITT 2023). The Spanish Mackerel Fishery is allowed to fish from the high-water mark to the outer boundary of the Australian EEZ. One licence was active in the vicinity of the Operational Area between the 2017-2021 seasons.


The WHP is marked on nautical charts surrounded by a 500m PSZ with fishing activities being excluded from this area. Given the existing presence of the WHP PSZ, the activities in this area do not introduce any additional exclusion areas to fisheries.

Given the continued presence of the Blacktip offshore infrastructure over the last 14 years with no incidence of interaction with other marine users being recorded, and the vastness of the fishery zones relative to the area of exclusion (500m PSZ), the impact to commercial fishing is considered slight.

7.1.3.3 Traditional and Subsistence Fisheries

The coastal land adjacent to the Operational Area belongs to the First Nations people (refer to Section 4.6.9); access to the coast in this area is strictly limited. Along the north-western coastline of Australia, traditional and subsistence fishing is generally limited to shorelines, creeks and nearshore reefs.

Subsistence fishing continues to form an important part of Traditional Owner culture and as a source of food. Wadeye (7km from the Operational Area) is the main community in the Thamarrurr region and is populated by landowners who own land from Cape Scott in the north to the Fitzmaurice River in the south. Subsistence fishing occurs throughout this region using traditional methods, as it does across the NT. The most important species reflect those typically important across the territory and include mullet for bait, barramundi and catfish. Species of mussels and mudcrabs are also highly significant along the shoreline areas. Given fishing is largely limited to shorelines, creeks and nearshore reefs, the Blacktip operations are not anticipated to cause any interference. Meetings have been held with Thamarrurr Rangers (about Blacktip operations in general rather than this EP development) which previously confirmed most of the fishing occurs nearshore and there is little to no offshore subsistence fishing in the region. Therefore, impacts to traditional fisheries are not anticipated.

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7.1.3.4 Tourism and Recreation

Fishing Tour Operators are permitted to operate across WA state waters and are required to report monthly logbook records of client fish catches. Generally, Fishing Tour Operators target areas of high scenic value and offshore coral reef areas. As these attributes are generally sparse in the offshore area of the JBG, the level of charter fishing and tourism is therefore low. FishCube data reports indicate less than 3 licences overlapping the Operational Area (DPIRD, 2023).

Any recreational and charter fishing from vessels is largely undertaken using lines. Given the distance from boating facilities and slipways and lack of natural attractions in the Operational Area, very little recreational or charter fishing is expected to occur. As such, impacts to recreational and charter fishing are expected to be slight.

7.1.3.5 Defence

WA-33-L is in the North Australia Exercise Area and restricted airspace R264G. Given the nature of the defence training area, interactions are not anticipated.

7.1.4 Environmental Performance Outcomes and Control Measures


EPOs relating to this risk include:

- information is provided to relevant persons to manage impacts on their functions, interests and activities (EPO-01)
- activities are managed in accordance with navigational and safety requirements (EPO-02)
- no unplanned interactions with other users (EPO-03).

Control measures (CMs) relating to this risk include:


- navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes) (CM-01)
- navigational charting of infrastructure (CM-02)
- 500m PSZ around the WHP and SPM (CM-03)
- consultation with relevant persons, including ongoing consultation and notifications (CM-04).

EPSs and MC relating to the above are presented in Table 9.2.


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7.1.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate the use of vessels in the Operational Area	Interactions between the vessels, SPM/WHP and other maritime traffic cannot be eliminated, though the risk is extremely low, given the low volume of shipping traffic through the Operational Area.	✗
	Remove infrastructure	The WHP, SPM and GEP have been in the JBG since 2009 and are fixed for the duration of field life. Removal is not feasible for the operations to occur.	✗
	Reduce or eliminate the 500m PSZ around the WHP and SPM	The PSZ is mandated by the OPGGS Act. It cannot be reduced or eliminated.	✗
	Timing IMR to avoid NPF fishing season / or where possible to avoid fish spawning season during warmer months (September-March)	During 2023 consultation, the DITT / NT Fisheries requested that where possible, activity is undertaken during warmer months (September-March) to avoid fish spawning season. Ongoing operations typically requires small vessel use to service and maintain the WHP and associated infrastructure as required, these activities are often not able to be delayed due to operational requirements.	✗
Substitute	N/A	N/A	N/A
Engineering	Navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes)	<p>Ensures the vessels and surface infrastructure (WHP and SPM) are seen by other marine users, thereby reducing risk of collisions.</p> <p>A radar beacon unit is installed on the WHP, which would appear on the display of the triggering radars, providing range, bearing and identification information. Would alert vessels of WHP position reducing collision risk.</p> <p>A requirement under Marine Orders requires vessels to have navigational equipment to avoid collisions.</p>	✓ (CM-01)
Isolation	N/A	N/A	N/A
Administrative	Navigational charting of infrastructure	WHP, SPM, CEP and GEP locations are charted on Australian Hydrographic Service nautical charts so other users are aware of their presence and can navigate accordingly.	✓ (CM-02)


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Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
	500m PSZ around the WHP and SPM	PSZ is marked on nautical charts and alerts other marine users to the presence of the WHP and SPM, thereby reducing the likelihood of interaction with other marine users.	✓ (CM-03)
	Consult with relevant persons (refer to Section 5), including ongoing consultation and notifications	<p>Relevant persons consultation ensures marine users are aware of the proposed activities, reducing the likelihood of unplanned interactions. Provides marine users an opportunity to request practicable interface control measures.</p> <p>Enables identification of potential Sea Country protection and enhancement initiatives, and implementation where practicable.</p> <p>Eni will notify the DNP of any Blacktip operations vessel activities within the Joseph Bonaparte Gulf AMP, as requested during consultation.</p>	✓ (CM-04)

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7.1.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>Physical presence of Blacktip operations is managed in accordance with relevant legislative requirements, including compliance with international maritime conventions and Australian legislation, being:</p> <ul style="list-style-type: none"> • International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 • International Convention for the Safety of Life at Sea 1974 • International Regulations for Preventing Collisions at Sea 1972 • <i>Navigation Act 2012</i>, including, as appropriate to vessel class: <ul style="list-style-type: none"> – Marine Order 21: Safety and emergency arrangements) – Marine Order 30: Prevention of Collisions) – Marine Order 71: Masters and Deck Officers • OPGGS Act Section 616 (2) Petroleum safety zones, which involve establishing and maintaining a PSZ around offshore structures or equipment. <p>Eni will not interfere with the rights of other marine users to a greater extent than is necessary for the reasonable exercise of right conferred by the titles granted, as per Section 280 of the OPGGS Act.</p> <p>Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).</p>
Policy compliance	The management of physical presence of the Blacktip operations is aligned with Eni policies and standards. The residual risk is Low, which is acceptable. The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.
Social acceptability	<p>Eni will notify the DNP of any Blacktip operations vessel activities within the Joseph Bonaparte Gulf AMP, as requested during consultation (refer to Section 5). During 2023 consultation, the DITT / NT Fisheries requested that where possible, activity is undertaken during warmer months (September-March) to avoid fish spawning season. Ongoing operations typically requires small vessel use to service and maintain the WHP and associated infrastructure as required, these activities are often not able to be delayed due to operational requirements.</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>The Operational Area is not in or near heavily fished waters or shipping fairways.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p> <p>Physical presence of infrastructure has not been identified as a threat in any recovery plans or conservation advice for threatened and migratory species.</p>
ESD principles	<p>Blacktip operations are consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> • the nature and scale of potential impacts from physical presence is not inconsistent with the integration principle • the precautionary principle was applied and the analysis of available fishing data and usage information was supplemented with consultation where knowledge gaps were identified.
ALARP	The residual risk has been demonstrated to be ALARP.

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Given the low volume of other marine users over the Operational Area, potential impacts are slight. The residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts associated with interactions with other marine users is considered acceptable and ALARP.

7.2 Atmospheric Emissions (Risk ID P2)

7.2.1 Summary of Environmental Risk Assessment

Hazard	Atmospheric emissions		
	Likelihood	Severity	Risk
Inherent Risk	E	1	L
Residual Risk	E	1	L

7.2.2 Description of Hazard

Non-GHG atmospheric emissions, referred hereafter as atmospheric emissions, refer to the emissions of sulphur oxides, carbon monoxide, volatile organic compounds and particulate matter (less than 10 µm and less than 2.5 µm) with potential impact on environment, human health and amenity. These emissions may cause effects at a local and regional scale. Atmospheric emissions will mainly result from power generation required for operating the vessels and the WHP. Venting may also occur intermittently from the WHP during IMR activities (Table 3.1).

GHG emissions (carbon dioxide, methane, nitrous oxide) from Blacktip operations have been assessed in Section 7.3.

7.2.2.1 Vessels


Blacktip vessel operations are not constant within the Operational Area. Therefore, the potential for atmospheric emissions from vessels is limited to specific periods such as:

- support vessel activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

Fuel combustion for generating power in internal combustion engines will occur routinely on vessels. Other combustion source emissions may be associated with waste incinerators, required to reduce waste to ash for disposal. The type and quantities of material that can be disposed in incinerators are regulated via the Marine Orders. These emissions make up a small fraction when compared to power generation combustion.

7.2.2.2 Wellhead Platform

Continuous power generation is the main source of engine exhaust emissions on the WHP. The WHP generators are run on fuel gas rather than diesel, using approximately 40m³ per day. Other engine exhausts result from the use of the diesel powered crane.

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During normal Blacktip operations, some venting of non-combusted hydrocarbon gas may occur during routine maintenance and intermittently during wireline and workover activities (for a period of hours). Venting is provided to manually depressurise the WHP topside piping during maintenance or PSV relief during IMR (typically pigging activities). The WHP discharges the vapour to atmosphere at a safe location. The vent is continuously purged with 0.7 Sm³/day of nitrogen supplied from nitrogen bottles.

7.2.3 Potential Environmental Impact

Atmospheric emissions may result in a temporary, localised reduction of air quality in the environment immediately surrounding the emission source.

The quantities of emissions are relatively small and will quickly dissipate into the surrounding atmosphere. Atmospheric emissions will be similar to other vessels operating in the region for both petroleum and non-petroleum activities.

Local impacts typically associated with the atmospheric emissions are mitigated by the dispersive nature of the offshore environment. Any potential local elevated concentrations of emissions will be short lived and unlikely to be detectable, except in the immediate vicinity of the release. Atmospheric emissions will not impact on air quality in coastal community, the nearest being Wadeye, 100km from the WHP and 10km from the condensate offtake SPM.

Potential impacts are expected to be short-term, localised air quality changes, limited to the air shed local to the Operational Area. Air emission impacts are not expected to have direct or cumulative impacts on sensitive environmental receptors, or be above National Environmental Protection (Ambient Air Quality) measures. Given the low sensitivity of the receiving environment – open offshore location away from coastal communities – the impact on air quality is anticipated to be slight.

7.2.4 Environmental Performance Outcomes and Control Measures

EPOs relating to this risk include:


- Impacts to air quality will be limited to the impacts from the planned activities described in Section 7.2.3 (EPO-04)
- no unplanned objects, emissions or discharges to sea or air (EPO-05).

CMs relating to this risk include:

- air pollution prevention certificate (CM-05)
- WHP power generation fuel (CM-06)
- vessel fuel quality (CM-07).


EPSs and MC relating to the above are presented in Table 9.2.

Monitoring and reporting of emissions are presented in Section 10.8.

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7.2.5 As Low as Reasonably Practicable Demonstration


Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate energy consumption	Energy consumption and associated emissions cannot be eliminated as it is needed to power production processes and provide a safe and reliable natural gas supply. Substitution by renewable alternatives is addressed below.	✘
	Eliminate venting during IMR	Eliminating venting during IMR would increase safety risk. Venting volumes during IMR are small and typically relate to depressurisation of the WHP topside piping during maintenance or PSV relief. Venting of the gas is a requirement for safe maintenance operations.	✘
	No incineration of waste on vessels	Eliminates the potential for emissions from waste incineration to impact air quality. However, increases health risk from storing wastes. Increases risk due to transfers (increased fuel usage, potential increase in collision risk, disposal on land).	✘
Substitute	Use green energy sources on the WHP and vessels	Alternatives such as renewable energy generators (wind and/or sun) are not viable options, as they are weather-dependant and do not supply continuous base load power required for the WHP and vessels. The vessels will use MDO, which is low in sulphur dioxide, in accordance with Marine Order 97.	✘
	Vessel fuel quality (in compliance with Marine Order 97)	Reduces emissions by using low-sulphur fuel in accordance with Marine Order 97. Minimal cost, as vessels must comply with Marine Orders.	✓ (CM-07)
Engineering	WHP power generation – gas rather than diesel is used to fuel the generator	Atmospheric emissions from the gas turbines on the WHP are reduced compared to diesel generators.	✓ (CM-06)
Isolation	N/A	N/A	N/A
Administrative	Vessel Air Pollution Prevention Certificate (in compliance with Marine Order 97)	Reduces probability of potential impacts to air quality. Minimal cost, as vessels must comply with Marine Orders.	✓ (CM-05)

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7.2.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>Atmospheric emissions will be managed in accordance with relevant legislative requirements, including compliance with international maritime conventions and Australian legislation, specifically:</p> <ul style="list-style-type: none"> MARPOL 73/78: Annex VI: Regulations for the prevention of air pollution from ships Marine Order 97: Marine pollution prevention – air pollution relevant requirements of the NPI National Environmental Protection Measure. <p>The NGER Scheme requires Eni to report on atmospheric emissions and energy use from activities that are under its operational control. Eni will report greenhouse gas emissions and energy use from the WHP in accordance with its requirements under the NGER Act.</p> <p>Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).</p>
Policy compliance	<p>The management of atmospheric emissions from the Blacktip operations is aligned with Eni policies and standards. The residual risk is Low, which is acceptable.</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>To date, no stakeholder concerns have been raised regarding atmospheric emission impacts (refer to Section 5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>The offshore location means winds will disperse and dilute emissions rapidly.</p> <p>No human settlements are nearby.</p> <p>Atmospheric emission has not been identified as a threat in any recovery plans or conservation advice for threatened and migratory species. GHG emissions have been considered in Section 7.3.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>The activity is consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> the impacts associated with atmospheric emissions do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained there are no identified health, diversity or productivity impacts that may affect the biodiversity or ecological function for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

Potential impacts associated with atmospheric emissions are slight. The residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts associated with atmospheric emissions are considered acceptable and ALARP.

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7.3 Greenhouse Gas Emissions (Risk ID P3)

7.3.1 Summary of Environmental Risk Assessment

Hazard	Greenhouse gas emissions		
	Likelihood	Severity	Risk
Inherent Risk	A	1	L
Residual Risk	A	1	L

7.3.2 Description of Hazard

The Blacktip operations will produce emissions of greenhouse gases (GHG). Greenhouse gases are gases in the atmosphere that absorb and radiate heat back onto the earth's surface. There are six GHGs listed under the Kyoto Protocol, three of which are applicable to the Blacktip operations. These are:


- carbon dioxide (CO₂)
- methane (CH₄)
- nitrous oxide (N₂O).

Emissions of GHG are expressed in terms of tonnes of CO₂ equivalent (tCO₂-e). This universal unit of measurement indicates the global warming potential of each GHG, expressed in terms of the global warming potential of one tonne of CO₂. As per the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (2015), GHG emissions are categorised as:

- Scope 1: GHG emissions which are direct emissions from sources owned or controlled by the company.
- Scope 2: GHG emissions which are indirect emissions from the consumption of purchased electricity.
- Scope 3: GHG emissions which are indirect emissions that are a consequence of the activities of the company, but occur from sources not owned or controlled by the company.

In relation to the Blacktip operations, Scope 1 and Scope 3 emissions are relevant. For the purposes of this EP, the Scope 3 emission sources associated with the Blacktip WHP comprise emissions associated with vessels and helicopters supporting maintenance campaigns at the WHP, the use of the produced natural gas and condensate by third parties, along with the emissions produced from the operation of the YGP. Scope 2 emissions are not relevant to the Blacktip operations, since they do not use electricity purchased from the grid.

In Australia, facilities that emit more than 100,000 tCO₂-e in a year are subject to the Safeguard Mechanism. The Safeguard Mechanism was first legislated in 2014 and has been in place since 2016. The *National Greenhouse and Energy Reporting Act 2007* (the NGER Act) established the legislative framework for the Safeguard Mechanism. However, much of the detail regarding the Safeguard Mechanism is contained within the National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015 (the Safeguard Rules). The Safeguard Mechanism establishes legislated targets, known as 'baselines', on the net GHG emissions of covered Safeguard facilities.

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On 30 March 2023, The Safeguard Mechanism (Crediting) Amendment Bill 2022 passed both Houses of Parliament and amended the NGER Act and other related Acts to provide the architecture for reforms. These reforms were implemented to reduce emissions at Australia's largest industrial facilities, help Australia meet its climate targets and ensure the Australian economy remains competitive in a decarbonising world. Subsequently, the Safeguard Rules and other subordinate legislation were amended in May 2023 to give effect to these reforms. The reformed Safeguard Mechanism commenced on 1 July 2023.

These reforms apply a decline rate to Safeguard facilities' baselines. This facilitates predictable and gradual reductions in GHG emissions along a trajectory consistent with achieving Australia's emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050. Additional amendments to the Safeguard Rules undertaken in September 2023 and April 2024 provided additional policy detail, including updates to production variables and setting best practice benchmarks.

Australia is also party to the Paris Agreement, which came into effect in 2016. The Paris Agreement strengthens the international response to climate change by:

- holding the increase in the global average temperature to well below 2°C above pre-industrial levels
- pursuing efforts to limit temperature increase to 1.5°C.


In accordance with the Paris Agreement, Australia must submit emissions reduction commitments, also known as Nationally Determined Contributions (NDCs). Australia submitted its first NDC in 2015. An updated version of this NDC was submitted in 2022, which committed Australia to reducing its emissions to 43% below 2005 levels by 2030.

Due to the low GHG emissions levels produced at the Blacktip operations, these operations do not fall under the scope of the Safeguard Mechanism. Eni reports the GHG emissions from the Blacktip operations in accordance with its requirements under the NGER Act.

7.3.2.1 Wellhead Platform (WHP)

Continuous power generation is the main source of GHG emissions on the WHP. The WHP generators run on fuel gas rather than diesel, using approximately 40m³ per day.

At the Blacktip WHP, some venting of non-combusted hydrocarbon gas may occur during routine maintenance and intermittently during wireline and workover activities (for a period of hours) (refer Table 3.11). Venting is provided to manually depressurise the WHP topside piping during maintenance or PSV relief during IMR (typically pigging activities). The WHP discharges the vapour to atmosphere at a safe location. The vent is continuously purged with 0.7 Sm³/day of nitrogen supplied from nitrogen bottles.

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7.3.2.2 Vessels

The Blacktip Wellhead platform is normally an unmanned facility and vessel operations are not constant within the Operational Area. Therefore, emissions from vessel movements associated with the Blacktip WHP are limited to specific periods such as:

- support vessel activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

7.3.2.3 Helicopters

The WHP is normally an unmanned facility and is subject to both planned and unplanned visits. Planned or campaign maintenance visits (routine planned inspection, testing and maintenance) are estimated to be two visits per year, using supply vessels mainly, or in exceptional occasions, by helicopter access with marine vessel support. Unplanned maintenance is rare, however it is assumed that up to six helicopter visits will be required per year to support such maintenance campaigns.

7.3.3 Potential Environmental Impact


The combustion of hydrocarbons at both the WHP and YGP, the use of vessels and helicopters to support maintenance campaigns, along with the refinement and provision of natural gas and condensate for use by third-parties; results in the release of GHG emissions into the atmosphere. These emissions were estimated using methods defined in the National Greenhouse and Energy Reporting (Measurement) Determination 2008.

The following sections present the GHG emissions forecast for the remaining estimated duration of Blacktip. Historical GHG emissions from the WHP and YGP between the years of 2019 and 2024 were sourced from the NGERs reports submitted for the same reporting periods and are also presented below.

7.3.3.1 Scope 1 Emissions

Direct GHG emissions (Scope 1) occur from sources that are owned or controlled by Eni. These emissions are released directly to the atmosphere as a result of an activity at the Blacktip WHP. Emissions sources associated with the Blacktip WHP are:

- power generation, comprising fuel gas consumption by the gas turbines on the WHP
- the WHP crane, which is powered by diesel fuel consumption
- fugitive emissions
- venting – intermittent upon well start-up after maintenance.

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Atmospheric venting was selected during the design phase at the WHP due to its inherent simplicity and reliability, which is essential for an unmanned facility. There is no flare on the WHP. It should be noted that outside of well start-up and maintenance activities, no venting activities are undertaken at the WHP. Due to the limited equipment established on the WHP, the overall GHG emissions profile for the WHP operational activities are materially lower than the GHG emissions arising from the use of vessels and helicopters to support maintenance campaigns, the operation of the YGP and the consumption of natural gas and condensate by third parties.

Scope 1 emission sources reported as part of Eni's historical NGRS reports included the cold vent at the WHP. As outlined in Section 7.3.2.1, this vent is continuously purged with 0.7 Sm³/day of nitrogen supplied from nitrogen bottles. Therefore, the Cold Vent was removed from the NGRS report for the 2023-2024 reporting period.


7.3.3.2 Scope 3 Emissions

Scope 3 emissions are indirect emissions (not included in either Scope 1 or Scope 2) that are generated both upstream and downstream as part of the Blacktip value chain activities. These indirect emissions occur because of the operation of the Blacktip WHP. For the Blacktip operations, Scope 3 emissions associated with the WHP include emissions from vessels and helicopters (Table 7.1).

As outlined in Section 7.3.2, while the YGP is not within the scope of this EP, the emissions from the processing and distribution of gas and condensate from the YGP are considered Scope 3 emissions for the Blacktip WHP. The Scope 3 emissions for the Blacktip WHP operational activities also include the third-party use of the produced gas and condensate. The Blacktip operations supply gas to the NT. As per the NT's gas strategy (NT Government, 2023), gas resources are a vital transition fuel to:

- support industry decarbonisation innovations
- provide ongoing energy stability and security
- enable economic, technological and workforce viability as new industries establish
- aid the replacement of fossil-fuel sources over time
- support development of renewable energy solutions and new technology.

The Blacktip operations produce gas that is supplied to a utility within Australia, which is a signatory of the Paris Agreement. The GHG emissions from the consumption of the gas are regulated and mitigated by Australia's GHG legislative frameworks and Net Zero Emissions target by 2050. All condensate produced at the WHP is currently provided to consumers in Asia, predominantly Thailand and Singapore, although sales to other countries in this region may occur periodically. Thailand and Singapore are signatories of the Paris Agreement and therefore subject to their own emissions reduction targets.

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7.3.3.3 Greenhouse Emissions Forecast

A GHG emissions forecast for the combined Blacktip operations has been developed over the remaining duration of the Blacktip field. This forecast is based on the existing production scenario for the Blacktip reservoir, with the addition of the P5 well. The P5 well is anticipated to commence operations in 2025 and enhance the production of gas and condensate from the Blacktip field until the end of field life in 2040.

While it is outside of the scope of this EP, Eni operates the YGP that receives and processes hydrocarbons from the Blacktip WHP for distribution to the buyer. For the purposes of this EP, the Scope 3 emissions forecast associated with the Blacktip operations includes the YGP, along with the end use of natural gas and condensate and the use of vessels and helicopters to support maintenance campaigns.

The GHG emissions forecast for the Blacktip operations found both Scope 1 and Scope 3 GHG emissions are expected to increase from 2025 onwards, due to additional gas and condensate production facilitated by the newly drilled P5 well coming online.

Scope 1 emissions are estimated to peak at approximately 693 tCO₂-e per annum between 2026 and 2034 (Table 7.1). As detailed in Table 7.1, Scope 3 emissions attributed to the operation of the YGP between 2026 and 2034 are expected to reach 83,936 tCO₂-e based on a maximum production level. Consequently, cumulative GHG emissions from the operation of the WHP and YGP are approximately 1.3 million tCO₂-e (MtCO₂-e) between 2019 and the end of field life (2040).

As outlined in Section 7.3.3.1, the Cold Vent on the WHP was removed as Scope 1 emissions source for 2023 – 2024 NGRS report for Eni Australia's operations. Consequently the cold vent is not considered to contribute to the WHP Scope 1 GHG emissions after 2023 for the purposes of the forecast provided in Table 7.1.

Cumulative emissions from the Blacktip operations are forecast to remain under 100,000 tCO₂-e per year (Table 7.1). Consequently, the Blacktip operations will not become a Safeguard facility.

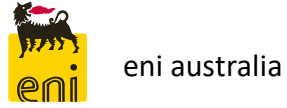


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Table 7.1: Historical and forecast Blacktip GHG emissions

Year	WHP Fuel Gas Combustion (S1) [tCO ₂ -e]	WHP Diesel Combustion (S1) [tCO ₂ -e]	WHP Cold Venting Emissions (S1) [tCO ₂ -e]	WHP Fugitive Emissions (S1) [tCO ₂ -e]	Total WHP Emissions (S1) [tCO ₂ -e]	YGP Fuel Gas combustion (S3) [tCO ₂ -e]	YGP Diesel combustion (S3) [tCO ₂ -e]	YGP Fugitive Emissions (S3) [tCO ₂ -e]	YGP Flaring Emissions (S3) [tCO ₂ -e]	Total YGP Emissions (S3) [tCO ₂ -e]	Total WHP and YGP Emissions (S1 and S3) [tCO ₂ -e]	Support Operations (Vessel and Helicopter) Emissions (S3) [tCO ₂ -e]	Total GHG Emissions [tCO ₂ -e]
2019	147	4	251	9	411	38,918	231	13	8,298	47,460	47,871	485	48,356
2020	137	4	148	9	298	46,167	138	14	10,180	56,499	56,797	399	57,196
2021	163	4	213	10	390	44,492	349	15	5,998	50,854	51,244	2,053	53,297
2022	156	21	300	11	488	37,019	246	15	5,399	42,679	43,167	1,415	44,582
2023	155	21	12	39	227	21,999	246	22	3,920	26,187	26,414	855	27,269
2024	74	1	0	10	85	24,164	229	14	3,722	28,129	28,214	3,344	31,558
2025	464	21	0	36	521	53,371	361	25	9,317	63,074	63,595	1,831	65,426
2026	617	27	0	48	693	71,024	481	33	12,399	83,936	84,629	605	85,234
2027	617	27	0	48	693	71,024	481	33	12,399	83,936	84,629	1,831	86,460
2028	617	27	0	48	693	71,024	481	33	12,399	83,936	84,629	605	85,234
2029	617	27	0	48	693	71,024	481	33	12,399	83,936	84,629	1,831	86,460
2030	617	27	0	48	693	71,024	481	33	12,399	83,936	84,629	605	85,234
2031	617	27	0	48	693	71,024	481	33	12,399	83,936	84,629	1,831	86,460
2032	617	27	0	48	693	71,024	481	33	12,399	83,936	84,629	605	85,234
2033	617	27	0	48	693	71,024	481	33	12,399	83,936	84,629	1,831	86,460
2034	617	27	0	48	693	71,024	481	33	12,399	83,936	84,629	605	85,234
2035	491	22	0	38	552	56,556	383	26	9,873	66,838	67,390	1,831	69,221
2036	394	18	0	31	443	45,376	307	21	7,921	53,625	54,068	605	54,673
2037	314	14	0	25	353	36,169	245	17	6,314	42,744	43,097	1,831	44,928
2038	251	11	0	20	282	28,936	196	13	5,051	34,197	34,479	605	35,084
2039	200	9	0	16	225	23,017	156	11	4,018	27,201	27,426	1,831	29,257
2040	160	7	0	13	180	18,413	125	8	3,214	21,760	21,940	605	22,545
Total	8,661	403	924	701	10,689	1,113,811	7,541	508	194,815	1,316,674	1,327,363	28,039	1,355,403

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As shown in Figure 7.1, approximately 94% of the cumulative GHG emissions from the Blacktip operations are anticipated to be released as Scope 3 emissions arising from the use of the produced natural gas by third party consumers in Australia. Scope 3 emissions from the use of produced condensate by third parties (outside of Australia) are expected to represent approximately 2% of the GHG emissions over the remaining life of the Blacktip operations. Scope 3 emissions resulting from the operation of YGP are expected to represent approximately 4% of the GHG emissions over the remaining life of the Blacktip operations. The Scope 1 emissions arising from the operation of the WHP represent approximately 0.03% of the GHG emissions associated with the Blacktip operations (Figure 7.1). Scope 3 emissions arising from the use of vessels and helicopters to support maintenance activities account for the remainder of the Blacktip GHG emissions (0.09%).

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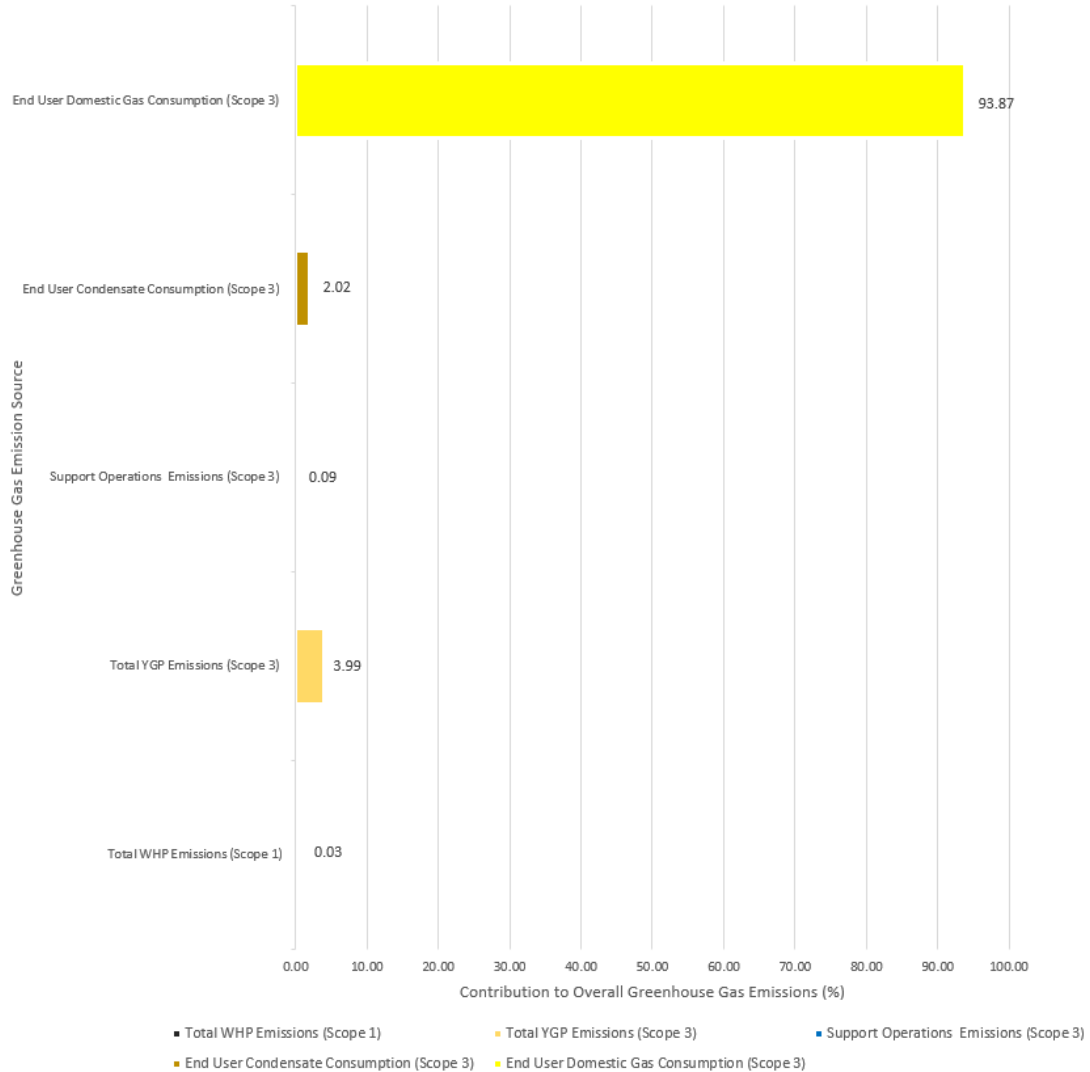


Figure 7.1: Anticipated GHG emissions contributions by source

The forecast GHG emissions for each year, by source, are detailed in. The cumulative GHG emissions (Scope 1 and Scope 3) associated with the operation of the WHP, including the consumption of natural gas and condensate by third party consumers, are approximately 25.2 MtCO₂-e between 2025 and the expected end of the field life in 2040. The GHG emissions between 2025 and 2034 are based on maximum production levels, which are expected to decline towards the end of field life.



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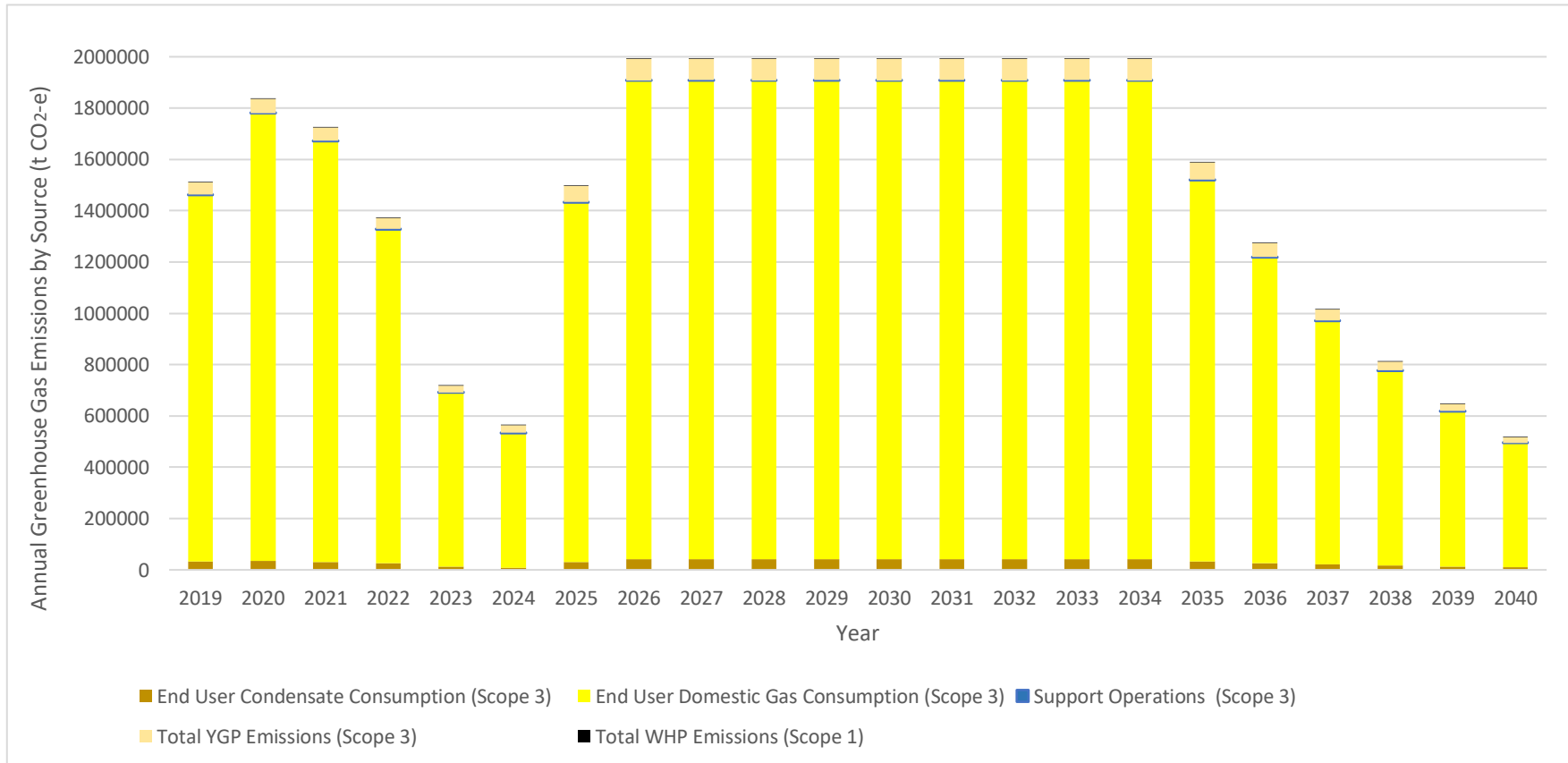



Figure 7.2: Historical and forecast cumulative Scope 1 and Scope 3 GHG emissions over the remaining Blacktip reservoir life, assigned by source

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The GHG emissions forecast detailed above was calculated based on the expected natural gas and condensate production resulting from the installation of the proposed P5 production well, along with production of natural gas and condensate from the existing wells in the Blacktip reservoir. Aside from the installation of the P5 well, the GHG emissions forecast shown in Table 7.1,

Figure 7.1 and Figure 7.2 is based on certain assumptions. These assumptions include:

- Emissions from support vessels were higher in 2021, 2022 and 2024 than the future forecasts for the same activity due to:
 - The 2021 well intervention campaign was prolonged due to the COVID-19 pandemic
 - The 2022 well intervention campaign was preceded by a campaign to replace the SSIV valve on the pipeline, which necessitated additional vessel movements
 - The 2024 well intervention campaign was delayed due to crane failure on the WHP, causing significantly more vessel traffic than normal to restore the crane to operational status.

These events are impossible to anticipate ahead of time, however support operations comprise less than 0.1% of the overall Blacktip GHG emissions forecast.

- The emissions forecast for vessels and helicopters assumes that from 2025, every first year will be a well intervention campaign with additional vessel traffic. Every second year will only routine maintenance at the WHP with reduced vessel traffic compared to that undertaken for a well intervention. Helicopter visits are expected to be the same number (6) per year, regardless of whether it is routine maintenance or a well intervention campaign being undertaken at the WHP. The support vessel operations include an additional 50% each year in their assumption of GHG emissions, as a contingency for additional vessel movements associated with unexpected circumstances.
- The WHP and YGP operating with an average 'up-time' of 97 per cent each year for the duration of the forecast period. This 'up-time' accounts for maintenance activities undertaken at these facilities.
- The WHP is subject to both planned and unplanned maintenance campaigns as detailed in Section 7.3.2. These maintenance campaigns do not require the facilities to be shut down and during these maintenance campaigns the facilities remain online, with the exception of small shut ins for Safety Critical Function Testing.
- The YGP is on a 4-year cycle of plant turnarounds, each with a duration of approximately 8 days. For the period 2025 to 2040, volumes of produced natural gas and condensate exported from the YGP are based on maximum production levels, including the maintenance campaigns outlined above. In addition, it is assumed all produced natural gas and condensate is ultimately combusted and not utilised for any other purpose.

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7.3.3.4 Description of the consequence


The key impacts of GHG emissions are their propensity to accumulate in the atmosphere over varying time scales, where their increasing concentration leads to a warming or 'greenhouse' effect. Once released into the atmosphere, carbon dioxide will persist in the atmosphere for thousands of years, nitrous oxides persist for hundreds of years and methane persists for a least a decade (EPA 2022). Whilst CO₂ is naturally cycled out of the atmosphere by various carbon sinks (such as vegetation and the ocean surface) this natural source/sink cycle has been disrupted since the beginning of the industrial revolution.

Predicting the impact of these warming effects at the ecosystem level is inherently difficult due to the influence of variables such as surface pressure, wind, temperature, humidity and rainfall within diverse ecosystems. These interdependent variables would require consideration in determining a contribution to global temperature increase.

Contribution to Australia's and Global Emissions

For 2022, DCCEEW estimated the Northern Territory's GHG emissions to be approximately 16.7 MtCO₂-e (DCCEEW, 2024b). For the same year, DCCEEW estimated Australia's cumulative GHG Emissions to be approximately 433 Mt CO₂-e (DCCEEW, 2024b). The cumulative Blacktip WHP and YGP operations GHG emissions for the same year contributed approximately 0.27% to the overall NT emissions inventory and 0.01% of Australia's emissions inventory (DCCEEW, 2024b). While the GHG emissions from the Blacktip Operations are anticipated to increase in response to additional production from the P5 well, the overall contribution of the Blacktip Operations to the Northern Territory's and Australia's GHG emissions inventory is not anticipated to materially change.

The Intergovernmental Panel on Climate Change (IPCC) defines the term "carbon budget" as the maximum amount of cumulative net global anthropogenic CO₂ emissions that would result in limiting global warming to a given level with a given probability, taking into account the effect of other anthropogenic climate forcers. This is referred to as the total carbon budget when expressed starting from the pre-industrial period, and as the remaining carbon budget when expressed from a recent specified date. The remaining carbon budget for a 50% likelihood to limit global warming to 1.5°C, 1.7°C, and 2°C is respectively, 500 Gt CO₂, 850 Gt CO₂, and 1350 Gt CO₂ (IPCC, 2021a).

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The cumulative Scope 1 and Scope 3 GHG emissions associated with the Blacktip operations total approximately 25 Mt CO₂-e for the estimated remaining life of operations (2025 to 2040; Table 7.1). These emissions are expected to represent a negligible reduction in the total remaining global carbon budget of between approximately 0.002% and 0.005%, depending on the global warming threshold examined. As described above and shown in, Scope 1 GHG emissions from the Blacktip WHP account for approximately 0.03% of the total cumulative GHG emissions associated with Blacktip operations. Scope 3 emissions resulting from the operation of YGP are expected to represent approximately 4% of the total cumulative GHG emissions over the remaining life of the Blacktip operations. Scope 3 GHG emissions arising from the use of vessels and helicopters to support maintenance activities account for approximately 0.09% of the cumulative Blacktip GHG emissions.

As outlined previously, Scope 3 GHG emissions associated with the use of hydrocarbons produced by the Blacktip operations represent the majority of the cumulative GHG emissions. Scope 3 GHG emissions arising from the use of the produced natural gas by third party consumers in Australia account for approximately 94% of these emissions and Scope 3 GHG emissions from the use of produced condensate by third parties (outside of Australia) accounts for approximately 2%.

As detailed in Table 7.1, the Blacktip operations GHG Emissions will remain below the NT's Greenhouse Gas Emissions Management for New and Expanding Large Emitters Industrial Project Threshold of 100,000 t CO₂-e per annum (Department of Environment, Parks and Water Security, 2021). These emissions are also forecast to remain below the 100,000 tCO₂-e per annum threshold for the Safeguard Mechanism.


Eni corporate emissions reduction initiatives

Eni has developed a strategy to achieve its goal of Net Zero Emissions by 2050. The implementation of Eni's strategy consists of several actions that allow Eni to decarbonize its own activities by reducing Scope 1 and 2 emissions. This strategy also contributes to accelerating the decarbonization of the value chain, through the supply of low and zero carbon products, thereby reducing Scope 3 emissions.

This strategy is implemented using a mix of different approaches and technologies, which are adopted in a targeted manner with time horizons that consider individual solutions' technological and commercial maturity. Simultaneously, this strategy considers market dynamics and the demands of the 'energy trilemma' (environmental sustainability, security of supply, and energy equity) while remaining in line with the evolving scientific and regulatory framework. Eni's short to medium-term priority is to reduce Scope 1 and Scope 2 emissions, by focusing primarily on the upstream sector, for which solutions which are technologically and economically viable are available.

Between 2018 and 2023, Eni reduced net Scope 1 and 2 upstream equity emissions by approximately 40%, with a particular focus on the following areas:

- projects to reduce methane emissions and routine or process flaring and venting
- energy efficiency measures
- portfolio actions.

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Eni's corporate strategy also includes increasing the share of hydrocarbon production which is comprised of natural gas. Natural gas is the most suitable conventional fuel source to accompany the energy transition due to:

- The comparatively low carbon footprint of gas-fired power generation compared to other conventional fuel sources, with the potential for further reductions through efforts to limit fugitive emissions and routine flaring;
- The flexibility of gas-fired power plants allow rapid intervention to balance energy systems.

These attributes make natural gas the ideal bridging solution for quickly replacing other conventional fuel sources with higher carbon footprints and supporting the transition to renewable energy.

Eni's measures to reduce Scope 3 emissions comprise initiatives to reduce the carbon intensity of its products and services. Eni anticipates that biofuel development will significantly contribute to the decarbonization of the transport sector, while providing an opportunity to reallocate traditional existing refining capacity to new fuel sources. Carbon capture, storage and utilisation (CCUS) projects will have a complementary function in reducing residual emissions that are difficult to abate with existing technologies. Finally, offsets, including nature-based solutions, will compensate for residual emissions.


The speed of this transformation and the relative contribution of the various business lines will depend on several variables, including market trends, advances in technology and the regulatory environment.

Eni is also a key contributor to the Oil and Gas Climate Initiative (OGCI). The OGCI led the oil and gas industry in responding to climate change and accelerated action towards a net zero emissions future in line with the Paris Agreement. In the ten years since its creation, the OGCI has grown to 12 companies that have set collective emissions reduction targets, particularly for methane emissions, contributed to the launch and deployment of CCUS projects, and increased investment in low carbon technologies and solutions. Among the recent initiatives promoted by OGCI to reduce methane emissions, the 'Aiming for Zero' initiative saw around 100 companies commit to the ambition of eliminating methane leakage from their assets by 2030.

Eni Australia Emissions Reduction Efforts

In accordance with Eni's global emissions reduction efforts, a detailed energy assessment was completed at the YGP in 2022. Energy assessments are systematic studies which identify, quantify and report existing energy consumption profiles and energy savings opportunities within Eni's assets. The goals of an energy assessment are the identification of energy efficiency opportunities, which consist of reductions in energy consumption and associated GHG emissions reduction. These reductions are to be pursued through the application of innovative technologies and operational best practices for energy efficiency.

As a result of the energy assessment, limited energy efficiency opportunities were identified for the YGP. These opportunities were screened from both an economic and GHG emissions reduction perspective.

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The main opportunities considered include the following:

- The installation of a Battery Energy Storage System (BESS) with a capacity of 1.12 MWh, to cover YGP power demand for about 1 hour in case of generator failure
- The installation of a solar photovoltaic modules (both with and without an associated BESS), to produce power in conjunction with the existing generators
- Reducing fuel gas consumption through the installation of a free spin in-line turboexpander
- The replacement of existing lighting fixtures with more energy efficient LED fixtures.

The sum of all identified opportunities were anticipated to yield a maximum reduction in GHG emissions from the YGP by up to 23 per cent per year. However, the implementation of the above opportunities was not considered to be economically or technically viable. Consequently, these emission reduction opportunities are re-evaluated on a yearly basis for possible implementation.

Emission reduction opportunities assessed for the WHP comprised the potential installation of a solar photovoltaic system and BESS on the WHP and the installation of a subsea tidal power system accompanied by a BESS on the WHP. The installation of a solar photovoltaic system and BESS on the WHP was anticipated to only result in minor emissions reductions, due to the lack space on the WHP available for solar panel installation. This infrastructure was also anticipated to impact safety and increase maintenance requirements on the WHP. The subsea tidal power system accompanied by a BESS was determined to not be technically and economically feasible, due to the minimum reliability requirements necessary to maintain operations on the WHP.


As outlined in the previous sections, approximately 94% of the emissions associated with the Blacktip operations are forecast to arise from the consumption of produced natural gas. This gas is consumed domestically in the Northern Territory and falls within the remit of Australia's emission reduction requirements under the Paris Agreement.

Eni will continue to evaluate opportunities to improve energy efficiency and reduce GHG emissions at both the YGP and WHP, on an annual basis, with appropriate consideration of economic, technical, operational and safety requirements at these facilities.

In accordance with Eni's global efforts to reduce methane emissions from its operational assets, the WHP and YGP undergo yearly fugitive emissions surveys to identify and quantify all fugitive emissions sources at these locations. The 2023 survey of the WHP identified no leaks at the premises and the methane emissions from the WHP were calculated at approximately 9.355 kg per year. The 2023 survey undertaken at the YGP identified fugitive methane emissions of approximately 205 kg per year. The locations of the identified leaks at the YGP were documented in a workbook prepared by the auditor to facilitate their resolution.

Fugitive emission surveys at both the WHP and YGP will continue to be undertaken annually, in compliance with Eni internal requirements as an OGMP 2.0 Gold Standard certified member since December 2023.

Eni Australia Emissions Forecasting and Tracking

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Eni Australia contributes to Eni's overall global GHG emissions reduction efforts by forecasting overall GHG emissions from both its own assets and those it has an equity interest within (non-operated assets). These forecasts are prepared based on expected reservoir and operational performance over a 4-year time horizon. GHG emissions performance is monitored monthly against this forecast to determine how actual GHG emissions performance compares against the GHG emissions forecast. The information provided through tracking the GHG emissions performance is used to fine-tune future GHG emissions forecasting efforts and determine whether GHG emissions reduction initiatives are required to support Eni's wider corporate emission reduction targets.


Eni Australia's GHG emission performance is also reported to the wider Eni corporate group to contribute to companywide GHG emissions tracking and monitoring efforts. This oversight by the wider Eni corporate group also allows Eni Australia's GHG emissions performance to be reviewed in comparison to other regions and Eni Australia's overall contribution to Eni's global GHG emissions performance to be determined.

Eni Australia has also established a CO₂ Emissions Steering Group. This cross functional team includes the Eni Australia Managing and Technical Directors in its composition. This group meets bi-annually and its responsibilities include monitoring and discussing Eni Australia's actual GHG emission performance against forecast emission performance. In addition, this group also examines emission reduction initiatives for the Eni Australia operations and potential areas and timeframes for their application. The GHG emission performance of assets not operated by Eni Australia, but where Eni has an equity interest, are also monitored by this group. Furthermore, this group monitors the local regulatory environment for changes in policy and legislation applicable to Eni Australia's GHG emissions management and reporting requirements.

Impacts to Ecosystems and Species

In 2009, the Biodiversity and Climate Change Advisory Group of Australia (Steffen et al., 2009) published a report that presents a comprehensive overview of the potential effects of climate change on marine and terrestrial species, habitats, and ecosystems throughout Australia. The impact on taxa and ecosystems is succinctly summarized in the tables below, which have been modified from the original work of Steffen et al. (2009). Table 7.2 describes the potential impact that could be experienced by the discharge of greenhouse gas emissions and the receptors that could be impacted.

The IPCC describes impacts of warming above pre-industrial levels to key receptor groups, including terrestrial ecosystems, mangroves, warm-water corals, unique and threatened systems, and arctic regions (Hoegh-Guldberg et al., 2018). These receptor groups show varying sensitivity to warming conditions, with a range of responses shown at 1°C warming, from corals suffering moderate impacts, to mangroves not showing any detectable impacts that can be attributed to climate change (Hoegh-Guldberg et al., 2018). Once warming reaches 1.5°C, all receptor groups show impacts attributable to climate change, with severity ranging from moderate impacts that are detectable and attributable to climate change (mangroves), to impacts that are severe and widespread (warm-water corals) (Hoegh-Guldberg et al., 2018). At the point where global temperature rise due to climate change reaches 2°C, increasing numbers of receptor groups suffer impacts that are high to very high, and likely to be irreversible, including terrestrial ecosystems, warm-water corals, unique and threatened systems, and arctic regions (Hoegh-Guldberg et al., 2018).


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The State of the Climate Report 2024 (Commonwealth of Australia, 2024) observes the following climate change related trends in Australia:

- Australia’s climate has warmed by an average of 1.51 ± 0.23 °C since national records began in 1910
- sea surface temperatures have increased by an average of 1.08 °C since 1900. This has led to an increase in the frequency of extreme heat events over land and sea
- there has been a decline of around 16 per cent in April to October rainfall in the southwest of Australia since 1970. Across the same region, May to July rainfall has seen the largest decrease, by around 20 per cent since 1970
- in the south-east of Australia, there has been a decrease of around 9 per cent in April to October rainfall since 1994
- there has been a decrease in streamflow at most gauges across Australia since 1970
- rainfall and streamflow have increased across parts of northern Australia since the 1970s
- there has been an increase in extreme fire weather, and a longer fire season, across large parts of the country since the 1950s
- there has been a decrease in the number of tropical cyclones observed in the Australian region since at least 1982
- snow depth, snow cover and number of snow days have decreased in alpine regions since the late 1950s
- oceans around Australia have continued to become more acidic, with changes happening faster in recent decades
- sea levels are rising around Australia, including more frequent extremes that are increasing the risk of inundation and damage to coastal infrastructure and communities.

The IPCC finalised the Sixth Assessment Report (AR6) in 2023 consisting of three Working Group contributions and a Synthesis Report. The AR6 Working Group 1 report states “climate change is a global phenomenon, but manifests differently in different regions” (IPCC 2021a). The AR6 Working Group 2 report (IPCC, 2021b) states that human-induced climate change, including more frequent and intense extreme events, has caused widespread adverse impacts and related losses and damages to nature and people, beyond natural climate variability. It states that global warming, reaching 1.5°C in the near-term, would cause unavoidable increases in multiple climate hazards and present multiple risks to ecosystems and humans. The report noted that societal choices and actions implemented in the next decade will determine the extent to which medium- and long-term pathways will deliver climate resilient development. The report identifies nine key climate risks for the Australasian region (IPCC, 2023):


- loss and degradation of coral reefs and associated biodiversity and ecosystem service values in Australia due to ocean warming and marine heatwaves
- loss of alpine biodiversity in Australia due to less snow
- transition or collapse of alpine ash, snowgum woodland, pencil pine and northern jarrah forests in southern Australia due to hotter and drier conditions with more fires

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- loss of kelp forests in southern Australia due to ocean warming, marine heatwaves, and overgrazing by climate driven range extensions of herbivore fish and urchins'. Loss of natural and human systems in low-lying coastal areas due to sea level rise
- disruption and decline in agricultural production and increased stress in rural communities in south-western, southern and eastern mainland Australia due to hotter and drier conditions
- increase in heat-related mortality and morbidity for people and wildlife in Australia due to heatwaves
- cascading, compounding and aggregate impacts on cities, settlements, infrastructure, supply-chains and services due to wildfires, floods, droughts, heatwaves, storms and sea level rise
- inability of institutions and governance systems to manage climate risks.

In addition to the AR6 Working Group 1 report, the State of the Climate Report 2024 (Commonwealth of Australia, 2024) states that Australia is projected to experience the following in the coming decades:

- continued warming, with more extremely hot days and fewer extremely cool days
- a further decrease in cool season rainfall across many regions of the south and east
- continued drying in the south-west of Western Australia, especially during winter and spring
- longer periods of drought on average in the south and east
- a longer fire season for the south and east, and an increase in the number of dangerous fire weather days
- more intense short-duration heavy rainfall events, even in regions where the average rainfall decreases or stays the same
- Fewer tropical cyclones, but a greater proportion projected to be of high intensity, with ongoing large variations from year to year. The intensity of rainfall associated with tropical cyclones is also expected to increase and, combined with higher sea levels, is likely to amplify the impacts from those tropical cyclones that do occur.
- fewer east coast lows on average, particularly during the cooler months of the year
- Ongoing sea level rise through this century and beyond, at a rate that varies by region. Recent research on potential ice loss from the Antarctic ice sheet suggests that a scenario of larger and more rapid sea level rise can't be ruled out
- More frequent extreme sea levels linked to coastal inundation and coastal erosion. For most of the Australian coast, extreme sea levels that had a probability of occurring once in a hundred years are projected to become an annual event by the end of this century with lower emissions, and by the mid-21st century for higher emissions.
- continued warming and acidification of surrounding oceans with consequent impacts on biodiversity and ecosystem processes
- increased and longer-lasting marine heatwaves, which will further stress marine environments, such as kelp forests, and increase the likelihood of more frequent and

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severe bleaching events in coral reefs around Australia, including the Great Barrier Reef and Ningaloo Reef

- an increase in the risk of natural disasters from extreme weather, including 'compound extremes', where multiple extreme events occur together or in sequence, thus compounding their impacts.

The report also provides the following updated projections of Australia's average temperature over the next two decades:

- The average temperature of each future year is now expected to be warmer than any year prior to the commencement of human-caused climate change. This is scientifically referred to as climate change 'emergence'.
- Ongoing climate variability means each year will not necessarily be hotter than the last, but the underlying probabilities are changing. This leads to less chance of cool years and a greater chance of repeatedly breaking Australia's record annual average temperature (e.g. record set in 2005 was subsequently broken in 2013 and then again in 2019).
- while the previous decade was warmer than any other decade in the 20th century, it is likely to be the coolest decade for the 21st century
- the average temperature of the next 20 years is virtually certain to be warmer than the average of the past 20 years
- The amount of temperature change expected in the next decade is similar under all plausible global emissions scenarios. However, by the mid-21st century, higher ongoing emissions of greenhouse gases will lead to greater warming and associated impacts, while lower emissions will lead to less warming and fewer impacts.

The AR6 Working Group 3 report provides an updated global assessment of climate change mitigation progress and pledges and examines the sources of global emissions, explaining the developments in emissions reduction and mitigation efforts, and assesses the impact of national climate pledges in relation to long-term emissions goals. 1202 scenarios of the 2000 quantitative emissions pathways submitted to the IPCC had sufficient information for assessing the associated warming. The report found that there are many pathways in the literature that likely limit global warming to 2°C with no overshoot, or to 1.5°C with limited overshoot. These variations occur because, while climate science can calculate a 'carbon budget' of net emissions before any particular temperature outcome is reached, the allocation of this budget between different human activities requires additional judgements about for example technology, economics, consumer preferences and policy choices.




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Table 7.2: Potential impacts from the release of greenhouse gas emissions to the atmosphere and the relevant receptors (Steffan et. Al. 2009)


Receptor Category	Projected Impact/Vulnerability
Species	
Mammals	The susceptibility of narrowly distributed endemic species to the effects of rapid climate change in situ, the alteration of grazing macropod competition in tropical savannas as mediated by changes in fire regimes and water availability, and the decline in the nutritional quality of foliage due to CO ₂ fertilisation all have important implications for herbivorous species.
Birds	The alterations in the phenology of migration and egg-laying, the prolongation of stay of migratory birds at breeding grounds leading to an intensified competition between resident and migratory species. The breeding of waterbirds that may be adversely impacted by a reduction in freshwater flows into wetlands. The vulnerability of apex predators to changes in food availability due to rising sea temperatures, the effects of rising sea levels on the breeding habitats of birds that nest on sandy and muddy shores, saltmarshes, intertidal zones, coastal wetlands, and low-lying islands. The potential harm caused by saltwater intrusion into freshwater wetlands all pose significant challenges to the natural environment.
Reptiles	Rising temperatures has the potential to disrupt the sex ratios of species that rely on environmental sex determination, such as turtles and crocodiles. To mitigate the impact of warming temperatures, some of these species may adapt by altering their utilisation of microhabitats in their immediate surroundings.
Amphibians	Frogs are likely to be the most vulnerable among terrestrial taxa. The repercussions of climate change on amphibians may manifest in the form of modified interplays between pathogens, predators, and fires.
Fish	Freshwater species face a high level of vulnerability due to potential reductions in water flows and compromised water quality. The migratory capacity of such species is also limited, thereby exacerbating the impact of these changes. Furthermore, all species may be susceptible to the flow-on effects of warming on the phytoplankton base of food webs.
Plants	The functional dynamics of plants may be affected by climate change, as changes in fires, plant phenology, and insect life cycles, as well as specific environmental conditions, could come into play. In particular, longer-lived plants could be at greater risk if climate change causes suitable establishment sites for seedlings to shift beyond their dispersal capacities. Additionally, narrow-ranged endemic plants that are reliant on specific conditions will face limited capacity to disperse to alternative sites with similar conditions.

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Ecosystems	
Coral Reefs	<p><u>Increases in cyclone and storm surge</u> Heightened occurrences of cyclones and storm surges may result in escalated physical degradation of coral reef structures.</p> <p><u>CO₂ increases leading to increased ocean acidity</u> Elevated levels of CO₂ resulting in increased ocean acidity could potentially impair the capacity of calcifying organisms, such as corals, to construct and uphold their skeletal structures.</p> <p><u>Sea surface temperature increases, leading to coral bleaching</u> Rising sea surface temperatures that trigger coral bleaching can have the consequence of preventing recovery if the frequency of these events surpasses the required recovery duration. Consequently, coral reefs may remain in an early successional state or potentially be overtaken by communities that are dominated by macroalgae.</p> <p><u>Warming will increase the susceptibility of corals to diseases</u> The warming of ocean temperatures heightens the vulnerability of corals to diseases. There is a prospect for the formation of new reefs at higher latitudes, provided that appropriate substrates are present, and light is not limiting. However, this process may lead to a decrease in beta diversity among coral communities, as tropical-adapted taxa expand their range to the southern regions, with varying rates of survival among different taxa further amplifying this effect.</p>
Oceanic Systems	<p><u>Ocean warming</u> The warming of the ocean poses a significant threat to various marine organisms that are highly responsive to even minor fluctuations in temperature, ranging from 1-2 degrees Celsius. Such changes may cause an impact on crucial factors such as growth rates, survival rates, reproductive cycles, disease susceptibility, and dispersal capacity. Rising temperatures could lead to reduced larval development time, which could subsequently reduce the distance of dispersal. Moreover, warm-water assemblages may take over cool-water communities as temperatures increase.</p> <p><u>Changed circulation patterns, including increase in temperature stratification and decrease in mixing depth, and strengthening of East Australian Current</u> These changes significantly influence the distribution and productivity of marine ecosystems, as the timing and location of ocean currents play a crucial role in the transfer of the reproductive phase of various organisms, which in turn influences the dispersal and maintenance of populations. With climate change potentially suppressing upwelling in certain regions and increasing it in others, the location and extent of productivity zones may shift, resulting in significant alterations to the marine environment.</p> <p><u>Changes in ocean chemistry</u> The surge in CO₂ levels in the atmosphere has led to a corresponding increase in ocean acidity and a decline in the availability of carbonate ions that form the foundation of calcium carbonate skeletons, including those of numerous planktonic species and corals. The changes in ocean chemistry caused by these alterations have the potential to threaten these organisms' survival. However, the increase in dissolved CO₂ could also stimulate productivity.</p>

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Estuaries and coastal fringes	<p><u>Sea level rise</u> As sea levels rise, some species, notably mangroves, may shift towards land due to inundation, creating suitable habitat. Concurrently, changes in freshwater habitats upstream could have an impact on species such as wetland birds.</p> <p><u>Increase in water temperature</u> A rise in water temperature could lead to impacts on phytoplankton production, which in turn may have implications for secondary production in benthic communities.</p>
Savannas and Grasslands	<p><u>Elevated CO₂</u> Elevated levels of CO₂ can cause changes in the competitive relationships between woody and grass species due to their different responses to Elevated CO₂ levels.</p> <p><u>Increased rainfall in north and north-west regions</u> The north and northwest regions may experience an increase in rainfall, which could result in higher plant growth and subsequent increase in fuel loads. This, in turn, may lead to more intense, frequent, and larger fires that occur later in the dry season. The ecotonal boundaries between savanna woodlands, grasslands, and monsoonal rainforest patches could also be impacted. It is worth noting that changes in rainfall seasonality are likely to have a more significant impact than changes in rainfall amount.</p>
Tropical Rainforests	<p><u>Warming and changes in precipitation patterns</u> Increased likelihood of fires penetrating rainforest vegetation, leading to a shift from fire-sensitive species to communities dominated by fire-tolerant species. Cool-adapted species may be forced to higher elevations, changing competitive interactions between species.</p> <p><u>Change in duration of dry season</u> Changes in patterns of flowering, fruiting, and leaf flush may affect the availability of resources for animals.</p> <p><u>Increased intensity of storms/tropical cyclones</u> More intense storms and tropical cyclones can cause physical damage to forests, altering gap dynamics and succession rates. Tall, shallow-rooted rainforest trees are particularly vulnerable to uprooting, breakage, and defoliation.</p> <p><u>Elevated atmospheric CO₂</u> The response of different growth forms to higher levels of CO₂ may result in changes to vegetation structure.</p>
Temperate Forests	<p><u>Potential increases in frequency and intensity of fires</u> Communities dominated by obligate seeders may face a disadvantage compared to vegetative resprouters due to changes in community structure and species composition.</p> <p><u>Warming and changes in rainfall patterns</u> Areas where rainfall is not limiting may experience potential increases in productivity, while some Australian forests may face reduced forest cover associated with soil drying.</p> <p><u>Rising atmospheric CO₂</u> Vegetation may experience an overall increase in productivity and thickening due to the enhanced CO₂ levels.</p>

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Inland Waterways and Wetlands	<p><u>Reductions in precipitation, increased frequency and intensity of drought</u> Decrease in precipitation and increased frequency and intensity of droughts may result in reduced river flows, changes in seasonality of flows, and reduction in the available breeding area for waterbirds. More intense rainfall events may cause flooding, affecting nutrient, pollutant, and sediment movement, riparian vegetation, and erosion. Groundwater-dependent ecosystems may be negatively impacted.</p> <p><u>Changes in water quality, including changes in nutrient flows, sediment, oxygen and CO₂ concentration</u> Changes in water quality, including variations in nutrient flows, sediment, oxygen, and CO₂ concentrations may affect eutrophication levels and lead to an increase in populations of warm-adapted species while causing the loss of cool-adapted species. There may also be an incidence of blue-green algal outbreaks.</p> <p><u>Sea level rise</u> Sea level rise may lead to saltwater intrusion into low-lying floodplains, freshwater swamps, and groundwater. This could result in the replacement of existing riparian vegetation by mangroves.</p> <p><u>Warming of water column; increase in depth of seasonal thermoclines in still water</u> Warming of the water column and an increase in the depth of seasonal thermoclines in still water may cause changes in the abundance of temperature-sensitive species, such as algae and zooplankton. It may also lead to a reduction in the depth of the lowest oxygenated zones in some instances.</p>
Arid and Semi-arid Region	<p><u>Increasing CO₂ coupled with drying in some regions</u> The correlation between water supply and CO₂ is critical, as approximately 90% of primary production variability can be explained by annual precipitation.</p> <p><u>Shifts in seasonality or intensity of rainfall events</u> Any augmentation in the redistribution of runoff will magnify vegetation patterns and the mosaic structure of erosion cells in degraded areas. Changes in the quantity and variability of rainfall will also influence the frequency of wildfires. Changes in rainfall intensity and timing could affect dryland salinity.</p> <p><u>Warming and drying, leading to increased frequency and intensity of fires</u> A reduction in patches of fire-sensitive mulga in spinifex grasslands may lead to the dominance of spinifex across the entire landscape.</p>
Alpine	<p><u>Reduction in snow cover depth and duration</u> In the face of reduced snowpack, some species that depend on it for hibernation and predator protection may be at risk of extinction. On the other hand, the reduced snowpack may provide more opportunities for plant species to establish themselves at higher elevations.</p>

Since climate change is a result of the accumulation of global greenhouse gas emissions in the atmosphere over time, the impacts resulting from these emissions cannot be solely attributed to any particular development, due to the following reasons:

- Climate change and its impacts are caused by net global greenhouse gas concentrations, which include emissions from various sources over time.

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- It is challenging to accurately predict the total future global greenhouse gas emissions, which makes it difficult to attribute specific climate-related impacts to any particular source.
- Future national and international climate change initiatives could impact the total future global greenhouse gas emissions, including the emissions from the Blacktip operations.
- Climate impacts associated with oil and gas supply may occur regardless of whether the Blacktip operations continue or not.

7.3.4 Environmental Performance Outcomes and Control Measures

In addition to Eni's Corporate Climate Change Objectives and GHG management framework, the Blacktip operations will continue to comply with all applicable Commonwealth and State regulations related to managing GHG emissions. These regulations include monitoring, reporting and verification requirements. Eni recognises that compliance with these regulations is essential to ensuring the protection of the environment and the health and well-being of local communities.

EPOs relating to this risk include:


- Scope 1 GHG emissions associated with the Blacktip WHP operations will be managed to remain below 1,000 t CO₂-e/year (EPO-06)
- Natural gas produced by the Blacktip operations will only be sold to customers who are signatories of the Paris Agreement (EPO-07)
- Actively support the global transition to a lower carbon future by implementing Eni corporate and Eni Australia emissions reduction initiatives and emissions forecasting and tracking requirements, to support the objectives of the Paris Agreement (EPO-08).

CMs relating to this risk include:

- WHP power generation fuel (CM-06)
- Vessel fuel quality (CM-07).
- WHP gas leak detection (CM-08)
- Asset integrity systems (CM-09)
- GHG management practices (CM-10)
- Natural gas produced by the Blacktip operations will only be sold to customers who are signatories of the Paris Agreement (CM-11)
- Annual review and assessment of emissions reductions opportunities at both the Blacktip WHP and YGP (CM-12)


EPSs and MC relating to the above are presented in Table 9.2.

Monitoring and reporting of emissions are presented in Section 10.8.


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7.3.5 As Low as Reasonably Practicable Demonstration


Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate energy consumption	Energy consumption and associated emissions cannot be eliminated as it is required to power production processes and provide a safe and reliable natural gas supply. Substitution by renewable alternatives is addressed below.	*
	Eliminate venting during IMR	Eliminating venting during IMR would increase safety risk. Venting volumes during IMR are small and typically relate to depressurisation of the WHP topside piping during maintenance or PSV relief. Venting of the gas is a requirement for safe maintenance operations.	*
Substitute	Reduce emissions at the WHP, the YGP, and on vessels	<p>Alternatives such as renewable energy generators (wind, sun) are not viable options as they are weather-dependant and do not supply continuous base load power required for the WHP, YGP and vessels. Eni has previously performed studies relating to installing renewable energy sources, including BESS and found these to not be practicable in this context.</p> <p>As part of Eni's latest Energy Assessment that identifies and assesses energy efficiency opportunities for its assets, Eni identified and assessed a number of GHG emissions reductions opportunities for both the Blacktip WHP and YGP.</p> <p>For the Blacktip WHP, Eni has assessed the following GHG emissions reduction opportunities to either replace or complement existing use of fuel gas:</p> <ul style="list-style-type: none"> • installation of a solar photovoltaic system and BESS • installation of a subsea tidal power system and BESS. <p>These emissions reduction opportunities at the Blacktip WHP were not pursued for the following reasons:</p> <ul style="list-style-type: none"> • large capital expenditure to achieve a limited reduction in Scope 1 emissions (the WHP platform is expected to emit < 1,000 t CO₂-e/year; Table 7.1) • expected reduced output power from solar PV arrays for 6 months of the year (wet season), limiting reliability of the system • limited room available on the WHP, which would require modifications to topsides arrangements to accommodate the required components • potential impacts to safety and increased maintenance requirements for the WHP 	

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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
		<p>For the YGP, Eni has assessed the following GHG emissions reduction opportunities to complement or replace existing power generation:</p> <ul style="list-style-type: none"> • installation of a BESS with capacity of 1.12 Mwh to cover 1 hour of YGP power demand in the case of generator failure • installation of solar PV modules (both with and without a BESS) to produce power in conjunction with existing generators • installation of a free spin in-line turboexpander in the compression process resulting a reduction of energy consumption required to support the compression process. <p>These emissions reduction opportunities at the YGP were not pursued due to the large capital expenditure required to achieve limited GHG emissions reductions.</p> <p>The turboexpander option results in the greatest GHG emissions reduction (approximately 8,202 t CO₂-e/year, less than 10% of the peak Scope 3 GHG emissions from YGP). However, the installation of the turboexpander was found to be not technically feasible, due to the inability to support its cooling requirements at the YGP site.</p> <p>The other GHG emissions reduction opportunities assessed have significant capital expenditure requirements and have been assessed to result in GHG emissions reductions of between 1,150 and 3,550 t CO₂-e/year.</p> <p>Eni will continue to annually review and assess these GHG emissions reduction opportunities, as well as new GHG emissions reduction opportunities and technologies for potential implementation at the WHP and YGP (CM-12).</p>	
Substitute	Investigate alternative, lower GHG emissions transport options for Blacktip gas	Blacktip gas is processed at the facilities at the YGP. Gas processed for sale is metered at the gas plant metering system, after which custody is transferred to the consumer, Power Water Corporation (PWC), the Northern Territory utility. Gas is transported on behalf of the consumer via the APA owned Bonaparte Gas Pipeline to domestic customers within Australia.	✘
Engineering	WHP power generation – gas rather than diesel is	GHG emissions from the gas turbines on the WHP are reduced compared to diesel generators.	✓ (CM-06)

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Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
	used to fuel the generator		
	Vessel fuel quality (in compliance with Marine Order 97)	Reduces emissions by using low-sulphur fuel in accordance with Marine Order 97. Minimal cost, as vessels must comply with Marine Orders.	✓ (CM-07)
	Asset integrity systems	Asset integrity systems provide processes and requirements for maintenance, inspection and corrosion management of the WHP and pipeline (including pigging and inspection requirements, refer to Section 3.5.3). Compliance to the systems detects external features, damage or signs of damage and deterioration that could present an emission release risk, reducing the likelihood of an unplanned gas release occurring (and resulting GHG emissions). Minor cost involved in complying and implementing.	✓ (CM-09)
	WHP gas leak detection	The WHP has ultrasonic and line-of-sight gas leak detectors to detect gas leaks, given the uncrewed philosophy of the platform. Leaks detected will be flagged and trigger relevant response procedures to mitigate the leak.	✓ (CM-08)
Isolation	N/A	N/A	N/A
Administrative	<i>National Greenhouse and Energy Reporting Act</i> reporting	Although the WHP operations do not trigger the requirement, the Blacktip operations including the YGP perform GHG reporting annually in accordance with the NGER Act.	✓ (Refer to Section 10.8 for commitment to report)
	GHG Management practices	GHG emissions management practices aim to reduce GHG emissions to ALARP over the life of production operations, including: <ul style="list-style-type: none"> • Ongoing GHG emissions measurement and monitoring, which includes annual fugitive emissions monitoring at the WHP and YGP, and GHG emissions forecasting and performance monitoring, as detailed in Table 10.2 • Annual review of WHP and YGP GHG emissions reduction opportunities and management. Including the adoption of reduction opportunities when feasible (CM-12) • Bi-annual meetings of the CO₂ management steering committee (as outlined in Section 10.11.2) 	✓ (CM-10)
	Natural gas produced by the Blacktip	Selling Blacktip gas to countries signatory to the Paris Agreement ensures that it is used responsibly within	✓ (CM-11)


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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
	operations will only be sold to customers who are signatories of the Paris Agreement	<p>countries aligned in the global reduction of emissions and the energy transition.</p> <p>Countries who are signatory to the Paris Agreement have emissions reduction targets in place. Blacktip gas is currently contracted for domestic supply within Australia. Australia is a signatory to the Paris Agreement and has in place net 2030 and 2050 GHG emissions reductions targets.</p>	
	Annual review and assessment of emissions reductions opportunities at both the WHP and YGP	Eni undertakes an annual review of energy efficiency opportunities for all its assets, including the Blacktip WHP and YGP, as part of its annual Energy Assessment. This ensures opportunities and technologies for GHG emissions improvement are identified, assessed and implemented where practicable. This process assesses emissions reduction opportunities in terms of estimated project costs, technical feasibility and corresponding energy and emissions savings to establish a business case, allow comparisons of opportunities and ultimately inform adoption or rejection of the opportunity.	✓ (CM-12)
	Condensate sale only to countries signatory to the Paris Agreement	<p>Blacktip condensate is stored in two condensate storage tanks at YGP. Condensate exports are infrequent, occurring twice a year on average. For export, condensate is pumped to a moored tanker via a Single Point Mooring (SPM) which is within Northern Territory waters with custody transfer occurring at the first flange of the inlet manifold of the tanker. The tankers are owned and operated by third parties.</p> <p>Whilst Eni condensate is currently provided to consumers in Asia, predominantly Thailand and Singapore who are signatories of the Paris Agreement and therefore subject to their own emissions reduction targets, it is not possible to confirm that all future end users of the condensate are signatory to the Paris Agreement. This is due to contract mechanisms in place for the sale of condensate in the global market.</p> <p>Condensate end use presents a very small portion of the overall forecast GHG emissions from the Blacktip operations (approximately 2%, see Figure 7.1). The cumulative emissions from the Blacktip operations are forecast to contribute to between a 0.002% and 0.005% reduction in the total remaining global carbon budget. Since there are currently no other contracting options to sell the condensate, it is considered acceptable to continue to sell the condensate to the global market.</p>	✗


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7.3.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>GHG emissions will be managed in accordance with relevant legislative requirements, specifically:</p> <ul style="list-style-type: none"> • <i>National Greenhouse and Energy Reporting Act 2007</i> • National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015. <p>NGER Scheme requires Eni to report on atmospheric emissions and energy use from activities under its operational control.</p> <p>Eni will report GHG emissions and energy use from the WHP in accordance with its requirements under the NGER Act.</p> <p>Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).</p> <p>Australia has ratified the Paris Agreement and set Nationally determined contributions (NDCs). As gas from the Blacktip WHP is provided to customers within Australia, the GHG emissions arising from third party consumption of Blacktip gas are accounted for through Australia's GHG legislative frameworks and commitments to achieve net zero emissions by 2050. The Scope 3 GHG emissions arising from the consumption of the Blacktip gas represent 94% of the cumulative emissions from the Blacktip operations. Approximately 2% of the Scope 3 GHG emissions relates to the sale of condensate to the south-east Asian market and represents a negligible contribution to the reduction of the total remaining global carbon budget.</p>
Policy compliance	<p>The management of GHG emissions from the Blacktip operations is aligned with Eni policies and standards. As a global business Eni has developed a strategy to achieve its goal of Net Zero Emissions by 2050. Blacktip operations align with this strategy and Eni Australia emissions reduction initiatives.</p> <p>Blacktip operations have a zero routine flaring commitment in-line with Eni corporate strategies.</p> <p>Blacktip operations fit with Eni's corporate decarbonisation targets.</p> <p>The residual risk is Low, which is acceptable.</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>Blacktip natural gas is being sold to meet Australian energy demands. Any natural gas produced by the Blacktip operations will only be sold to customers who are signatories of the Paris Agreement.</p> <p>To date, no stakeholder concerns have been raised regarding atmospheric emission impacts from the WHP operations (refer to Section 5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>

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Demonstration of acceptability	
Area sensitivity/ biodiversity	<p>Eni has considered information in relevant recovery plans and approved conservation advice for marine species that identify GHG emissions or climate change as a threat (as listed in Table 2.4). This includes:</p> <ul style="list-style-type: none"> • Conservation Management Plan for the Blue Whale 2015–2025 (Commonwealth of Australia, 2015a) • Approved Conservation Advice for <i>Balaenoptera borealis</i> (Sei Whale) • Approved Conservation Advice for <i>Balaenoptera physalus</i> (Fin Whale) • Approved Conservation Advice for <i>Megaptera novaeangliae</i> (Humpback Whale) • Approved Conservation Advice for <i>Dermochelys coriacea</i> (Leatherback Turtle) • Recovery Plan for the White Shark (<i>Carcharodon carcharias</i>) (Commonwealth of Australia, 2013) • Approved Conservation Advice for <i>Rhincodon typus</i> (Whale Shark) • Approved conservation advice for <i>Aipysurus fuscus</i> (dusky sea snake) (DCCEEW, 2024c). <p>Given its relatively low emissions profile, the Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice. Appropriate controls have been adopted to reduce and/or continue to reduce emissions from ongoing operations.</p> <p>Eni has considered the objectives of the North Marine Park Network Management Plan (DNP, 2018a) and the IUCN principles of the zones of the marine park. The Blacktip operations are not inconsistent with the IUCN principles and North Marine Parks Network Management Plan objectives (refer to Section 4.5.1).</p>

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Demonstration of acceptability	
ESD principles	<p>Blacktip GHG emissions contribute to the global GHG emissions which have associated impacts on climate change, with increased global greenhouse gas emissions ultimately causing impacts inherently inconsistent with some of the principles of ESD. Specifically the global impact from climate change has the potential to impact biodiversity and ecological integrity and may affect the biodiversity or ecological function for future generations.</p> <p>Whilst the GHG emissions from Blacktip operations are a contributor to the global GHG emissions, the contribution is not in-consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> • Blacktip gas is sold to meet the Australian domestic energy demand (specifically the NT) and as per the NT’s gas strategy (NT Government, 2023), gas resources are a vital transition fuel. • Blacktip gas will continue to be sold to customers who are signatories of the Paris Agreement. • natural gas is a bridging solution for quickly replacing other conventional fuel sources with higher carbon footprints and supporting the transition to an energy system based on renewables. • Blacktip presents a lower emissions operation and operates below the emissions level which triggers the Safeguard Mechanism. • GHG management practices are in place (Section 7.3.5 and Table 9.2). • Controls are implemented reduce the emissions to ALARP (as presented in Section 7.3.5). • The cumulative forecast Scope 1 and Scope 3 GHG emissions for the remaining life of the Blacktip operations (2025 to 2040) total approximately 25 Mt CO₂-e and are expected to contribute between approximately 0.002% and 0.005% to the reduction in the total remaining global carbon budget, which is a negligible contribution and considered to have a consequence severity of slight (1). <p>As a global business Eni has developed a strategy to achieve its goal of Net Zero Emissions by 2050. This strategy is considered to reduce the risks and impacts of climate change, thereby ensuring that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations. For Eni Australia’s operations, these strategies are enabled through Eni Australia emissions reduction initiatives outlined in Section 7.3.3.4.</p>
ALARP	Given the nature and scale of the Blacktip operations GHG emissions, the residual risk has been demonstrated to be ALARP.

Potential impacts associated with GHG emissions are slight. The residual risk is considered low, which is acceptable in accordance with Eni’s acceptability criteria (Table 6.5). The control measures adopted are considered adequate to manage the potential impacts and risks to ALARP. Additional control measures that could result in the further reduction of GHG emissions were considered and rejected given:

- The relatively high capital expenditure costs to achieve a slight to minor reduction in Blacktip Scope 1 and Scope 3 GHG emissions
- The Blacktip WHP Scope 1 GHG emissions are forecast to remain under 1,000 t CO₂e/year for the remaining life of the facility (Table 7.1)


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- The forecast Scope 1 and Scope 3 GHG emissions associated with the Blacktip operations are estimated to total approximately 25 Mt CO₂-e for the estimated remaining life of operations (2025 to 2040; Table 7.1) and are expected to contribute between approximately 0.002% and 0.005% to the reduction in the total remaining global carbon budget, which is a negligible contribution and considered to have a consequence severity of slight (1).

Managing Scope 1 emissions to a level below 1,000 t CO₂-e per year is considered acceptable given the following:

- The Scope 1 emissions from the WHP contribute approximately 0.03% of the total GHG emissions (Scope 1 and Scope 3) associated with Blacktip operations that will only contribute between approximately 0.002% and 0.005% to the reduction in the total remaining global carbon budget, which is a negligible contribution and considered to have a consequence severity of slight (1)
- Although the forecast emission profile provided in Table 7.1 indicates the Scope 1 emissions are forecast to remain well below 1,000 t CO₂-e per year, setting a limit of 1,000 t CO₂-e per year provides sufficient buffer for any upset events that cannot be anticipated ahead of time, whilst committing Eni to managing Scope 1 emissions from the WHP to a level that is considered ALARP and acceptable. Eni will continue to assess opportunities for WHP Scope 1 emissions reductions.

Potential impacts associated with GHG emissions are considered acceptable and ALARP.

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7.4 Routine Helicopter, Vessel and Wellhead Platform Noise (Risk ID P4)

7.4.1 Summary of Environmental Risk Assessment

Hazard	Noise caused by helicopters, vessels, WHP		
	Likelihood	Severity	Risk
Inherent Risk	A	1	L
Residual Risk	A	1	L

7.4.2 Description of Hazard

During the Blacktip operations, noise will be generated by vessels and helicopters. Noise from these sources can be broadly defined as non-impulsive. Blacktip vessel and helicopter operations are not constant within the Operational Area. Therefore, vessel noise is limited to specific periods such as:

- support vessel and helicopter activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

Helicopter transit is used occasionally for accessing the WHP, for mostly less than a day in duration, approximately two to six times per year.

Key sources of sound on the WHP originate from generators and equipment above the water level (i.e., no wellheads on the seafloor). No underwater noise sources are present.


How underwater noise is received by the environment depends on a number of factors. These include the frequency in which the receptor receives noise, how the noise moves through the water column and how loud the noise is. The movement of noise through the water column is influenced by factors such as the bathymetry and composition of the seabed, the temperature and salinity of the water, the depth of the water and the location of the noise source.

7.4.2.1 Helicopters

The main acoustic source associated with helicopters is the impulse noise from the main rotor, which consists of:

- blade-vortex interaction noise in descent or level flight at low and medium velocities
- high-speed impulsive noise related to trans-sonic effects on the advancing blade.

The rotating blades of helicopters produce tones with fundamental frequencies proportional to the rate and number of blades. Noise levels for typical helicopters used in offshore operations (Eurocopter Super Puma AS332) at 150m separation distance have been measured at up to 90.6 dB (BMT Asia Pacific, 2005). Unconstrained point source noise in the atmosphere, such as helicopter noise, spreads spherically, with noise received at the sea surface decreasing with increasing distance from the aircraft (Nowacek *et al.*, 2007).

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Based on spherical geometric spreading, and not considering transmission loss from atmospheric absorption, the sound level is expected to decrease by 6 dB for every doubling of the distance from the source (Truax, 1978). Using this model, a maximum sound level of approximately 90 dB at 150m would be reduced to approximate 76 dB directly below a helicopter travelling at an altitude of 500m. Noise from the flyover of a Bell 214ST helicopter has been recorded underwater (Richardson *et al.*, 1995); the maximum recorded sound level for the dominant 22 Hz tone was 109 dB re 1 μ Pa (sound pressure level [SPL]) when the helicopter was 152m from the surface and the hydrophone 3m and 18m under the surface, and only detectable underwater for 11 to 38 seconds (based on transit speed), depending on water depth.

7.4.2.2 Vessels

For vessels, the noisiest anticipated activity is when the vessel maintains position and heading by using its own propellers and thrusters (dynamic positioning). The typical sound levels generated by vessels are broadband and usually increase with increasing vessel size, with smaller vessels (less than 50m) having source levels 160 to 175 dB (re 1 μ Pa) (Gotz *et al.*, 2009; Richardson *et al.*, 1995). Tugboats, crew boats, supply ships and many research vessels in the 50 to 100m size class typically have broadband source levels in the 165 to 180 dB re 1 μ Pa SPL) range (Gotz *et al.*, 2009). In comparison, underwater sound generated by large ships can produce levels exceeding 190 dB re 1 μ Pa SPL (Gotz *et al.*, 2009).

McCauley (1998) measured underwater broadband noise equivalent to approximately 182 dB re 1 μ Pa SPL @ 1m with a frequency range of 20 Hz to 10 kHz from a vessel using dynamic positioning in the Timor Sea; it is expected this noise level will be the maximum by the vessels used for Blacktip operations, given the typically small vessels used for routine and non-routine IMR activities. The thruster noise dropped below 120 dB re 1 μ Pa within 3 to 4km (McCauley, 1998).

7.4.2.3 Wellhead Platform


A key source of sound on the WHP originates from generators and equipment above the water level (no wellheads on the seafloor). Noise from generators on the WHP are in the region of 65 dBA to 75 dBA at the source.

7.4.2.4 Noise modelling and attenuation calculations

To understand the noise footprints likely to be generated by the activities this impact assessment utilises previously completed JASCO noise modelling for a similar Eni project in a water depth of approx. 40m, which is similar to that of Blacktip activities. The modelling is conservative and considered applicable in informing the noise impact assessment, given the nature and scale of the activities.

The underwater noise sources modelled by JASCO (Connell *et al.*, 2023) relevant to the activities are:

- non-impulsive noise: Pipelay vessel on DP

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A pipelay vessels is significantly larger that the vessels used by Eni and therefore presents figures in excess of that expected for typical Blacktip routine and non-routine IMR activities.

The modelling study predicted the distances at which underwater sound levels from the activities reached noise effect thresholds and criteria for marine fauna (detailed in Section 7.4.3). Due to the variety of species considered, there are several different thresholds for evaluating effects, including mortality, injury, temporary reduction in hearing sensitivity, and behavioural disturbance.

Characteristics of noise emissions source used in the modelling are presented in Table 7.3

Table 7.3: Characteristics of noise emissions sources used in the modelling

Source	Source Level	Frequency
Vessel Operations: Pipelay Vessel	182 dB re 1 μ Pa m @ 1 m	20 to 10 kHz

Modelling results

The worst-case output from the modelling results based on the maximum-over-depth modelled received noise levels are shown in Table 7.4. Impact thresholds are based on those detailed in Section 7.4.3.



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Table 7.4: Noise modelling result summary: maximum over depth distances to frequency weighted 24 hour sound exposure level based on noise effect criteria (Connell et al., 2023)

Receptor	Impact threshold	Distance From Source Where Impact May Occur (in kilometres, R_{max})
		Vessel Operations: Pipelay Vessel
Marine Mammals		
Marine mammal behaviour (NOAA, 2019) (SPL)		26.2
Low-frequency cetaceans	PTS ¹ (SEL _{24h})	0.03
	TTS ¹ (SEL _{24h})	5.89
High-frequency cetaceans	PTS ¹ (SEL _{24h})	-
	TTS ¹ (SEL _{24h})	0.03
Very-high-frequency cetaceans	PTS ¹ (SEL _{24h})	0.03
	TTS ¹ (SEL _{24h})	2.88
Sirenians	PTS ¹ (SEL _{24h})	-
	TTS ¹ (SEL _{24h})	0.03
Marine Reptiles		
Turtle behaviour McCauley et al. (2000) (SPL) (Popper et al., 2014)		N/A
Sea turtles	PTS ¹ (SEL _{24h})	-
	TTS ¹ (SEL _{24h})	0.03
Fish²		
Fish I	Mortality and potential mortal injury (SEL _{24h})	N/A
	Recoverable injury (SEL _{24h})	N/A
	TTS (SEL _{24h})	N/A
Fish II	Mortality and potential mortal injury (SEL _{24h})	N/A
	Recoverable injury (SEL _{24h})	N/A
	TTS (SEL _{24h})	N/A
Fish III	Mortality and potential mortal injury (SEL _{24h})	N/A
	Recoverable injury (SEL _{24h})	1
	TTS (SEL _{24h})	0.6
Fish eggs and fish larvae	Mortality and potential mortal injury (SEL _{24h})	N/A
	Recoverable injury (SEL _{24h})	N/A
	TTS (SEL _{24h})	N/A

Note 1: Dual metric acoustic thresholds for impulsive sounds: Use whichever results in the largest isopleth for calculating PTS onset. If a non-impulsive sound has the potential of exceeding the peak sound pressure level thresholds associated with impulsive sounds, these thresholds should also be considered.

Note 2: Fish I – No swim bladder; Fish II – Swim bladder not involved with hearing; Fish III – Swim bladder involved with hearing.

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7.4.3 Potential Environmental Impact

Potential environmental impacts from noise from helicopters and vessels:

- behavioural change in marine fauna (localised avoidance and attraction)
- temporary hearing impairment or threshold shift to marine fauna
- induced stress in marine fauna
- disruption to marine fauna underwater acoustic cues
- secondary ecological effects – alteration of predator/prey relationship.

For non-impulsive noise, only weighted sound exposure level (SEL) metrics are provided in the literature (Table 7.5). Estimating SEL provides a metric that integrates cumulative exposures. For permanent threshold shift (PTS) and temporary threshold shift (TTS) due to non-impulsive noise, 24 hours have been assumed as a suitable timeframe to estimate SEL (Southall *et al.*, 2007). Since TTS and PTS are not provided in SPL, it is not possible to directly compare these thresholds with the predicted SPL @ 1m for the vessels.

Cumulative impacts from multiple noise sources (vessels and Blacktip WHP operations) are not considered significant, given the received levels from these types of activities. The WHP is a steel-legged structure, with minimal topside arrangements. A key source of sound on the WHP originates from generators and equipment above the water level (i.e., no wellheads on the seafloor); therefore, no underwater noise sources are present. Noise from generators on the WHP (above the water) are in the region of 65 dBA to 75 dBA at the source, far below any impact threshold to marine fauna. The noise impact thresholds for PTS and TTS consider the received levels over a period of 24 hours, and as outlined in the text above. Marine fauna may be attracted by the noise sources but are unlikely to remain in the vicinity for 24 hours, or approach close enough to result in PTS or TTS (discussed further below).

7.4.3.1 Marine Mammals

Marine mammals are generally sensitive to noise in the marine environment due to their use of sound for communication, prey capture, predator avoidance and navigation. Some also have large gas-filled organs that make them vulnerable to sound pressure.

Marine mammals that may occur within the vicinity of the Operational Area include low frequency (such as baleen whales), high frequency (odontocetes such as orca and sperm whale) and very high frequency (such as dolphins) cetaceans and sirenians (dugongs) (refer to Section 4.4 for further information about presence).

Table 7.5 presented a summary of cetacean behavioural and impact thresholds, which have been used in the JASCO modelling (Connell *et al.*, 2023).


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Table 7.5: Continuous noise: summary of cetacean impact thresholds

Hearing group	PTS onset thresholds (received level)	TTS onset thresholds (received level)	Behavioural response
	Non-impulsive	Non-impulsive	
Low-frequency cetaceans	L_E , low frequency, 24h: 199 dB	L_E , low frequency, 24h: 179 dB	L_p 120 dB
High-frequency cetaceans	L_E , high frequency, 24h: 198 dB	L_E , high frequency, 24h: 178 dB	L_p 120 dB
Very high-frequency cetaceans	L_E , very high frequency, 24h: 173 dB	L_E , very high frequency, 24h: 153 dB	L_p 120 dB

Source: NMFS (2014, 2018); NOAA (2019); Southall et al. (2019).

As presented in Table 7.4, impact from vessel may exceed behavioural thresholds for marine mammals out to a distance of 26.2km. PTS is not predicted. TTS may occur out to 5.89km the noise source. Whilst TTS may be exceeded impacts are not considered significant given marine mammals' mobility and ability to avoid the sound source. In addition, the Operational Area and noise footprint are not within a BIA or aggregation area for species sensitive to noise (e.g. pygmy blue whales), reducing the risk of impacts.


There is potential for auditory masking of vocalisations of marine mammals due to the overlap in frequency range between signals and vocalisations; however, impacts are considered temporary and localised because marine mammals are moving and unlikely to stay in the same area for any length of time.

The SEL_{24h} is a cumulative metric that reflects the dosimetric impact of noise levels within 24 hours, based on the assumption an animal is consistently exposed to such noise levels at a fixed position. More realistically, marine mammals would not stay in the same location for 24 hours. Therefore, a reported distance for SEL based criteria does not mean marine fauna travelling within this radius of the source will be injured, but rather an animal could be exposed to the sound level associated with impairment if it remained in that location for 24 hours.

Cumulative impact from the use of multiple vessels is not considered to present significant impacts to marine fauna, given their mobility and ability to avoid the sound source; impacts will relate to behavioural disturbance and avoidance only. The Operational Area is not within an area of high shipping density (Section 4.6.4); therefore, should avoidance behaviour occur, it is anticipated the marine mammals would be able to move to an area below the behavioural threshold.

Eni has considered information in relevant recovery plans and approved conservation advice for marine fauna that identify noise emissions as a potential threat (as listed in Table 2.4). This includes the objectives and actions within the:

- Conservation Management Plan for the Blue Whale 2015–2025 (Commonwealth of Australia, 2015a)
- Approved Conservation Advice for *Balaenoptera borealis* (Sei Whale)
- Approved Conservation Advice for *Balaenoptera physalus* (Fin Whale)
- Approved Conservation Advice for *Megaptera novaeangliae* (Humpback Whale).

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The Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice. Considering there are no regionally significant feeding, breeding or aggregation areas for marine mammals in the Operational Area, impacts are likely to be limited to individuals only. Any impact is anticipated to be slight and will not result in impacts at a population level.

7.4.3.2 Marine Turtles


The Operational Area overlaps with the BIA for green turtle (foraging) and olive ridley turtle (foraging), and a BIA for the flatback turtle (reproduction) is 8km from the Operational Area (Table 4.5). The nearest known marine turtle nesting sites (flatback) are located at north side of Cape Domett and at Lacrosse Island and Pelican Island in the Cambridge Gulf (75km south of the Operational Area). Low levels of flatback turtle activity are also reported at Yelcherr Beach (Woodside, 2004). However, marine turtle species are not likely to be resident or occur in the Operational Area in significant numbers. Studies define suitable internesting habitat as areas of water shallower than 16m, which are typically within 5 to 10km of coastlines (Whittock *et al.*, 2016). Water depths in the Operational Area and the area of noise propagation (typically 20 to 40m depth) suggest they are unlikely to comprise important habitat for the turtles during any life history phase.

Thresholds for non-impulsive noise emissions (e.g., those from vessels) have not been identified for marine turtles. However, a playback study of diamondback terrapins (*Malaclemys terrapin terrapin*), using boat noise, noted some of the species increased or decreased swimming speed, while others did not alter their behaviour at all (Lester *et al.*, 2013). Numerical thresholds have been developed for impacts of impulsive noise sources to marine turtles (e.g., Finneran *et al.*, 2017) (as defined in Section 7.5). Popper *et al.* (2014) has defined a more qualitative means, which has been applied to both impulsive and non-impulsive noise. Popper *et al.* (2014) identified mortality or permanent injury as being low risk to marine turtles, and TTS is moderate close to the source only. As presented in Table 7.4, TTS may occur very near the sound source (within 0.03km).

Behavioural impacts and TTS to marine turtles are expected to be temporary, within proximity to the vessels. The risk of impact is further reduced as the vessel-based noise will be for short periods of time only, and intermittently over the field life. Any impact is anticipated to be slight and will not result in impacts at a population level.

7.4.3.3 Seabirds and Migratory Shorebirds

Seabirds and migratory shore birds have been observed at the WHP, these species may be disturbed or displaced during helicopter transfer.

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However, birds observed at the WHP (crested tern and brown booby) have sufficient flight ranges to relocate to other roosting sites within the region if displaced from the WHP. The nearest coastal roosting locations are expected to be approximately 100km away on the WA and NT coastlines. Crested tern (the predominant species on the WHP) are widely observed around NT coastlines and islands and are present all year round (BirdLife Australia, 2024). There are at least five islands in the NT supporting colonies of more than 30,000 nesting birds each year (Chatto 2001). Large colonies have been established on the Fog Bay islands and banks, 250km to the northeast of the WHP (Giuliano and Guinea, 2015). Chatto (2001) noted that crested tern are the dominant seabird species in terms of the number of places seen and their total numbers in the NT.

Brown boobies have been recorded around most of the NT coast all year (Chatto 2001), although rarely seen in large numbers. Numerous recordings have been made in the JBG region and on the coastlines (BirdLife Australia, 2024).

Both the crested tern and brown booby numbers on the WHP represent a small number of the overall population. When taking into account the distance from the coastline and nearest coastal roosting locations within their flight range, a displacement and behavioural disturbance to the species on the WHP is not anticipated to result in impacts to the local or regional population. The local population on the WHP are expected to relocate to the alternative roosting locations in the region in the event of disturbance.


It is recognised that a range of other bird species may visit the WHP and Operational Area (as detailed in Table 4.4). However there have not been observations of other roosting species on the WHP. Any disturbance to other species (including those listed under the EPBC Act) are anticipated to relate to a temporary behavioural change to individual species only.

Any impact is anticipated to result in a slight and temporary behavioural change only, limited to those species on the WHP (particularly around the helideck).

7.4.3.4 Protected Areas

Portions of the GEP and CEP lie within the Joseph Bonaparte Gulf AMP Multiple Use Zone (Table 3.4) and the SPM is in the AMP. The values of the AMP are presented in Table 4.9 and include natural, cultural, socio-economic and heritage. The values and sensitivities of the AMP are submerged (such as KEFs) or are described above (turtles). Routine helicopter, vessel and WHP noise is not expected to cause an impact to other socio-economic receptors.

Appropriate controls have been evaluated and adopted to manage potential impacts and risks to the values and sensitivities of the Joseph Bonaparte Gulf AMP to ALARP and acceptable levels.

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7.4.4 Environmental Performance Outcomes and Control Measures

EPOs relating to this risk include:

- no injury or mortality to EPBC Act listed fauna during operational activities (EPO-09).


CMs relating to this risk include:

- regulations and measures for interacting with marine fauna (CM-13)

EPSs and MC relating to the above are presented in Table 9.2.

7.4.5 As Low as Reasonably Practicable Demonstration


Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
Eliminate	Eliminate the noise associated with using helicopters and vessels	The noise associated with using helicopters and vessels cannot be eliminated. Elimination of helicopters and vessels would mean the Blacktip operations cannot be completed.	*
Substitute	Substitute vessels and helicopters	The vessels and helicopters are contracted to meet the specifications of the Blacktip operations and cannot be substituted.	N/A
Isolation	N/A	N/A	N/A
Administrative	Regulations and measures for interacting with marine fauna (e.g., EPBC Regulations 8 (Part 8))	Minor cost in complying. Reduces risk of physical and behavioural impacts to marine fauna. EPBC Regulations include restrictions such as vessel speed and direction when in proximity to marine fauna and are based on legislated requirements.	✓ (CM-13)
	Use a dedicated marine fauna observer on vessels to spot marine fauna	May improve the ability to spot and identify marine fauna at risk of impact from noise. However, the high cost of contracting marine fauna observers is grossly disproportionate to the low risk (refer to Section 7.4.3) of vessel noise sources on marine fauna.	*

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	Schedule vessel and helicopter activity outside of the sensitive period for marine fauna	The timing of the activities is subject to operational requirements and weather conditions. Given the low risk to marine fauna in the region, rescheduling the vessel and helicopter activity outside of the sensitive period for marine fauna will not result in significant environmental benefit.	*
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7.4.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	Noise from Blacktip operations is managed in accordance with relevant legislative requirements, including: <ul style="list-style-type: none"> vessels will comply with EPBC Regulations 2000- Part 8 Division 8.1 (Interacting with cetaceans) helicopters will comply with EPBC Regulations 2000 – Part 8 Division 8.3 (Regulation 8.07). Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).
Policy compliance	Management of the physical presence of the Blacktip operations is aligned with Eni policies and standards. The residual risk is Low, which is acceptable. The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.
Social acceptability	To date, no stakeholder concerns have been raised regarding noise impacts (refer to Section 5). An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.
Area sensitivity/ biodiversity	Eni has considered information in relevant recovery plans and approved conservation advice for cetaceans that identify noise emissions as a threat (as listed in Table 2.4). This includes: <ul style="list-style-type: none"> Conservation Management Plan for the Blue Whale 2015–2025 (Commonwealth of Australia, 2015a) Approved Conservation Advice for <i>Balaenoptera borealis</i> (Sei Whale) Approved Conservation Advice for <i>Balaenoptera physalus</i> (Fin Whale) Approved Conservation Advice for <i>Megaptera novaeangliae</i> (Humpback Whale). The Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice. Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).

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Demonstration of acceptability	
ESD principles	<p>The activity is consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> the impacts associated with noise emissions do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained conservative assumptions have been applied to the impact assessment there are no identified health, diversity or productivity impacts that may affect the biodiversity or ecological function for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

Given the infrequent nature and short duration of the vessel and helicopter operations, the potential impacts are considered slight. Several controls have been evaluated above and adopted in accordance with the ALARP criteria (Section 7.2.5). The residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts are therefore acceptable and ALARP.

7.5 Underwater Survey Equipment Noise (Risk ID P5)

7.5.1 Summary of Environmental Risk Assessment

Hazard	Underwater survey equipment noise		
	Likelihood	Severity	Risk
Inherent Risk	B	2	L
Residual Risk	A	2	L


7.5.2 Description of Hazard

Geophysical survey instrumentation (boomer, SBP, MBES and SSS) is designed to characterise the seabed topography, bathymetry, potential geohazards, and other seafloor features along the GEP and CEP route. As presented in Table 3.11, the use of geophysical survey instrumentation is typically limited to:

- every two years at the SPM for three to five days
- every five years over the GEP for three to five days
- every two years over the CEP for three to five days.

The geophysical surveys will use a range of sources, as shown in Table 7.6. The noise from this equipment is categorised as impulsive noise, which can be defined as a series of pulsed sound events that are brief, broadband, atonal and transient.

Table 7.6: Estimated frequency and sound ranges for geophysical survey equipment

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Geophysical technique	Estimated source intensity (peak dB re 1 µPa @ 1 m)	Estimated source level (rms dB re 1 µPa @ 1 m)	Estimated sound exposure level (dB re 1 µPa ² s)	Frequency range (kHz)
MBES	210 to 245	221	188	150 to 700
SSS	200 to 235	234	200	75 to 500
SBP – chirp or pinger	170 to 230	210	193	2 to 23
Boomer	205 to 225	205.9	175.6	5 to 500

Source: Jimenez-Arranz *et al.*, 2017

JASCO (2013) conducted noise modelling for low-energy survey instruments off the coast of California. MBES, SSS, SBP and boomer equipment was modelled in a sandy bottom environment and at a water depth of 64m. Given the similarities in equipment type, seafloor habitat and water depth, the modelling is considered comparable for the nature and scale of the low-energy survey equipment used during the Blacktip operations.


The modelling reported distances to specific threshold levels for different types of marine mammals. Where applicable, m-weighted R_{max} – the distance to the farthest occurrence of the threshold level – estimates were used. A behavioural threshold of 160 dB re 1 µPa (rms SPL) was used, based on United States (US) National Marine Fisheries Service (NMFS, 2018) acoustic threshold for behavioural effects in marine mammals. The 160 dB re 1 µPa (rms SPL) threshold was reached during the modelling at the distances (R_{max}) of:

- MBES – 290m
- SSS – 682m
- SBP (chirp) – 36m
- boomer – 50m.

7.5.3 Potential Environmental Impact

Elevated underwater noise can affect marine fauna, including cetaceans, fish, turtles, sharks and rays, in three main ways (Richardson *et al.*, 1995), being:

1. by causing direct physical effects on hearing or other organs, including:
 - mortality or potential mortal injury resulting from exposure to noise; not considered credible, given the noise sources associated the geophysical surveys
 - permanent threshold shift – permanent reduction in the ability to perceive sound after being exposed to noise
 - temporary threshold shift – temporary reduction in the ability to perceive sound after being exposed to noise, with hearing returning to normal
2. by masking or interfering with other biologically important sounds, including vocal communication, echolocation, signals, and sounds produced by predators or prey
3. through disturbance leading to behavioural changes or displacement from important areas.

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Criteria for impulsive noise exposure for impact and behavioural threshold to marine mammal, turtles and fish are presented in Table 7.7 to Table 7.9. JASCO (2013) modelling shows SSS has the furthest R_{max} at 160 dB re 1 μ Pa (SPL) – threshold for marine mammals’ behavioural impact – and would be reached at 682m from the source; any impacts would likely be restricted to within that distance from survey equipment noise.

Table 7.7: Criteria for impulsive noise exposure acoustic effects on marine mammals

Potential marine fauna receptor	PTS onset thresholds		TTS onset thresholds		Behaviour (SPL, dB re 1 μ Pa)
	Weighted SEL _{24h} (dB re 1 μ Pa ² ·s)	PK (dB re 1 μ Pa)	Weighted SEL _{24h} (dB re 1 μ Pa ² ·s)	PK (dB re 1 μ Pa)	
High-frequency cetaceans	185	230	170	224	160
Low-frequency cetaceans	183	219	168	213	

Source: Southall et al. (2019) and NMFS (2018)

Table 7.8: Criteria for impulsive noise exposure for turtles

Potential marine fauna receptor	Masking	Behaviour	TTS	Recoverable injury	Mortality and potential mortal injury
Marine turtle	(N) Low (I) Low (F) Low	(N) High (I) Moderate (F) Low	(N) High (I) Low (F) Low	(N) High (I) Low (F) Low	>210 dB SEL _{24h} or >207 dB PK

Note: Relative risk (high, moderate, low) is given for animals at three distances from the source defined in relative terms as near (N) – tens of metres, intermediate (I) – hundreds of metres, and far (F) – thousands of metres.

Source: adapted from Popper et al. (2014).


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Table 7.9: Criteria for impulsive noise exposure for fish


Potential marine fauna receptor	Mortality and potential mortal injury	Impairment			Behaviour
		Recoverable injury	TTS	Masking	
Fish: No swim bladder (particle motion detection)	>219 dB SEL _{24h} or >213 dB PK	>216 dB SEL _{24h} or >213 dB PK	>186 dB S EL _{24h}	(N) Low (I) Low (F) Low	(N) High (I) Moderate (F) Low
Fish: Swim bladder not involved in hearing (particle motion detection)	210 dB SEL _{24h} or >207 dB PK	203 dB SEL _{24h} or >207 dB PK	>186 dB S EL _{24h}	(N) Low (I) Low (F) Low	(N) High (I) Moderate (F) Low
Fish: Swim bladder involved in hearing (primarily pressure detection)	207 dB SEL _{24h} or >207 dB PK	203 dB SEL _{24h} or >207 dB PK	186 dB SEL _{24h}	(N) Low (I) Low (F) Moderate	(N) High (I) High (F) Moderate
Fish eggs and fish larvae	>210 dB SEL _{24h} or >207 dB PK	(N) Moderate (I) Low (F) Low	(N) Moderate (I) Low (F) Low	(N) Low (I) Low (F) Low	(N) Moderate (I) Low (F) Low

Source: adapted from Popper et al. (2014)

7.5.3.1 Marine Mammals

Marine mammals that may occur within the vicinity of the surveys include low frequency (such as baleen whales), high frequency (odontocetes such as orca and sperm whale) and very high frequency (such as dolphins) cetaceans and sirenians (dugongs). No marine mammal BIAs overlap the Operational Area (refer Table 4.5 for more information about presence), and the Operational Area lacks aggregating habitat, such as that for foraging, resting or calving. Marine mammal species are expected to be transitory only within the region.

Survey geophysical equipment has been modelled at multiple locations (Zykov *et al.*, 2013; Austin *et al.*, 2012). These studies indicate both peak and frequency-weighted SEL noise emissions from survey equipment such as MBES are typically below sound levels that could result in low- and high-frequency marine mammal TTS or PTS from either peak (PK) or SEL criteria (Table 7.7) in a horizontal direction.

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SSS impulses and MBES sound levels are outside the auditory range of low-frequency marine mammal species and baleen whales (e.g., humpback and pygmy blue whales) but within the high-frequency and very-high-frequency marine mammal auditory range (e.g., sperm whales and dolphins). PTS and TTS thresholds for high-frequency and very-high-frequency marine mammals (Table 7.7) are only expected to be exceeded close to the source.

When reviewing the JASCO (2013) modelling and considering the US NMFS (2018) acoustic threshold for behavioural effects in marine mammals of 160 dB re 1 μ Pa (SPL), the boomer could potentially disturb marine mammals at horizontal distances of up to 50m, the SSS at 682m and the MBES at 290m.

Marine mammals use sound for communication, prey capture, predator avoidance, navigation, and their physical makeup (i.e., large gas-filled organs). This makes them vulnerable to both disturbance and physiological damage from underwater noise of sufficient magnitude. Survey equipment could mask vocalisations of cetaceans due to the overlap in frequency range between signals and vocalisations. However, such masking impacts would be limited to within hundreds of metres from the sound source.


Eni has considered information in relevant recovery plans and approved conservation advice for marine fauna that identify noise emissions a potential threat (as listed in Table 2.4). This includes the objectives and actions within the:

- Conservation Management Plan for the Blue Whale 2015–2025 (Commonwealth of Australia, 2015a).
- Approved Conservation Advice for *Balaenoptera borealis* (Sei Whale)
- Approved Conservation Advice for *Balaenoptera physalus* (Fin Whale)
- Approved Conservation Advice for *Megaptera novaeangliae* (Humpback Whale).

The Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice. Considering there are no regionally significant feeding, breeding or aggregation areas for marine mammals in the Operational Area, impacts are likely to be limited to individuals only. Any impact is anticipated to be slight and will not result in impacts at a population level.

7.5.3.2 Marine Turtles

The Operational Area overlaps with the BIA for green turtle (foraging) and olive ridley turtle (foraging) and a BIA for the flatback turtle (reproduction) is 8km from the Operational Area (Table 4.5). The nearest known marine turtle nesting sites are at Cape Domett and at Lacrosse Island and Pelican Island in the Cambridge Gulf (75km south of the Operational Area) and flatback turtle activity is also reported at Yelcherr Beach (10km to the east of the SPM), in low numbers (Woodside, 2004). However, marine turtle species are not likely to be resident or occur in the Operational Area in significant numbers. Studies define suitable internesting habitat as areas of water shallower than 16m, which are typically within 5 to 10km of coastlines (Whittock *et al.*, 2016). Water depths in the Operational Area and the area of noise propagation (typically 20 to 40m depth) suggest they are unlikely to comprise important habitat for the turtles during any life history phase.

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Electro-physical studies have indicated marine turtle hearing is most sensitive to sounds between 100 to 700 Hz (McCauley, 1994), which is at the lowest frequency range of a geophysical survey (Table 7.6). Studies indicate turtles may begin to show behavioural responses to an approaching seismic array at received sound levels of approximately 166 dB re 1 μ Pa, and avoidance at around 175 dB re 1 μ Pa (McCauley *et al.*, 2000). The sound levels of the survey equipment are below those associated with the PK criteria for injury (Table 7.8) beyond a few metres, and due to the low per-pulse SEL, the SEL criteria will also not be exceeded (McPherson, 2020).

Popper *et al.* (2014) present thresholds of risk (high, medium, low) for turtles at three distances from the source, defined in relative terms as near (N), intermediate (I) and far (F) (Table 7.8). It is expected the noise from survey equipment could reach masking and behavioural thresholds near the sound source only and within hundreds of metres. Any impacts to marine turtles are anticipated to be slight and temporary, relating to behavioural impacts only.

7.5.3.3 Fish

Behavioural impacts to fish from survey equipment noise may occur in individuals located within hundreds of metres of the source. None of the survey equipment has energy below 1 kHz, and therefore it will not be heard by most fish, further reducing the risk of impact (Ladich & Fay, 2013).


Fish may be temporarily displaced from the immediate vicinity of a noise source; however, they would be expected to behave normally once the noise ceased. Thresholds and Rmax distances in JASCO (2013) suggest TTS (186 dB SEL_{24h}) (refer Table 7.9) in fish could occur within 20m of the SBP chirp and within 1m of the SSS, MBES and boomer. Any fish present are expected to move rapidly outside of the distances at which any TTS could occur.

Demersal and pelagic fish species are in the Operational Area. Since species richness has been shown to correlate with habitat complexity (Gratwicke & Speight, 2005), it is unlikely the gravelly sand sediments that comprise the largest proportion of the Operational Area support a wide diversity of species. Any impacts to fish are anticipated to be slight and temporary, relating to behavioural impacts only.

7.5.3.4 Protected Areas

Portions of the GEP and CEP lie within the Joseph Bonaparte Gulf AMP Multiple Use Zone (Table 3.4) and the SPM is in the AMP. The values of the AMP are presented in Table 4.9 and include natural, cultural, socio-economic and heritage. The values and sensitivities of the AMP are submerged (such as KEFs) or are described above (turtles). Survey noise is not expected to cause an impact to other socio-economic receptors.

Appropriate controls have been evaluated and adopted to manage potential impacts and risks to the values and sensitivities of the Joseph Bonaparte Gulf AMP to ALARP and acceptable levels.

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7.5.4 Environmental Performance Outcomes and Control Measures


EPOs relating to this risk include:

- no injury or mortality to EPBC Act listed fauna during operational activities (EPO-09).

CMs relating to this risk include:


- regulations and measures for interacting with marine fauna (CM-13).

EPSs and MC relating to the above are presented in Table 9.2.

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7.5.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate the survey noise	Surveys of the GEP and SPM are required for safety and integrity purposes and cannot be eliminated.	✘
Substitute	N/A	N/A	
Engineering	Use soft starts for noise equipment	The noise source is directed towards the sea floor, minimising propagation of the noise source horizontally. The sound power of the acoustic source will be the minimum practicable to obtain the required data. Soft starts are not feasible on geophysical equipment as there is not a typical array (as in seismic activities).	✘
Isolation	N/A	N/A	N/A
Administrative	Use a dedicated marine fauna observer to spot	May improve the ability to spot and identify marine fauna at risk of impact from noise. However, the high cost of contracting marine fauna observers is grossly disproportionate to the low risk (refer to Section 7.5.3) of noise sources on marine fauna.	✘
	Schedule surveys to be outside of ecologically sensitive periods for marine fauna	The timing of the activities is subject to operational requirements and are needed to ensure infrastructure integrity. Given the low risk to marine fauna in the region, rescheduling the survey activity outside of the sensitive period for marine fauna will not result in significant environmental benefit and may result in asset integrity risks.	✘
	Regulations and measures for interacting with marine fauna (e.g., EPBC Regulations 8 (Part 8))	Minor cost in complying. Reduces the risk of physical and behavioural impacts to marine fauna. While not directly relating to survey noise EPBC Regulations include restrictions such as vessel speed and direction when in proximity to marine fauna and are based on legislated requirements.	✓ (CM-13)


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7.5.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>Noise from Blacktip operations is managed in accordance with relevant legislative requirements, including:</p> <ul style="list-style-type: none"> vessels will comply with EPBC Regulations 2000- Part 8 Division 8.1 (Interacting with cetaceans) helicopters will comply with EPBC Regulations 2000 – Part 8 Division 8.3 (Regulation 8.07). <p>Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).</p>
Policy compliance	<p>Management of the physical presence of the Blacktip operations is aligned with Eni policies and standards. The residual risk is Low, which is acceptable.</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>To date, no stakeholder concerns have been raised regarding noise impacts (refer to Section 5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>Eni has considered information in relevant recovery plans and approved conservation advice for cetaceans that identify noise emissions as a threat (as listed in Table 2.4). This includes:</p> <ul style="list-style-type: none"> Conservation Management Plan for the Blue Whale 2015–2025 (Commonwealth of Australia, 2015a) Approved Conservation Advice for <i>Balaenoptera borealis</i> (Sei Whale) Approved Conservation Advice for <i>Balaenoptera physalus</i> (Fin Whale) Approved Conservation Advice for <i>Megaptera novaeangliae</i> (Humpback Whale). <p>The Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>The activity is consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> the impacts associated with noise emissions do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained conservative assumptions have been applied to the impact assessment there are no identified health, diversity or productivity impacts that may affect the biodiversity or ecological function for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

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Given the infrequent nature and short duration of the IMR operations using survey equipment, the potential impacts are considered slight. Several controls have been evaluated above and adopted in accordance with the ALARP criteria (Section 7.5.4). The residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts are therefore acceptable and ALARP.

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7.6 Artificial Light Emissions (Risk ID P6)

7.6.1 Summary of Environmental Risk Assessment

Hazard	Artificial lighting on WHP, SPM and vessels		
	Likelihood	Severity	Risk
Inherent Risk	C	1	L
Residual Risk	B	1	L

7.6.2 Description of Hazard

7.6.2.1 WHP, SPM and vessels

Artificial lighting on the WHP and SPM will be required on a 24-hour basis for safety and navigational purposes in accordance with requirements of the *Navigation Act 2012* (Marine Order 30 – Prevention of collisions). Lighting on the WHP during normal ‘uncrewed’ operations is minimal, where only navigational and aviation warning lights are used. Lighting on the SPM is minimal, relating to navigational warning.

External lighting on the vessels is located on the decks, with most external lighting directed towards working areas, limiting the light spill area. Blacktip vessel operations are not constant within the Operational Area. Therefore, the light source from vessels is limited to specific periods such as:


- support vessel activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

When ROV is used (for example, during IMR activities – refer to Section 3.5.3), underwater lighting is generated over short periods while it is in use. Given the typical intensity of ROV lights and the attenuation of light in seawater, light will be highly localised to the vicinity of the ROV.

7.6.3 Potential Environmental Impact

Artificial light can be received by the environment in three ways, being:

1. directly visible light
2. skyglow – the diffuse scattering of light in the atmosphere above the horizon
3. light spill – the trespass of light outside the area intended, such as the sea surface.

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The characteristics of light emissions associated with sources from the Blacktip operations will differ depending upon the number, intensity, spectral output and type of light.

To inform the impact assessment, Eni has drawn upon artificial light modelling it previously commissioned for vessel activities in Australia (Pendoley Environmental, 2022). While this modelling is for a large construction vessel, it provided a useful proxy for light emissions from an offtake tanker (largest vessel associated with the Blacktip operations), given the comparable vessel sizes. Smaller vessels used during IMR will present significantly lower light emissions.

The modelling study (Pendoley Environmental, 2022) applied the ILLUMINA model (Aube *et al.*, 2005), which represents light across large areas and distances and across the entire visible spectrum and generates quantitative outputs relevant to assess the impacts of light on wildlife and the night sky. The model outputs in units of absolute radiance, $W/m^2/sr$, where W = Watts, m^2 = metres squared and sr = steradian. These units represent the intensity of direct, reflected and scattered (glow) light visible by an observer from a specific location, and considers light equally across the entire visible spectrum.

In the absence of published or generally accepted impact thresholds for evaluating the impact of artificial light on sensitive receptors, an approach based on presenting the light modelling outputs to the visibility of the full moon was used in the modelling.

As the full moon is the brightest natural light source visible within the region of the horizon, presenting modelling outputs as a proportion of full moon equivalent (FME) gives the model outputs some biological relevance for informing impact assessments for marine turtles. Impacts are assessed on a scale of the FME, with different FME ranges assigned an impact level and impact potential criteria that have been developed based on expert opinion (refer Table 7.10). Although the potential effects of artificial light on other marine fauna, such as seabirds or migratory shorebirds, is gaining more recognition, the vulnerability of individuals to negative impacts is highly species-specific and can vary depending on the life stage or behaviour being undertaken at the time (see Commonwealth of Australia (2020a) for review). Accordingly, while presenting radiance as a measure relative to that of a full moon is biological relevant to other marine taxa, potential impact criteria could not be defined (Pendoley Environmental, 2022).

Furthermore, the sensitivity of a hatchling turtle to directional light can be described by a specific 'cone of acceptance', which indicates a hatchling's field of view. This is defined by Lohmann *et al.* (1997) as 180° horizontally and 30° vertically. To understand potential impacts of modelled light emissions on hatchling behaviour, radiance was averaged over the brightest light source with this field of view (orientation field of view) and converted to FME.


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Table 7.10: Artificial light impact potential for marine turtles (Pendoley Environmental, 2022)

Impact level	FME ranges ¹	Impact potential criteria for marine turtles
4	10 to 100	Light or light glow visible and impact likely. Represents a very bright light, equivalent to up to 100 times the radiance of one moon. This light radiance will greatly override the moderating influence of the ambient full moon at the time of exposure.
3	1 to 10	Light or light glow visible and impact likely. Represents a bright light, equivalent to up to ten times the radiance of one moon. This light radiance will override the moderating influence of the ambient full moon at the time of exposure.
2	0.1 to 1	Light or light glow visible and behavioural impact possible, depending on ambient moon phase at the time of exposure, which will influence the visibility of the artificial light sources, equivalent to the light output. Artificial lights will be more visible to marine turtles under a first quarter moon than under a full moon.
1	0.01 to 0.1	Light or light glow visible but behavioural impact unlikely; as in, not biologically relevant. Equivalent to the light output from the first quarter moon to new moon.
NA	<0.01	Light or light glow is considered ambient and no impact expected. Equivalent to the light output from a new moon.


Note 1: Proportion of radiance of a full moon within orientation field of view, where 100 equals the radiance of one hundred full moons and 0.01 equals 100th the radiance of one full moon.

The distances at which the orientation field of view FME value is predicted to fall below 0.01 (ambient levels) is 16.2 km. Light is expected to be visible, but behavioural impacts to marine turtles unlikely, at distances beyond 5.2 km. Behavioural impacts to marine turtles are possible within 1.7km of the source (Table 7.11) (Pendoley Environmental, 2022).

Table 7.11: Summary of available artificial light modelling results for a pipelay vessel (Pendoley Environmental, 2022)

Impact Level	FME	Distance (m)
4	10 to 100	<540
3	1 to 10	540
2	0.1 to 1	1680
1	0.01 to 0.1	5210
NA	<0.01	>16,150

The impacts to the relevant receptors are described more in the following paragraphs.

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7.6.3.1 Marine Turtles

The Operational Area overlaps the BIA for green turtle (foraging) and olive ridley turtle (foraging) and a BIA for the flatback turtle (reproduction) is 8km from the Operational Area (Section 4.4.1). The nearest known marine turtle nesting sites (flatback) at the north side of Cape Domett and at Lacrosse Island and Pelican Island in the Cambridge Gulf (75km south of the WHP) and flatback turtle activity is reported at Yelcherr Beach (10km to the east of the SPM), in low numbers (Woodside, 2004). Light will not be visible from the nearest turtle nesting sites, except during offtakes from the SPM which occur two to three times per year (refer to Table 7.12).

The behavioural response of marine turtles to artificial light depends upon the life stage or behaviours being undertaken at the time and the characteristics of the light sources themselves.

Wavelength particularly has been shown to significantly affect the vulnerability of individuals to artificial light. In general, artificial light rich in short wavelength blue and green light are most disruptive (Fritches, 2012; Pendoley, 2005; Witherington, 1991). Although longer wavelengths of light are less attractive than shorter wavelengths, long wavelength light can still disrupt sea-finding of hatchlings (Robertson *et al.*, 2016; Pendoley, 2005; Pendoley & Kamrowski, 2015) and, if bright enough, can elicit a similar response to shorter wavelength light (Mrosovsky, 1972; Mrosovsky & Shettleworth, 1968; Cruz *et al.*, 2018). Red light must be almost 600 times more intense than blue light before green turtle hatchlings show an equal preference for the two colours (Mrosovsky, 1972).

Marine turtles may be exposed to different light types during different behaviours based on their distribution during these life stages. These are inferred from light modelling (Pendoley Environmental, 2022) and summarised in Table 7.12, with a more detailed impact assessment in the sections that follow. It should be noted light emissions at the SPM are very low and at a distance above the sea surface of approximately 10m, limiting light spill. Offtake vessel presence at the SPM is only for two to three times per year, as described in Section 3.5.5. The potential for visible light to be observed on the shoreline is expected to be limited to offtake vessel presence only.


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Table 7.12: Potential exposure of marine turtles undertaking different behaviours to light intensity at Impact Level 2 or higher, inferred from Pendoley Environmental, 2022

Behaviour	Potential for exposure to light at Impact Level ≥ 2 (behavioural response possible, as per Table 7.10)	
	WHP	SPM
Foraging and migration	Likely but in low numbers; no aggregations	Likely but in low numbers; no aggregations
Mating and internesting	Not expected; light may be visible, but impact unlikely	Not expected; light may be visible, but impact unlikely
Nesting and hatchling emergence	Not expected	Not expected; during offtakes light may be visible, but impact unlikely
Hatchling dispersal	Not expected	Not expected; during offtakes light may be visible, but impact unlikely


Foraging and migration

Foraging adult turtles have been observed feeding on prey presumed to be attracted by lights of oil production platforms in the Gulf of Mexico (Kebodeaux, 1994). However, fishing gear has been illuminated as a bycatch reduction measure as the light sources allow individuals to avoid the net (Ortiz *et al.*, 2016). This suggests marine turtles are most likely attracted to increased prey abundance around offshore facilities, rather than the light sources itself.

Although the Operational Area overlaps the BIAs for the green turtle (foraging) and olive ridley turtle (foraging) (Table 4.5), the number of individuals likely to be present is expected to be low.

A BIA for the flatback turtle (reproduction) is 8km from the Operational Area at the WHP (Section 4.4.1) and more than 50km at the SPM. Studies define suitable internesting habitat as areas of water shallower than 16m, which are typically within 5 to 10km of coastlines (Whittock *et al.*, 2016). Unsuitable internesting habitat was identified as water depths greater than 25m and greater than 27km from the coastline (Whittock *et al.*, 2016). Based on this information, the water depths at the WHP are not expected to be suitable internesting habitat for flatback turtles. Given the distance of the SPM from the BIA for the flatback turtle (reproduction) and the low level of flatback turtle activity in the area of Northern Yelcherr Beach and Injin Beach (10km to the east of the SPM) (refer Appendix B), impacts are not expected.

If individual adult turtles are present, light emissions are unlikely to be of concern. There is no evidence, published or anecdotal, to suggest internesting turtles are impacted by light from offshore vessels, and nothing in their biology would indicate this as a plausible threat (Witherington & Martin, 2003). Potential impacts to foraging turtles are limited to local attraction to prey species attracted to light (Kebodeaux, 1994). As such, the impact to adult marine turtles from light is anticipated to be slight and temporary.

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Nesting and hatchling emergence

The effects of artificial light on female nesting and hatchling emergence behaviour have been well documented, and include:


- disrupted nest site selection and orientation of females on the beach (Witherington & Martin, 2003)
- lower nesting density on beaches with significant light spill; for example, from urban development adjacent to nesting beaches (Salmon, 2003; Hu *et al.*, 2018)
- disrupted hatchling sea-finding behaviour (Withington & Martin, 2003; Pendoley & Kamrowski, 2015; Kamrowski *et al.*, 2014) resulting in:
 - disorientation – where hatchlings crawl on circuitous paths
 - misorientation – where hatchlings move in the wrong direction, possibly in the direction of artificial lights (Withington & Martin, 2003; Lohmann *et al.*, 1997; Salmon, 2003)
- hatchlings disoriented or misoriented by artificial lighting, such that they may take longer or fail to reach the sea. This may result in increased mortality through dehydration, predation or exhaustion (Salmon & Witherington, 1995).

Given the distance between light sources within the WHP and nesting beaches, nesting females and emerging hatchlings will not be impacted by these light sources (Table 7.10).

Low levels of flatback turtle activity have been recorded in the area of Northern Yelcherr Beach and Injin Beach (10km to the east of the SPM). Light modelling for a pipelay vessel (Pendoley Environmental, 2022) predicts artificial light would not reach beaches of this distance at an impact greater than Impact Level 2 (Table 7.11). Light may reach the beach as light glow during offtakes at the SPM only; however, considering the modelling, it is expected to be at ambient levels and impact criteria are not expected to be met. Behavioural impacts to any nesting females and emerging hatchlings are not expected.

Hatchling dispersal

Once hatchlings have traversed the beach after emerging from nests, they enter the ocean and disperse rapidly to avoid predation in predator-rich nearshore habitats, before reaching deeper waters where they develop into juveniles. As they traverse the beach, an internal compass, together with wave cues, guide hatchlings offshore to open ocean (Lohmann & Lohmann, 1992; Stapput & Wiltschko, 2005; Wilson *et al.*, 2021). The speed and direction of at-sea dispersal is substantially influenced by ocean currents. Tracking studies of flatback hatchlings at Thevenard Island found individuals were displaced by tidal currents at 100m from shore that ran parallel to the beach, an effect that increased as the hatchlings moved further offshore (Wilson *et al.*, 2018; 2019).

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Based on the light modelling undertaken for a pipelay vessel (Pendoley Environmental, 2022), hatchlings would need to be carried to within approximately 1.6km of the SPM during an offtake, for light intensities to be great enough to lead to possible attraction (Impact Level 2). For a more likely behavioural response, hatchlings would need to be carried to within 540m. Given the distance of the Operational Area to the nearest turtle nesting beaches (Northern Yelcherr Beach and Injin Beach, 10km to the east of the SPM), it is expected hatchlings will be well dispersed by ocean currents and densities will be low. Impact of lighting on hatchling dispersal is not anticipated.

Recovery Plan for Marine Turtles in Australia 2017–2027

The Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b) highlights artificial light as a threat to marine turtles. Specifically, the plan indicates artificial light may reduce the overall reproductive output of a stock, and therefore recovery of the species, by:

- inhibiting nesting by females
- disrupting hatchling orientation and sea-finding behaviour
- creating pools of light that attract swimming hatchlings and increase their risk of predation.

Given the Operational Area distance from nesting beaches, lighting is not anticipated to displace marine turtles from habitat critical or impact nesting adults and emerging and dispersing hatchlings. Light emissions may cause localised and temporary behavioural disturbance to transient individual marine turtles (as described in the above sections). Blacktip operations are not inconsistent with the actions and objectives within the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b) or the National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2023).

Appropriate controls have been considered (refer to Section 7.6.5), such as those within the National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2023), to reduce the impacts of light emissions to ALARP and acceptable levels.


7.6.3.2 Fish and Zooplankton

Fish and zooplankton may be directly or indirectly attracted to light. Light during night-time activities is likely to result in aggregations of fish around the vessels, as they are attracted to the light and increased food availability. While there is the potential for increased predation activity, the impact to fish and zooplankton from light is anticipated to be slight and temporary.

7.6.3.3 Sea Snakes

Sea snakes may also occur within the Operational Area and have been spotted by persons attending the WHP. While the direct effect of artificial light on sea snakes is largely unknown, they may experience indirect effects such as changes in predator-prey relationships and disorientation, attraction or repulsion.

Behavioural impacts to snakes from light emissions from the vessels are anticipated to be slight and temporary.

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7.6.3.4 Seabirds and Migratory Shorebirds

No BIAs for seabirds occur within the Operational Area. The nearest roosting areas are more than 75km away on the north Kimberley coastline (Section 4.4.1).

Artificial light can have a variety of effects on seabirds, depending upon the species and the life stage or behaviours being undertaken at the time. Negative responses of birds to artificial light may include collision, entrapment, stranding, grounding, disorientation or interference with navigation – being drawn off course from the usual migration route – potentially resulting in reduced fitness, injury or death (see Commonwealth of Australia, 2020a for review).

Species with a nocturnal component of their life history, such as procellariiformes (shearwaters, petrels and storm petrels), are at greater risk of negative impacts. The most significant impacts recorded, in terms of numbers of individuals impacted, have been associated with the synchronised mass exodus of procellariiform fledglings from nesting sites at night (Deppe *et al.*, 2017; Raine *et al.*, 2007; Rodriguez *et al.*, 2015a; Rodriguez *et al.*, 2015b; Le Corre *et al.*, 2002; Reed *et al.*, 1985).


No important nesting sites for procellariiform species are located within 500km of the Operational Area; therefore, impacts to breeding adults or fledgling procellariiforms are not expected.

Nocturnal foraging at sea is known to occur across the procellariiform order, with preferences for bioluminescent prey (Imber, 1975). This is likely linked to the vertical migration of prey in the water column; the greater abundance of prey closer to the sea surface under darkness enables more efficient foraging by birds compared to during daylight. While no foraging BIAs for procellariiforms overlap with or occur within 500km of the Operational Area, nocturnal seabirds, such as the streaked shearwater, may traverse the area and forage in low numbers (refer Table 4.4).

Attraction of procellariiforms to vessels and oil and gas facilities have been reported (Black, 2005; Merkel & Johansen, 2011; Montevecchi, 2006); however, interaction events are usually associated with weather conditions providing poor visibility, such as snow and fog. These conditions are not common within the region, suggesting any interaction between procellariiforms and the Blacktip offshore facilities would be limited to individuals rather than populations.

Diurnal seabird species, such as terns, noddies, frigatebirds and tropicbirds, in contrast to procellariiforms, are less vulnerable to impacts of artificial light, given the absence of nocturnal behaviours. However, the presence of facilities can alter foraging behaviours, potentially in response to aggregation of increased prey density around platforms – as described for fish above – or due to light sources artificially extending day length and foraging activities. Although such attraction increases the risk of collision with facilities, incidents of collision of these species or similar taxonomic groups are few (Ronconi *et al.*, 2015).

While these effects are unlikely to lead to negative impacts at the individual or population level, seabirds roosting on offshore platforms, as observed at the Blacktip WHP, can present safety risks.

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Artificial lighting has been shown to influence the foraging behaviour in shorebirds, with increased foraging success in areas illuminated by artificial light (Santos *et al.*, 2010). Although shorebirds may be attracted to foraging areas with increased illumination, artificial light near nocturnal roosting sites may displace shorebirds if they select darker roost areas, where risk of predation is perceived to be lower (Rogers *et al.*, 2006). Given the lack of natural roost sites or intertidal foraging areas in the vicinity of the Operational Area, artificial light is unlikely to impact these behaviours.

7.6.3.5 Marine Mammals

Direct effects of artificial lighting on marine mammals have not been reported. Since fish species may pool in areas of light spill, dolphins may be indirectly attracted to areas of increased light due to increased prey availability. Mammals use variations in the length of day to anticipate environmental changes and to time their reproduction. Therefore, light pollution that affects day length perception could lead to changes in biological functions. However, since marine mammals occurring within the region will be transient, such effects are not expected.

Behavioural impacts are expected to be limited to increased foraging in response to increased prey abundance around stationary light sources, with no anticipated impacts at the individual or population levels.

7.6.3.6 Protected Areas

Portions of the GEP and CEP lie within the Joseph Bonaparte Gulf AMP Multiple Use Zone (Table 3.4) and the SPM is in the AMP. The values of the AMP are presented in Table 4.9 and include natural, cultural, socio-economic and heritage. The values and sensitivities of the AMP are submerged (such as KEFs) or are described above (turtles). Lighting is not expected to cause an impact to other socio-economic receptors other than to act as a visual cue for avoiding the area by other marine users for safety purposes.

Appropriate controls have been evaluated and adopted to manage potential impacts and risks from light to the values and sensitivities of the Joseph Bonaparte Gulf AMP to ALARP and acceptable levels.


7.6.4 Environmental Performance Outcomes and Control Measures

EPOs relating to this risk include:

- No impacts to marine fauna greater than those described in Section 7.6.3 from the light emissions required for safe work and navigation (EPO-10).
- CMs relating to this risk include: Navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes) (CM-01)


EPSs and MC relating to the above are presented in Table 9.2.

The Blacktip operations lighting is managed in accordance with navigational and safety requirements (refer to Section 7.1.4).


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7.6.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate light sources on the WHP, SPM and vessels	Lighting levels cannot be reduced or eliminated as this would introduce navigational and occupational safety hazards and non-compliance with codes and regulations.	*
	No night-time operations	Eliminating light at night would restrict the activities requiring vessels to daytime hours, resulting in the activity taking approximately twice as long to complete. Given the low levels of lighting already on the vessels, there would be little or no environmental benefit.	*
Substitute	Adopt measures on the WHP, SPM or vessels designed to minimise lighting impacts on marine fauna, as per National Light Pollution Guidelines for Wildlife Management Actions (Commonwealth of Australia, 2023): <ul style="list-style-type: none"> Using non-reflective, dark-coloured surfaces (best practice design principle 5) 	Retrofitting non-reflective, dark-coloured surfaces on infrastructure as identified in the National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2023) would result in significant cost sacrifice and time expenditure. Given the distance of the Operational Area from the nearest nesting sites and the already slight impacts of lighting from the Blacktip operations, the cost of this measure grossly outweighs the environmental benefit.	*


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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
	Adopt measures on the WHP, SPM or vessels designed to minimise lighting impacts on marine fauna, as per National Light Pollution Guidelines for Wildlife Management Actions (Commonwealth of Australia, 2023): <ul style="list-style-type: none"> Replace some or all lights with reduced or filtered blue, violet and ultra-violet wavelengths (best practice design principle 6) 	Substituting external lighting for lights as identified in the National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2023) (e.g., lights with spectral output of longer wavelengths) would result in significant cost sacrifice and time expenditure. Given the distance of the Operational Area from the nearest nesting sites and the already slight impacts of lighting from the Blacktip operations, the cost of this measure grossly outweighs the environmental benefit.	*
Isolation	N/A	N/A	N/A
Administrative	Navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes)	Ensures the vessels and surface infrastructure (WHP and SPM) are seen by other marine users, thereby reducing risk of collisions. Unnecessary lighting is reduced.	✓ (CM-01, as a control in Section 7.1)
	Schedule offtakes at the SPM outside of turtle nesting seasons	Will eliminate the offtake tanker light source at the SPM during offtakes. However, offtakes are undertaken as operationally required and typically only occur two to three times per year. Restricting the offtakes to certain periods will delay the offtakes and condensate sale. Given the lighting is not anticipated to impact nesting turtles, the cost of this measure grossly outweighs the environmental benefit.	*


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7.6.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>Lighting from Blacktip operations is managed in accordance with relevant legislative requirements, including compliance with international maritime conventions and Australian legislation.</p> <p>Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).</p>
Policy compliance	<p>Management of lighting from the Blacktip operations is aligned with Eni policies and standards. The residual risk is Low, which is acceptable.</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>To date, no stakeholder concerns have been raised regarding light (refer to Section 5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>Eni has considered information in relevant recovery plans and approved conservation advice for cetaceans and marine turtles that identify artificial light emissions as a threat (as listed in Table 2.4). Management of artificial light emissions is aligned with guidelines, conservation advice, and recovery plans for threatened species, including:</p> <ul style="list-style-type: none"> National Light Pollution Guidelines for Wildlife including Marine Turtles, Seabirds and Migratory Shorebirds (Commonwealth of Australia, 2023) Recovery Plan for Marine Turtles in Australia 2017-2027 (Commonwealth of Australia, 2017b) Wildlife Conservation Plan for Seabirds (Commonwealth of Australia, 2020) EPBC Act Policy Statement 3.21 Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species (Commonwealth of Australia, 2017c). <p>Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice (Table 2.5).</p> <p>The evaluation of impacts and risks indicates significant impacts to MNES will not result from artificial light emissions.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer Section 4.5.1).</p>
ESD principles	<p>The activity is consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> the impacts associated with light emissions do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained conservative assumptions have been applied to the light impact assessment there are no identified health, diversity or productivity impacts that may affect the biodiversity or ecological function for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

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Given the distance of the Operational Area from the sensitive locations (e.g., turtle nesting beaches), the potential impacts are considered slight. Several controls have been evaluated above and adopted in accordance with the ALARP criteria (Section 7.6.5). The residual risk associated with light emissions is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts associated with light emission are therefore acceptable and ALARP.

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7.7 Grey Water, Sewage and Putrescibles Discharge (Risk ID P7)

7.7.1 Summary of Environmental Risk Assessment

Hazard	Grey water, black water and putrescible waste discharges		
	Likelihood	Severity	Risk
Inherent Risk	C	2	M
Residual Risk	A	2	L

7.7.2 Description of Hazard

Grey water and sewage as well as food wastes will be generated on-board the vessels; volumes will be directly proportional to the POB. The typical POB of the vessels used for Blacktip operations is 10 to 20. Based on information presented by National Energy Resources Australia (NERA, 2017), it is estimated 0.04 to 0.45m³ of sewage and greywater, per person per day, will be released to the marine environment during vessel operations. The volume of putrescible wastes varies depending on POB; however, approximately 1 to 2kg of wastes per day per person are predicted.

Blacktip vessel operations are not constant within the Operational Area. Therefore, the potential for the discharge from vessels is limited to specific periods such as:


- support vessel activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

Inbuilt toilet facilities are not included on the WHP as it is normally uncrewed. No sewage or putrescible waste is discharged from the WHP.

7.7.3 Potential Environmental Impact

The discharge of sewage and putrescible wastes may result in localised increase in nutrients in the marine environment, which can increase nutrient availability, algal growth and subsequently eutrophication (NERA, 2017). However, typically, this occurs in waters with little water movement or exchange. The mass of nutrients to be discharged in sewage each day is likely to be small and, given the open ocean environment, rapid dilution of the effluent is expected, resulting in highly localised effects (Black *et al.*, 1994). Eutrophication will not occur as the vessel operations are infrequent and in the open sea environment, with continuous water exchange driven by tidal currents.

Some fish and marine seabirds may be attracted to the vessel by the discharge of food waste. However, given the small quantities, intermittent nature of discharge and swift currents, any attraction is likely to be slight and is not anticipated to result in adverse impacts at an ecosystem or population level.

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Given the temporary (hours) and highly localised nature of the water quality change, as well as the transient nature of marine fauna, impacts from exposure to a reduction in water quality are not expected, but at worst, would be limited to behavioural change to a small number of individuals. Given the rapid dilution and dispersion of the discharge, any impact is anticipated to be slight and will not result in impacts at a population level.

7.7.4 Environmental Performance Outcomes and Control Measures


EPOs relating to this risk include:

- no discharges to sea of untreated sewage, greywater, putrescible wastes, bilge, and deck drainage (EPO-11).

CMs relating to this risk include:


- vessels comply with Marine Order 96 (Marine pollution prevention – sewage) (CM-14)
- vessels comply with Marine Order 95 (Marine pollution prevention – garbage) (CM-15).

EPSs and MC relating to the above are presented in Table 9.2.

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7.7.5 As Low as Reasonably Practicable Demonstration


Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
Eliminate	Eliminate discharge on vessels	<p>Generation of sewage, greywater and putrescible waste cannot be eliminated on the vessels, as storing the waste would present a safety issue (transport and handling).</p> <p>Transportation to shore was considered as an alternative to ocean discharge. However, this would be excessively costly and impractical due to the lack of storage capacity onboard the vessels and would result in increased vessel transits to provide ship-to-shore services. It also increases exposure to biological health hazards, and safety hazards such as bulk transfer and heavy lifting operations.</p> <p>This discharge is permitted under Marine Orders and is not anticipated to present significant environmental impact.</p>	*
Substitute	N/A	N/A	N/A
Engineering	Eliminate discharge on the WHP	Generation of sewage, greywater and putrescible waste was eliminated on the WHP during the design phase.	Already part of the WHP design
Isolation	N/A	N/A	N/A
Administrative	Implement measures in Marine Order 95 (Marine pollution prevention – garbage)	<p>Marine Order 95 reduces potential impacts of inappropriate discharge of sewage. Stipulates putrescible (food) waste disposal conditions and limitations.</p> <p>Environmental benefit outweighs the minor administrative costs in implementing the Marine Order.</p>	✓ (CM-15)
	Implement measures in Marine Order 96 (Marine pollution prevention – sewage)	<p>Marine Order 96 reduces the probability of garbage being discharged to the sea.</p> <p>Environmental benefit outweighs the minor administrative costs in implementing the Marine Order.</p>	✓ (CM-14)

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7.7.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>Discharges comply with the requirements of the <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i>, which in Australian waters reflects MARPOL, and is enacted by:</p> <ul style="list-style-type: none"> • Marine Order 95: Marine pollution prevention – garbage • Marine Order 96: Marine pollution prevention – sewage. <p>Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).</p>
Policy compliance	<p>Management of the discharge is aligned with Eni policies and standards. The residual risk is Low, which is acceptable.</p> <p>The EPO and the controls that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>To date, no stakeholder concerns have been raised regarding discharges (refer to Section 5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>There are no resident sensitive water column environmental receptors in the Operational Area. The volumes of putrescible waste discharged will be small and will be rapidly broken down and consumed.</p> <p>Wastewater discharge has not been identified as a threat in any recovery plans or conservation advice for threatened and migratory species. However, Eni has considered information in relevant recovery plans and approved conservation advice for cetaceans and marine turtles that identify chemical discharges and pollution as a threat (as listed in Table 2.4). Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>The evaluation of impacts and risks indicates significant impacts to MNES will not result from the discharges.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>Blacktip operations are consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> • the impacts associated with the discharge do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained • there are no identified health, diversity or productivity impacts that may affect the biodiversity or ecological function for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

Given the infrequent nature and short duration of the vessel operations (and no WHP discharge) in the Operational Area, the potential impacts associated with discharge of sewage, greywater and putrescible wastes are slight. Several controls have been evaluated above and adopted in accordance with the ALARP criteria (Section 6.3.1). The residual risk is low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Therefore, the potential impacts associated with discharge of sewage, greywater and putrescible wastes are acceptable and ALARP.

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7.8 Discharge of Contaminated Water (Risk ID P8)

7.8.1 Summary of Environmental Risk Assessment

Hazard	Discharge of oily water		
	Likelihood	Severity	Risk
Inherent Risk	C	1	L
Residual Risk	B	1	L

7.8.2 Description of Hazard

As presented in Section 3.4.1, the WHP has an open drains system to collect rainwater and chemical spills. The open drains are fed from drip pans to the open drains' header, which feeds down to a hose connection point at the boat landing which then can be connected to a small portable container or via a hose to the slops tank. Any chemical spills on the WHP (during chemical filling activities) are drained via a bunker hose to an ISO container located on a vessel or lower-deck laydown area and returned to shore for disposal. The WHP also uses grated floors to minimise the accumulation of rainwater.

On the vessels, under normal operating conditions, scupper plugs are fitted at open deck drainage points to direct drainage to the bilge water tank for processing. However, if clean water builds up after, for example, heavy rain, these plugs are manually removed, allowing the clean water to drain to sea.


Bilge water is generated on vessels and consists of deck drainage and machinery space water that has been directed to a bilge water tank. Sources of contamination include chemical spills on deck. Bilge water is diverted to a holding tank either for onshore disposal at an appropriately licenced facility, or for discharge with an oil content of less than 15 parts per million (ppm) in accordance with Marine Order 91.

Cooling water is used as a heat exchange medium for cooling machinery engines on vessels. Seawater is drawn from the ocean and flows counter-current through closed-circuit heat exchangers, transferring heat engines and machinery to the seawater. The seawater is then discharged to the ocean. Cooling water temperatures vary, depending on the vessel engine's workload and activity, however, may be in the vicinity of 32°C.

Blacktip vessel operations are not constant within the Operational Area. Therefore, the potential for the discharges from vessels is limited to specific periods such as:

- support vessel activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

Residual quantities of condensate may be in the GEP which can only be discharged during pipeline cutting, in the highly unlikely circumstance a section of GEP needs to be replaced (refer Table 3.11).

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As described in Section 3.5.7, to manage build up of bird guano, particularly during the dry season, maintenance campaigns are preceded by a WHP cleaning program lasting between 1 and 2 days where the upper decks are washed of bird guano using freshwater in preparation for the longer planned maintenance campaigns

7.8.3 Potential Environmental Impact

The environmental impacts associated with an oily water discharge are likely to be highly localised and temporary, due to the low volumes and the high dilution rates expected at the open ocean environment of the Operational Area (Black *et al.*, 1994). Hinwood *et al.* (1994) predicted dilution factors more than 10,000m within 100m of the discharge point.

Cooling water will remain in the surface layer, where turbulent mixing and heat transfer with surrounding waters will occur. This will cause a temporary and highly localised increase in water temperature. Given the temperature of the discharge is subject to strong currents, the impact of cooling water discharges is considered to be a slight, temporary and localised change in water quality.

Residual quantities of condensate that could be discharged during a pipeline replacement activity will quickly disperse in the marine environment, particularly given the high current and wave energy in the region.

Discharges of freshwater containing guano to the ocean are expected to result in highly localised and temporary impacts, including the possibility of a short term and highly localised turbidity plume that is expected to disperse rapidly. Given this, and that guano washing on the WHP is expected to occur very infrequently (2 to 6 times a year), any potential impacts are expected to be slight.

Given the temporary (hours) and highly localised nature of the water quality change, as well as the transient nature of marine fauna, impacts from exposure to a reduction in water quality are not expected, but at worst, would be limited to behavioural change in a small number of individuals. Given the rapid dilution and dispersion of the discharge, any impact is anticipated to be slight and will not result in impacts at a population level.

7.8.4 Environmental Performance Outcomes and Control Measures


EPOs relating to this risk include:

- no unplanned discharge of oily water or chemicals (EPO-12).

CMs relating to this risk include:


- vessels comply with Marine Order 91 (Marine pollution prevention – oil) (CM-16).

EPSs and MC relating to the above are presented in Table 9.2.

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7.8.5 As Low as Reasonably Practicable Demonstration


Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate contaminated water discharge on vessels	Eliminating the discharge would mean storing the liquids on the vessels. Storage space required for containment and an increase in transfers to shore for disposal would be required. Increased transfers result in increased fuel usage and increased safety risks.	✘
	Do not clean guano prior to WHP campaigns	Guano poses a HSE risk to WHP campaign personnel and can be corrosive to steel structures. Therefore, to provide a safe working environment, guano cleaning of the WHP using freshwater may be required prior to these campaigns.	✘
Substitute	N/A	N/A	N/A
Engineering	Equip vessels with oily water prevention system and IMO approved oil filtering equipment	Reduces potential impacts of planned discharge of oily water to the environment, with minor administrative and maintenance cost.	✓ (Through compliance with Marine Order 91)
	Continually plug the deck drains on vessels to prevent deck drainage	Would eliminate potential impacts of contaminants being discharged to sea from deck water; however, would present increased health and safety risks from wet deck, and water on a vessel deck can also cause stability issues. Storage space required for containing drained liquids increases transfers to vessels, resulting in increased potential impacts and risks.	✘
	Capture contaminated water on WHP	Chemical spills on the WHP are captured via the open drains system. The WHP is designed in a way that the chemical spills and such on the WHP (during chemical filling activities) are drained via a bunker hose to an ISO container and returned to shore via vessel.	Already part of WHP design

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Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
Isolation	Capture contaminated waters or bilge water	Fixed equipment, such as engines and generators, are contained and captured in the bilge water tank for treatment via the oil-in-water (OIW) separator (on vessels) in compliance with Marine Order 91.	✓ (Through compliance with Marine Order 91)
Administrative	Vessels comply with Marine Order 91: Marine pollution prevention – oil	Marine Order 91 stipulates the oily water prevention system and treatment requirements for OIW discharge from vessels. Environmental benefit outweighs the minor administrative costs in implementing the Marine Order.	✓ (CM-16)

7.8.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	Discharges comply with the requirements of the <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i> , which in Australian waters reflects MARPOL, and is enacted by: <ul style="list-style-type: none"> Marine Order 91: Marine pollution prevention – oil. Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).
Policy compliance	Management of the discharge is aligned with Eni policies and standards. The residual risk is Low, which is acceptable. The EPO and the controls that will be implemented are consistent with Eni internal requirements.
Social acceptability	To date, no stakeholder concerns have been raised regarding discharges (refer to Section 5). An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.

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Area sensitivity/ biodiversity	<p>There are no resident sensitive water column environmental receptors in the Operational Area. The volumes of putrescible waste discharged will be small and will be rapidly broken down and consumed.</p> <p>Wastewater discharge has not been identified as a threat in any recovery plans or conservation advice for threatened and migratory species. However, Eni has considered information in relevant recovery plans and approved conservation advice for cetaceans and marine turtles that identify chemical discharges and pollution as a threat (as listed in Table 2.4). Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>The evaluation of impacts and risks indicates significant impacts to MNES will not result from the discharges.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>Blacktip operations are consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> the impacts associated with the discharge do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained there are no identified health, diversity or productivity impacts that may affect the biodiversity or ecological function for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

Given the infrequent nature and short duration of the vessel operations, the potential impacts associated with discharge of contaminated water are slight. A number of controls have been evaluated above and adopted in accordance with the ALARP criteria (Section 6.3.1). The residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Therefore, the potential impacts associated with discharge of contaminated water are acceptable and ALARP.


7.9 Seabed Disturbance (Risk ID P9)

7.9.1 Summary of Environmental Risk Assessment

Hazard	Seabed disturbance		
	Likelihood	Severity	Risk
Inherent Risk	B	1	L
Residual Risk	A	1	L

7.9.2 Description of Hazard

As described in Table 3.11, replacement or maintenance of the GEP are not planned over the life of this EP, however, may be required based on results of pipeline inspections and surveys or damage to the pipeline. Most seabed disturbance relating to these activities would be limited to small areas along the GEP. Seabed disturbance from sediment relocation may also be required to access subsea infrastructure during replacement.

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Although highly unlikely, a section of the GEP could require replacement if damaged during operations. Typically, pipe lift frames are deployed next to the GEP section requiring replacement, resulting in a disturbance footprint of approximately 200m², including the working area on the seabed and the area directly under the replaced GEP section, all within proximity to the GEP section to be replaced.

Pipeline freespan repair, as described in Table 3.11, may be required to rectify areas of free span or instability identified along the GEP. However, this is not planned. The exact details and requirements are determined after inspection and surveys. Typically, stabilisation materials such as concrete mattresses and grout bags are positioned at the identified free span locations by using ROV. The degree of span will influence the area of disturbance. In the event of a concrete mattresses being laid, a disturbance footprint of 36m² may occur per mattress (12m by 3m mattress).

The presence of the GEP and CEP on the seabed can interact with surrounding hydrodynamic conditions, potentially resulting in disturbance to the seabed (scouring). Disturbance associated with localised lateral movement or scouring of the GEP or CEP is expected to only occur in cyclonic and storm events.

During ROV campaigns there may be instances where placement on the seafloor is required during IMR, as described in Table 3.11. The ROV has potential to impact an area of 4.25m² when stationed on seafloor. ROV use is infrequent during Blacktip operations.

Table 7.13 summarises typical seabed disturbance footprints.

Table 7.13: Summary of typical seabed disturbance footprints


Activity	Typical footprint (m ³)
Use of ROV (placed on seabed)	4.25
Freespan rectification	36
Pipeline repair	2
Pipeline section replacement	200

7.9.3 Potential Environmental Impact

The Operational Area is within areas of Joseph Bonaparte infaunal plains (Przeslawski & Nichol, 2012), which is identified by flat, soft substrate with occasional rocky outcrops, scattered epifauna, and biota dominated by infauna (Section 4.2). Previous surveys at the WHP and along the GEP have not identified any sensitive seabed habitats. Sediments are predominantly very soft, grey-green, gravelly sand clays (Woodside, 2004).

The seabed disturbance would occur in localised areas in proximity of the infrastructure or GEP and usually over areas of previous disturbance (e.g., within the GEP corridor). The extent of the impact to benthic habits is predicted for a duration of up to months to years while the small area of disturbance recolonises.

Sediment mobilisation may also occur during the pipeline repair or section replacement, resulting in localised decline in water quality and local smothering effects to local benthic infauna in proximity of the disturbance.

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Given the localised disturbance and lack of sensitive habitat within the Operational Area, impacts to the seabed are considered slight and highly localised. Impacts to transient marine fauna from exposure to a reduction in water quality as a result of any sediment mobilisation are not expected.

Eni has considered information in relevant recovery plans and approved conservation advice that identify habitat modification as a potential threat. This includes the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b), which relates to habitat degradation and modification. Given the low level of seabed disturbance and the benthic habitats over the Operational Area being well represented in the wider surrounds, the activities are not inconsistent with the recovery plans and conservation advice.

Portions of the GEP and CEP lie within the Joseph Bonaparte Gulf AMP Multiple Use Zone (Table 3.4) and the SPM is in the AMP. The values of the AMP are presented in Table 4.9 and include natural, cultural, socio-economic and heritage. Given the highly localised areas of seabed disturbance, no impact is anticipated on the values and sensitivities of the AMP. In addition, previous surveys at the WHP along the GEP have not identified any sensitive seabed habitats of key natural features (Woodside, 2004).

Eni has considered the objectives of the North Marine Park Network Management Plan (DNP, 2018a) and the IUCN principles of the zones of the marine park (refer to Table 4.9). The Blacktip operations are not inconsistent with the IUCN principles and North Marine Parks Network Management Plan objectives.

7.9.4 Environmental Performance Outcomes and Control Measures

EPOs relating to this risk include:

- seabed disturbance limited to planned activities and defined locations within the Operational Area (EPO-13).


CMs relating to this risk include:

- consultation with relevant persons, including ongoing consultation and notification (CM-04).


EPSs and MC relating to the above are presented in Table 9.2.

7.9.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
Eliminate	Eliminate ROV use	ROV use is required to maintain the Blacktip operations.	*

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Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
	Eliminate GEP and repair activities	Span rectification and stabilisation activities are required for safe operation of the GEP and cannot be eliminated. Rectification activities are undertaken on identified scour and infrastructure movement. Span rectification and stabilisation activities will further limit seabed disturbance from scour. Eliminating span rectification and stabilisation may result in more severe environmental impacts (such as a hydrocarbon leak) and compromising of safety requirements.	✘
Substitute	Use divers instead of ROVs for IMR activities	ROV use is required to maintain the Blacktip operations. Diver use presents a higher safety risk. The minor disturbance to the seabed from ROV use does not outweigh the safety risks to divers.	✘
Engineering	N/A	N/A	N/A
Isolation	N/A	N/A	N/A
Administrative	Monitor seabed and benthic habitats surrounding subsea infrastructure	Some limited environmental benefit (such as information only) from monitoring benthic habitat. However, costs are associated with collecting and reviewing footage. Footage may be interpreted opportunistically.	✘
	Consult with relevant persons (refer to Section 5)	Enables identification of potential Sea Country protection and enhancement initiatives, and implementation where practicable. Notification is made to DNP approximately 10 days before IMR in the AMP and at the end of IMR activities.	✓ (CM-04)

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7.9.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).
Policy compliance	<p>Management of physical presence of the Blacktip operations is aligned with Eni policies and standards. The residual risk is Low, which is acceptable.</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>To date, no stakeholder concerns have been raised regarding planned seabed disturbance (refer to Section 5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>Benthic fauna and seabed in in the Operational Area are widely represented in the region.</p> <p>Planned seabed disturbance has not been identified as a threat to any threatened and migratory species. However, Eni has considered information in relevant recovery plans and approved conservation advice that identify habitat degradation as a threat (as listed in Table 2.4). The Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>The activity is consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> the impacts associated with seabed disturbance do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained conservative assumptions on scale of impact have been applied and while there is a rigorous understanding of the environment, further studies are planned to increase confidence in the assessment.
ALARP	The residual risk has been demonstrated to be ALARP.

Given the highly localised and infrequent non-routine seabed disturbance, the potential impacts are considered to be slight. The residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts associated with seabed disturbance are acceptable and ALARP.

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8 ENVIRONMENTAL RISK ASSESSMENT – UNPLANNED EVENTS

8.1 Loss of Solid Wastes (ID U1)

8.1.1 Summary of Environmental Risk Assessment

Hazard	Loss of solid waste		
	Likelihood	Severity	Risk
Inherent Risk	B	2	L
Residual Risk	A	2	L

8.1.2 Description of Hazard

Solid waste materials with the potential to be accidentally lost from vessels or the WHP to the marine environment include:


- non-hazardous solid wastes, such as paper, plastics and packaging
- hazardous solid wastes, such as paints, hydrocarbon-contaminated materials, batteries, fluorescent tubes, medical wastes and aerosol cans
- equipment and materials, such as hard hats and tools or supplies backloaded to support vessels.

Non-hazardous, hazardous and smaller items may be accidentally lost as a result of human error, incorrect or inappropriate waste storage, mechanical failure or breakdown of equipment, or dropped objects. Based on industry experience, the most common solid materials accidentally lost include articles of personal protective equipment, such as hard hats or gloves, and small tools or equipment that may be dropped by vessel personnel.

Blacktip vessel operations are not constant within the Operational Area. Therefore, the risk from vessels is limited to specific periods such as:

- support vessel activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

No solid wastes are stored on the WHP or SPM, reducing any loss potential to periods of visits (as detailed in Table 3.11).

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8.1.3 Potential Environmental Impact

Water quality will temporally change due to the constituents of accidentally lost hazardous material leaching into the marine environment. The level of impact to water quality depends on the nature of the hazardous materials lost, which are typically residual volumes (less than 1 m³) of waste such as residual paint in cans or oily rags. Due to wave action and metocean currents, minor releases of residual hazardous material will rapidly disperse and dilute local to the release, resulting in temporary and highly localised changes to water quality. Non-hazardous material is inert; however, may result in impact to marine fauna from ingestion or entanglement, which are assessed further below.


Impacts from a change in water quality to marine fauna, such as fish, marine mammals and marine reptiles, are not anticipated, given the localised nature of the water quality change and the transient nature of these species.

An accidental loss of solid material may impact marine fauna through ingestion of, and entanglement with, waste. Marine fauna that ingest or become entangled in solid materials – particularly floating, non-biodegradable marine debris such as plastic – may be subject to physical harm that limits or inhibits physiological processes, potentially resulting in fauna fatality. Loss of plastics is of particular concern to seabirds and marine turtles. Wilcox *et al.* (2015) note foraging seabirds ingesting plastics may be subject to gut obstruction or reduced stomach volume, resulting in a loss of fitness. Turtles have been known to ingest plastics when mistaking it for food sources, such as jellyfish (Mrosovsky *et al.*, 2009). It is recognised fishing gear – ropes and nets made from synthetic fibres – balloons and plastic bags are the biggest entanglement threat to marine fauna, and plastic bags and utensils are the biggest ingestion risk for seabirds, turtles and marine mammals (Wilcox *et al.*, 2016, cited in Commonwealth of Australia, 2018).

While marine mammals may be in the Operational Area (Section 4.4), no BIAs overlap (refer to Section 4.4.1). It is not anticipated species will be present in significant numbers and, if present, would only be in the vicinity for short periods of time; for example, transiting through the area. Potential impacts to marine mammals either entangling or ingesting lost plastics will be limited to a small number of individuals. Any impact is anticipated to be minor and will not result in impacts at a population level.

The Operational Area overlaps the foraging BIA for green turtle and the foraging BIA for olive ridley turtle (refer Table 4.5). However, it is expected these species will be transiting or foraging for short periods only and are not likely to be resident or occur in the area in significant numbers.

Marine turtles foraging within the region may consume plastics accidentally released into the marine environment. As outlined, this may result in impacts such as injury or mortality. However, based on Eni experience with operating other offshore facilities, loss of solid materials such as plastics to the marine environment is an uncommon event. Any materials lost are also recovered rapidly when safe and practicable to do so. In the event any material is lost and unable to be recovered, the amount of plastic released to the marine environment will be very low. Potential impacts to marine turtles either entangling or ingesting lost plastics will be limited to a small number of individuals. Any impact is anticipated to be minor and will not result in impacts at a population level.

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Non-buoyant dropped objects will sink to the seabed within the Operational Area. Dropped objects that sink could impact benthic invertebrates. While soft sediment benthic habits will not be destroyed, disturbance of the communities on and within them (epifauna and infauna) will occur in the event of a dropped object, and depressions may remain on the seabed for some time after removing the dropped object, as it gradually infills over time. Any impact from sunken waste material is likely to be minor and highly localised to a small area of seabed within the Operational Area.

Under the EPBC Act, injury or fatality of vertebrate marine life as a result of entanglement or ingestion of marine debris is listed as a key threatening process. The Threat Abatement Plan for the Impacts of Marine Debris on the Vertebrate Wildlife of Australia's Coasts and Oceans (Commonwealth of Australia, 2018) identifies EPBC Act listed species that have been scientifically documented as being sensitive to interactions with marine debris (Commonwealth of Australia, 2018). The Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b) identifies ingestion of marine debris as a threat to all species of marine turtles. Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.

8.1.3.1 Protected Areas

Portions of the GEP and CEP lie within the Joseph Bonaparte Gulf AMP Multiple Use Zone (Table 3.4) and the SPM is in the AMP. The values of the AMP are presented in Table 4.9 and include natural, cultural, socio-economic and heritage. Blacktip operations are not inconsistent with the IUCN principles and North Marine Parks Network Management Plan objectives (refer to Table 4.9). Accidental loss of solid material is unlikely to impact the values of the Joseph Bonaparte Gulf AMP; any impact is anticipated to be slight, given the minor quantities of waste that could be lost.

8.1.4 Environmental Performance Outcome and Control Measures

EPOs relating to this risk include:


- no unplanned objects, emissions or discharges to sea or air (EPO-05).

CMs relating to this risk include:

- hazardous and non-hazardous waste management processes (CM-17)
- lifting operations standard (ENI HSE ST 007) (CM-18).


EPSs and MC relating to the above are presented in Table 9.2.

Monitoring and reporting of wastes are presented in Section 10.8.

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8.1.5 As Low as Reasonably Practicable Demonstration


Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate production of non-hazardous and hazardous waste	Eliminates the risk of releasing wastes to the marine environment. Use of vessels (which generate waste) and consumables is required to perform the Blacktip operations; therefore, risk cannot be eliminated.	*
Substitute	N/A	N/A	N/A
Engineering	N/A	N/A	N/A
Isolation	Hazardous and non-hazardous processes (waste segregated in accordance with Marine Order 95)	Securely segregating and isolating the hazardous and non-hazardous waste in accordance with Marine Order 95 will reduce the likelihood of it being lost to the marine environment. Minor cost involved in segregating the hazardous and non-hazardous waste on vessels.	✓ (CM-17)
Administrative	Lifting operations standard on the WHP	Details processes to reduce the risk of dropped objects, including: <ul style="list-style-type: none"> competency of persons undertaking lift planning and preparation process for undertaking lifts. Reducing the risk of dropped wastes and solids outweighs the personnel cost associated with implementing the standard.	✓ (CM-18)

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8.1.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>Waste management complies with the requirements of Marine Order 95, particularly Regulations 6.1 and 6.4.</p> <p>Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180). Condition 2 of EPBC 2003/1180 relates to collecting, handling and disposing of naturally occurring radioactive material. To date, Eni has only detected very low levels of radiation in pigging waste (collected at YGP), where safety measures are not required; therefore, the waste is exempt from regulatory control for radiation protection purposes and is disposed of as per non-radioactive waste.</p>
Policy compliance	<p>Management of solids waste risks is aligned with Eni policies and standards. The residual risk is Low, which is acceptable (refer Table 6.5).</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>To date, no stakeholder concerns have been raised regarding unplanned loss of solid wastes (refer to Section 5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>Eni has considered information in relevant recovery plans and approved conservation advice (as listed in Table 2.3). This includes the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b) and the Threat Abatement Plan for the Impacts of Marine Debris on the Vertebrate Wildlife of Australia’s Coasts and Oceans (Commonwealth of Australia, 2018).</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>The risks of this unplanned event are consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> • the impacts associated with unplanned loss of solid material do not result in ‘threats of serious or irreversible harm’, as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained • conservative assumptions on scale of impact have been applied • the health, diversity and productivity of the environment will be maintained, including for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

Given the infrequent nature and short duration of the vessel operations for IMR and the minor quantities of material that could be lost to the marine environment, residual risk is considered low, which is acceptable in accordance with Eni’s acceptability criteria (Table 6.5). Potential impacts are acceptable and ALARP.

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8.2 Marine Fauna Interaction (ID U2)

8.2.1 Summary of Environmental Risk Assessment

Hazard	Marine fauna interaction		
	Frequency	Severity	Risk
Inherent Risk	B	2	L
Residual Risk	A	2	L

8.2.2 Description of Hazard

There is the potential for vessels to collide with marine fauna, including cetaceans, fish and marine reptiles. There is also the potential for helicopters to collide with seabirds. The main collision risk associated with Blacktip vessel operations is through vessel collision with large, slow-moving cetaceans, potentially resulting in severe injury or mortality.

Blacktip vessel and helicopter operations are not constant within the Operational Area. Therefore, the risk from vessels and helicopters is limited to specific periods such as:

- support vessel and helicopter activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

The WHP and SPM are not considered to pose a collision risk to marine fauna due to their fixed position.


8.2.3 Potential Environmental Impact

8.2.3.1 Marine Mammals

Marine mammals spend much of their life at or near the sea surface when breathing, making them susceptible to vessel strikes caused by moving vessels. Large, slow-moving cetaceans are most at risk of vessel collisions; the probability and consequence of a vessel strike between a vessel and cetacean is proportionate to the speed by which the vessel is travelling. It has been found a lethal injury from a vessel strike to a large whale will increase by 20% at 8.6 knots to 80% at 15 knots (Vanderlaan & Taggart, 2007). Similarly, an increase in vessel numbers increases the likelihood of strike (Silber & Bettridge, 2012).

As presented in the National Strategy for Mitigating Vessel Strike of Marine Megafauna 2017 (Commonwealth of Australia, 2017a), most of the reported vessel collisions for whales in Australian waters between 1990 and 2015 have occurred along eastern or south-eastern Australia, with no reported incidences in NT waters (Commonwealth of Australia, 2017a).

Cetaceans may demonstrate a variety of behaviours in response to approaching vessels (attributed to vessel noise), including longer dive times and moving away from the vessel's path with increased speed. These behaviours can contribute to reducing the likelihood of a vessel strike.

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While marine mammals may be within the Operational Area (Section 4.4), the area is 430km from the pygmy blue migration BIA and 370km from the humpback reproduction BIA (refer to Table 4.5). It is not anticipated marine mammal species will be present in significant numbers and, if present, would only be in the vicinity for short periods of time; for example, transiting through the area.

The worst potential impact from vessel collision would be mortality or serious injury for an individual. Vessels undertaking activities in the Operational Area will typically move slowly; therefore, the potential of collision with marine mammals is considered unlikely. Considering there are no regionally-significant feeding, breeding or aggregation areas for marine mammals in the Operational Area, impacts are likely to be limited to individuals only. Any impact is anticipated to be minor and will not result in impacts at a population level.

8.2.3.2 Marine Turtles

Turtles are vulnerable to vessel strikes as they surface to breathe, bask near the surface, or forage in shallow areas or on prey near the sea surface. Adult sea turtles are at increased risk during breeding and nesting season.


The Operational Area overlaps with the BIA for green turtle (foraging) and olive ridley turtle (foraging), and a BIA for the flatback turtle (reproduction) is 8km from the Operational Area (Table 4.5). However, considering the water depths of the Operational Area, it is expected these species will be transiting or foraging for short periods only and are not likely to be resident or occur in the area in significant numbers.

Turtles may exhibit avoidance behaviour in response to vessel presence, which generally decreases the risk of vessel collision. Marine turtles on the sea surface have been observed avoiding approaching vessels by typically moving away from the vessel's track (Hazel *et al.*, 2007). However, individual species' ability to flee is proportionate to the speed at which the vessel is moving. Vessels undertaking activities in the Operational Area will typically move slowly, and marine turtles would be expected to show some avoidance to vessels.

Marine turtle mortality due to vessel strike has been identified as an issue in Queensland waters in the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b). However, turtles appear to be more vulnerable to boat strike in areas of high urban population, where incidents of pleasure crafts are higher. Vessel strikes, as a standalone threat, have not been shown to cause declines at a population or stock level in the NT (Commonwealth of Australia, 2017b). Blacktip operations are not inconsistent with the objectives and actions detailed in the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b).

8.2.3.3 Seabirds and Migratory Shorebirds

As described in Section 3.5.7, there is potential for bird strike involving the helicopter and migratory bird species such as the crested tern and brown booby, along with other roosting seabirds species. However, these birds are expected to seek alternative roosting areas during pre-campaign cleaning activities and during maintenance campaigns (Section 3.5.3).

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Approximately 100 migratory crested tern (*Thalasseus bergii*) are roosting on the WHP helideck, main deck and crane. Approximately 10 – 20 brown booby (*Sula leucogaster*) are roosting on the boat landing. No birds roost on the WHP mezzanine deck, cellar deck or sub cellar deck. Crested tern and brown booby are a listed species but not threatened and are not covered by species-specific management plans.

The birds were originally observed to be roosting during dry season and would leave during the wet season. However, in recent years they have been found occupying the WHP outside of the dry season. There has not been any recorded nesting on the WHP.

Crested tern are widely distributed around NT coastlines and islands and are present all year round. There are at least five islands in the NT supporting colonies of more than 30,000 nesting birds each year (Chatto 2001). Chatto (2001) documented the location and status of seabirds along the NT coastline, offshore islands and Top End floodplains. The crested tern was clearly the dominant seabird species in terms of the number of places they were seen and their total numbers. The species tended to be seen at daytime roosts of groups that number from a few birds through to many hundreds. Giuliano and Guinea (2015) have noted colonies of greater than 1,000 crested tern on sandbanks in Fog Bay, approximately 250km north east of the WHP.

Brown boobies have been recorded around most of the NT coast all year, although are rarely seen in large numbers. Most records and the largest numbers have been seen off the NT coast in the northern Gulf of Carpentaria area (Chatto, 2001). Other species of migratory birds have not been observed roosting on the WHP, however it is possible species may visit the WHP, these species are listed in Table 4.4.

During pre-campaign cleaning activities, these seabirds are expected to seek alternate roosting locations. Given the infrequency of these campaigns (2 to 6 times per year, Section 3.5.3), impacts to birds from these activities are expected to result in an impact not greater than short-term and localised.

Helicopter movements have the potential to impact birds through bird strike, however given the high visibility and noise levels associated with helicopters, birds are expected to avoid collisions with helicopters. Helicopter use of the WHP is infrequent, with only 2 to 6 maintenance campaigns expected per year. Therefore, impacts to birds from helicopter usages are expected to result in an impact not greater than short-term and localised.

8.2.4 Environmental Performance Outcome and Control Measures


EPOs relating to this risk include:

- no injury or mortality to EPBC Act listed fauna during operational activities (EPO-09).

CMs relating to this risk include:


- regulations and measures for interacting with marine fauna (CM-13)
- seabird management training (CM-19)

EPSs and MC relating to the above are presented in Table 9.2.

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8.2.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate vessel use	The risk associated with using helicopters and vessels cannot be eliminated. Elimination of helicopters and vessels would mean the Blacktip operations cannot be completed.	*
Substitute	N/A	N/A	N/A
Isolation	N/A	N/A	N/A
Administrative	Regulations and measures for interacting with marine fauna (e.g., EPBC Regulations 8 (Part 8))	Minor cost in complying. Reduces risk of physical and behavioural impacts to marine fauna. EPBC Regulations include restrictions such as vessel speed and direction when in proximity to marine fauna and are based on legislated requirements.	✓ (CM-13)
	Seabird management training	Minor costs associated with training personnel in methods of counting seabirds, species identification, capture and handling and reporting requirements, as described in Section 10.3.1.	✓ (CM-19)
	Use a dedicated marine fauna observer on vessels to spot marine fauna	May improve the ability to spot and identify marine fauna at risk of impact from noise. However, the high cost of contracting marine fauna observers is grossly disproportionate to the low risk (refer to Section 8.2.3) on marine fauna.	*
	Use spotter planes to identify marine fauna in the region	Improves ability to spot and identify marine fauna at risk of collision. However, costs involved with implementing a dedicated marine fauna observer is grossly disproportional to the environmental benefit, given the low risk (refer to Section 8.2.3).	*
	Schedule vessel and helicopter activity outside of sensitive period for marine fauna	The timing of the activities is subject to operational requirements and weather conditions. Given the low risk to marine fauna in the region, rescheduling the vessel and helicopter activity outside of the sensitive period for marine fauna will not result in significant environmental benefit.	*

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8.2.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>Vessel and helicopters will comply with EPBC Regulations 2000 – Part 8 (Interacting with cetaceans) and the Australian National Guidelines for Whale and Dolphin Watching 2017 (Commonwealth of Australia, 2017d). Specifically:</p> <ul style="list-style-type: none"> vessels will comply with EPBC Regulations 2000- Part 8 Division 8.1 (Interacting with cetaceans) helicopters will comply with EPBC Regulations 2000 – Part 8 Division 8.3 (Regulation 8.07). <p>Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).</p>
Policy compliance	<p>Management of marine fauna interaction is aligned with Eni policies and standards. The residual risk is Low, which is acceptable (refer Table 6.5).</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>To date, no stakeholder concerns have been raised regarding marine fauna interaction (refer to Section 5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>Eni has considered information in relevant recovery plans and approved conservation advice for cetaceans that identify vessel strike as a threat (as listed in Table 2.3). This includes the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b) and the Conservation Management Plan for the Blue Whale 2015–2025 (Commonwealth of Australia, 2015a). Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>Management of vessel collisions is consistent with the National Strategy for Mitigating Vessel Strike of Marine Megafauna 2017 (Commonwealth of Australia, 2017a).</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>The risks of this unplanned event are consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> the impacts associated with unplanned interactions with marine fauna have the potential to occur to a small number of an overall population and population-level impacts will not occur, so the event does not result in ‘threats of serious or irreversible harm’ as detailed within the EPBC Act and biodiversity and ecological integrity will be maintained conservative assumptions on scale of impact have been applied, including a conservative assumption on marine fauna presence the health, diversity and productivity of the environment will be maintained, including for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

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Given the infrequent nature and short duration of the vessel and helicopter operations and lack of important marine fauna aggregation areas in the Operational Area, the residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts are acceptable and ALARP.

8.3 Introduction of Marine Pest Species (ID U3)

8.3.1 Summary of Environmental Risk Assessment

Hazard	Introduction of marine pest species		
	Frequency	Severity	Risk
Inherent Risk	C	3	M
Residual Risk	B	3	M

8.3.2 Description of Hazard

Activities that have the potential to result in introduction of invasive marine species (IMS) are:

- discharges of vessel ballast water containing foreign species
- translocation of species through biofouling of vessel hull or niches (e.g., sea chests, bilges or strainers)
- translocation of species on submerged equipment such as ROV.


Blacktip vessel operations are not constant within the Operational Area. Therefore, the risk from vessels is limited to specific periods such as:

- support vessel and ROV activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

For IMS to survive there are conditions that would need to occur. Firstly, the IMS needs to be present on the vector, such as a vessel hull. Then the IMS needs to be released from the vector to the receiving environment. Finally, the environmental conditions of the Operational Area need to be conducive to the IMS colonising then establishing a new local population. This includes water temperature, water depth, suitable habitat and presence of predators. For this assessment, it has been assumed the vectors have potential to carry IMS – either through biofouling, ballast water or both – and the activities in the Operational Area have potential to transfer the IMS.

8.3.2.1 Biofouling

Biofouling is the growth of marine organisms that occur on surfaces that have been immersed in the marine environment, usually for an extended period. Biofouling commonly occurs on the lower hulls of vessels and other submerged surfaces and the level of biofouling is relative to the amount of water movement the area experiences. Areas with high water movement, such as propellers, tend to have lower levels of biofouling, and areas subject to low water movement, such as stationary vessels or slow-moving vessels, have higher levels of biofouling.

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As soon as a surface is submerged in seawater, a range of micro-organisms attach to it. This often starts as a slimy surface film of microscopic bacteria and algae, which then facilitates the growth of larger organisms such as macroalgae. This secondary level of larger organisms then facilitates the growth of larger encrusting organisms, such as ascidians and mussels. Most species identified as an IMS risk in Australian waters can be characterised as these larger encrusting organisms.


Biofouling in Australia is managed under the *Commonwealth Biosecurity Act 2015*, via the National Biofouling Management Guidelines for the Petroleum Production and Exploration Industry (Marine Pest Sectoral Committee, 2018), and the National biofouling management guidelines for commercial vessels (Marine Pest Sectoral Committee, 2018) for export tankers. These Australian national guidelines align with the internationally-agreed 2011 Guidelines for the Control and Management of Ships Biofouling to Minimise the Transfer of Invasive Aquatic Species (the IMO Biofouling Guidelines; IMO, 2011).

8.3.2.2 Ballast Water

Ballast water is water adjusted on vessels to help manage weight and stability and improve manoeuvrability. During the uptake of ballast water from the surrounding environment in an international or domestic location, it is possible for a vessel to take in water that contains planktonic biota, including holoplankton, gametes, spores and larvae. This biota may then be discharged at the vessel's new location during ballast water exchange. Ballast water management is a critical mechanism for achieving safe vessel operations.

Seawater is the most likely source for ballast water, which contains thousands of microbes, plants and animals. Gollasch *et al.* (2002) looked at 1508 samples of ballast water and identified 990 difference species within it. Ballast water is discharged and recharged at various times throughout vessel operations, meaning those microbes, plants and animals can be picked up in one location and discharged in another. If ballast water is not managed appropriately, it can spread IMS.

Given the risk ballast water presents for spreading IMS across the marine environment, the International Convention for the Control and Management of Ships Ballast Water and Sediment (Ballast Water Convention) is adopted for all vessels. The Ballast Water Convention sets out standards and procedures for managing ballast water and includes the phasing-out of ballast water exchange. The Ballast Water Convention is implemented in Australia through implementing the Australian Ballast Water Management Requirements (DAWE, 2020), which contains several requirements for managing ballast water with which the vessels operating within the Operational Area will need to comply.

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8.3.3 Potential Environmental Impact

8.3.3.1 Benthic Habitats

The establishment of IMS could cause direct and indirect impact to benthic habitats, including:

- competition with native species for food
- competition with native species for hard substrate
- predation of native species.

Most IMS are unable to establish in deep-water ecosystems (Marine Pest Sectoral Committee, 2018), most likely due to a lack of light or suitable habitat to sustain their growth and survival, however some IMS have been known to establish in water depths greater than 100m (e.g. *Didemnum vexillum* and *Plumularia setacea*). IMS generally establish on hard substrate, both natural (rocky reef structures, bedrock, stone) and artificial (e.g. buoys, wharfs).

IMS establishment is more common in temperate than tropical waters (Huisman et al. 2008; Hewitt, 2002 cited in Wells, 2024), such as those of the Operational Area. Several possible reasons have been proposed for this, including the higher diversity of native tropical communities conferring an increased resistance to invasions through an increase in biotic interactions (Wells, 2024). MarinePests (2024a) presents a map of the known distribution of eight species in 17 Australian ports. All eight are recorded in six southern Australia between Newcastle NSW and Fremantle WA; none are recorded in the 11 ports further north. The National Introduced Marine Pest Information System (MarinePests, 2024b) notes four IMS detected in NT waters (refer to Table 8.1 for further information), mainly in marine ports and marinas.



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Table 8.1: Description of IMS detected in NT waters

IMS	Description
<i>Didemnum perlucidum</i> (White colonial sea squirt)	<p><i>Didemnum perlucidum</i> occurs throughout WA, from Esperance to the Kimberley and the Northern Territory and northern Queensland (MarinePests, 2024b). It is widely established in many Australian ports and marinas.</p> <p><i>Didemnum perlucidum</i> may have been introduced into Australia in multiple introduction events with subsequent admixture and spread via anthropogenic vectors (Dias et al., 2021). The IMS typically occurs on a wide range of hard substrates, where it can rapidly overgrow other organisms. The species is particularly abundant on artificial habitats, especially steel mooring buoys (MarinePests, 2024b).</p> <p>The larvae are free-swimming, spending only a short time in the water column (~48hr), generally dispersing a few metres from the parent colony (Muñoz and McDonald, 2014).</p>
<i>Hydroides elegans</i> (fouling serpulid)	<i>Hydroides elegans</i> is a small, tube dwelling worm that grows to no longer than 20mm in length. <i>H. elegans</i> is a fouling species on both natural and artificial structures (MarinePests, 2024b).
<i>Megabalanus tintinnabulum</i> (acorn barnacle)	<i>Megabalanus tintinnabulum</i> is a medium sized barnacle, growing to a height of 50mm and having a diameter of about 65mm. It is found in many types of natural and artificial habitat. These include rock and boulder areas, pylons, wharves, vessel hulls and even other organisms such as mussels and algae. <i>Megabalanus tintinnabulum</i> can be found to a depth of 40m and is distributed throughout both the intertidal and subtidal zones (MarinePests, 2024b).
<i>Plumularia setacea</i> (hydroid)	<i>Plumularia setacea</i> is a colonial hydroid with brown feather-like stems up to 60mm high. The species can be found in both temperate and tropical regions from intertidal and calm coastal waters. It is typically found attached to hard substrata and other organisms including hydroids. It has been found as deep as 604m in the east Atlantic and to at least 90m in other oceanic regions (MarinePests, 2024b).

Water depths within the Operational Area vary between 20m (at the SPM and along the GEP) and approximately 50m (at the WHP). Whilst IMS are known to establish in these water depths, seabed sediments in the Operational Area are predominantly very soft, grey-green, gravelly sand clays (Woodside, 2004), which are not known to be conducive to supporting the survival of most of the IMS that are considered a risk to the Australian marine environment. The artificial substrates associated with the Blacktip operations (e.g. the SPM) can provide a shallow artificial habitat for IMS to establish, however the infrequent vessel use during Blacktip operations limits the vector presence. Typical IMR vessels servicing the operations are sourced from local ports and do not carry the same quarantine risks as international vessels or out-of-state vessels, as they supply the same waters as those in the Operational Area.

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If left unmanaged, IMS can result in often irreversible impact to the marine environment. Bax *et al.* (2003) state IMS often significantly change the environment in which they are introduced. This change may include applying predation pressure on native organisms, smothering habitats or providing new structural habitat (Bax *et al.*, 2003).

8.3.3.2 Protected Areas

Portions of the GEP and CEP lie within the Joseph Bonaparte Gulf AMP Multiple Use Zone (Table 3.4) and the SPM is in the AMP. Previous surveys at the WHP along the GEP have not identified any sensitive seabed habitats of key natural features (Woodside, 2004). As described in the section above, introduction of IMS is unlikely, based on the lack of hard seabed substrate facilitating IMS attachment and the infrequent presence of a vector; for example, vessel use. Should IMS establish, it could cause direct and indirect impact to the marine park through a reduction in its natural values – for example, change in benthic habitat – which could subsequently change the way users interact with the AMP.

Eni has considered the objectives of the North Marine Park Network Management Plan (DNP, 2018a) and the IUCN principles of the zones of the AMP (refer to Table 4.9). The Blacktip operations are not inconsistent with the IUCN principles and North Marine Parks Network Management Plan objectives.

8.3.3.3 Fisheries

Fisheries operate within the Operational Area and wider region, but as described in Section 4.6.1, there has been very limited fishing effort. Establishment of IMS could cause direct and indirect impact to fishery resource stocks and fishery. It may cause changes to the abundance of prey for fish species and distribution or behaviour of fish species, subsequently resulting in impacts to the activities of commercial fisheries.

The establishment of IMS may result in increased abundance of prey for fish species targeted by commercial fisheries, although this is unlikely to result in any detectable change in the abundance of targeted fish or commercial by-catch.

8.3.4 Environmental Performance Outcome and Control Measures


EPOs relating to this risk include:

- no introduction of IMS from Blacktip operations (EPO-14).

CMs relating to this risk include:


- implementation of IMS management tools (CM-20)
- ballast water management (CM-21).
- biofouling management (CM-22).

EPSs and MC relating to the above are presented in Table 9.2.


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8.3.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption ?
Eliminate	Do not use vessels	Using vessels is unavoidable. Elimination of vessels would mean the Blacktip operations cannot be completed.	*
	Do not exchange ballast	Exchange of ballast water is a safety-critical activity for marine operations and its elimination could put the vessel at risk.	*
Substitute	Contract only local vessels	Contracting vessels only operating in local, state or national waters will reduce potential for IMS. While vessels for Blacktip operations are typically from local ports, this cannot be guaranteed for all potential activities and may present significant costs and delays.	*
	Use alternative ballast system which does not require a discharge	Using an alternative ballast system to avoid uptake and discharge of water would reduce the requirement for ballast water exchange. However, sourcing such vessels may present significant costs and delays and ballast water exchange is standard practice on many vessels.	*
Engineering	Treat ballast water with heat to eliminate IMS	Heat treatment will reduce potential for IMS to establish by eliminating individuals present in ballast water itself. However, discharge of water at much higher temperature than the surrounding marine environment would likely result in impact to local water quality and to marine species.	*
Isolation	N/A	N/A	N/A
Administrative	Implement an IMS risk assessment tool	Ensures vessels are assessed to low IMS risk before mobilising to the Operational Area. Minimal cost involved in demonstrating contracted vessel(s) are of 'low risk' of introducing IMS by completing an IMS risk assessment. IMS management measures will be applied to vessels according to risk to minimise the likelihood of IMS being introduced, such as the treatment of internal systems, IMS inspections or cleaning.	✓ (CM-20)


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Demonstration of ALARP			
	Ballast water management	Pursuant to the <i>Biosecurity Act 2015</i> and Biosecurity Amendment (Biofouling Management) Regulations 2021 (biofouling regulations), support vessels carrying ballast water and engaged in international voyages shall manage ballast water in accordance with a Ballast Water Management Plan. Reduces IMS risk; minimal cost to manage. Vessels should already have a plan in place to meet vessel legislative and Eni vessel contracting requirements.	✓ (CM-21)
	Biofouling management	The likelihood of introducing IMS from vessels is reduced due to anti-fouling systems in accordance with Biosecurity Amendment (Biofouling Management) Regulations 2021 (Biofouling Regulations). Includes marine growth prevention systems on the seawater intakes and ballast pumps.	✓ (CM-22)

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8.3.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>The risk of introducing IMS will be managed in accordance with:</p> <ul style="list-style-type: none"> • Australian Ballast Water Requirements (DAWE, 2020) • Offshore Installations - Biosecurity Guide (DAWR, 2020) • IMO's Guidelines for the Control and Management of Ships' Biofouling to Minimise the Transfer of Invasive Aquatic Species (2011) • <i>Biosecurity Act 2015</i>, including Biosecurity Amendment (Biofouling Management) Regulations 2021 (Biofouling Regulations) • Fish Resources Management Regulations 1995 • WA DPIRD Biofouling and Biosecurity Policy. • Marine order 98—Marine pollution—anti-fouling systems <p>Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).</p>
Policy compliance	<p>Management of IMS risk is aligned with Eni policies and standards. The residual risk is Medium, which is acceptable given a review of the risk reduction measures for the activity that has been undertaken (refer Table 6.5).</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>To date, no stakeholder concerns have been raised regarding IMS risk (refer to Section 5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>The main risks associated with introducing IMS are the displacement of native species or interference with ecosystem processes in other ways (such as through predation). Provided the biosecurity controls are implemented during the activities, the risk of introducing IMS is deemed Moderate.</p> <p>IMS has not been identified as a threat in any recovery plans or conservation advice for threatened and migratory species. However, Eni has considered information in relevant recovery plans and approved conservation advice for habitat modification (which could occur as a result of IMS establishing) (listed in Table 2.3). The Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>The impact from this event is not consistent with the principles of ESD, but the risk associated with the event occurring is, because:</p> <ul style="list-style-type: none"> • while the nature and scale of impacts have the potential to result in lasting change to benthic community dynamics, the controls that will be implemented reduce the risk to an acceptable level • conservative assumptions have been applied to the impact assessment, including assuming conditions in the Operational Area are conducive for IMS to establish and vessels mobilised to the Operational Area are a vector for IMS • while there is a rigorous understanding of the environment, further studies are planned to increase confidence in the assessment.
ALARP	The residual risk has been demonstrated to be ALARP.

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Given the controls that will be implemented, the residual risk is considered moderate, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5) once assessed to ALARP (Section 8.6.5). Potential impacts are acceptable and ALARP.

8.4 Accidental Minor Spills and Leaks (ID U4)

8.4.1 Summary of Environmental Risk Assessment

Hazard	Loss of hydraulic fluid and bulk chemicals		
	Frequency	Severity	Risk
Inherent Risk	B	3	M
Residual Risk	B	1	L

8.4.2 Description of Hazard

Accidental minor spill and leaks include:

- hydrocarbon and hydraulic fluids (less than 1m³) from:
 - hydraulics fluid from ROV (approximately 20) if hydraulic lines are pinched during subsea work
 - structural failure of infrastructure containing diesel on WHP or vessel
 - loss of primary containment due to dropped objects (e.g., swinging load during lifting activities) on vessels or WHP
- hydraulics fluid from the SSIV and valves on the SPM (less than 1 m³)
- chemical loss (less than 1m³) during bulk transfer from vessels to the WHP.


Blacktip vessel operations are not constant within the Operational Area. Therefore, the risk from vessels is limited to specific periods such as:

- support vessel and ROV activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

Spills and leaks of chemicals required for maintenance or cleaning, such as solvents and cleaning agents, onboard vessels may arise from equipment malfunction, corrosion of storage vessels, or human errors during filling. Typically, these leaks will be captured by a drainage system and subsequently treated in accordance with Marine Order requirements.

Chemicals are transferred from vessels to the WHP for operational purposes. Bulk transfer occurs approximately three times per year on the WHP. Corrosion inhibitor is typically transferred in in 316SS containers, which are non-corrosive and designed for the marine conditions.

Hydraulics systems are used to actuate the SSIV and valves on the SPM. As in the case of all hydraulically driven equipment, it is possible an accidental discharge of hydraulic fluids can occur in the event of a ruptured hydraulic line.

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8.4.3 Potential Environmental Impact

Water quality will temporarily reduce due to the constituents of chemicals and hydrocarbon releasing into the marine environment, some of which will be toxic. The level of impact to water quality depends on the nature and volume of the chemical lost, which are typically low volumes (refer Table 3.7).

All operational chemicals will be selected to reduce environmental impacts to ALARP (refer to Section 3.6). Hydraulic fluids are medium oils of light to moderate viscosity and have a relatively rapid spreading rate and, like MDO, will dissipate quickly, particularly in high sea states.


Due to wave action and metocean currents and the low volumes potentially lost, minor accidental releases will rapidly disperse and dilute local to the release site, resulting in temporary (hours) and highly localised reduction in water quality. No long-term reduction in water quality is expected.

Given the minor accidental releases will dilute and disperse rapidly within the marine environment, with the highest concentrations of harmful constituents very close to the release site, the impact on water quality is anticipated to be temporary in nature and minor.

Marine fauna – for example, marine mammals, fish, marine reptiles and seabirds – may be exposed to the minor spill and leaks. However, such spills are unlikely to have widespread ecological effects, given the nature of the release, the scale (small volumes), and the open-ocean environment of the location facilitating dispersion. Any impacts will be limited to short-term behavioural change as any marine fauna traverse the release. Physical coating of marine fauna coming in contact with entrained or surface components, and associated sublethal or lethal effects from toxic chemicals, are not considered credible.

Eni has considered information in relevant recovery plans and approved conservation advice for marine fauna (as listed in Table 2.3). This includes the objectives and actions within the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b), which identify chemical discharge as a threat to all species of marine turtles. Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.

Eni has considered the objectives of the North Marine Park Network Management Plan (DNP, 2018a) and the IUCN principles of the zones of the marine park (refer to Table 4.9). Blacktip operations are not inconsistent with the IUCN principles and North Marine Parks Network Management Plan objectives. Any reduction in water quality (described in the section above) associated with accidental minor release is unlikely to impact the values of the Joseph Bonaparte Gulf AMP (refer Table 4.9); any impact is anticipated to be slight.

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8.4.4 Environmental Performance Outcome and Control Measures


EPOs relating to this risk include:

- no unplanned objects, emissions or discharges to sea or air (EPO-05).

CMs relating to this risk include:


- vessel chemical management procedures (CM-23)
- on board spill response kits (CM-24)
- chemical transfer from vessels to the WHP procedure (CM-25)
- chemical risk assessment process (CM-26).

EPSs and MC relating to the above are presented in Table 9.2.

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8.4.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate hydraulic systems and ROVs	Would eliminate the environmental risk associated with pinching of hydraulic lines and release of hydraulic fluids. However, the need for ROVs cannot be eliminated and are required to ensure subsea integrity is maintained.	✘
	Eliminate transfer of materials between vessels and WHP	Would eliminate the environmental risk associated with loss during crane transfers. However, transfers from vessels to the WHP are considered routine activities, required for Blacktip operations, and cannot be eliminated.	✘
	Timing IMR to avoid NPF fishing season / or where possible to avoid fish spawning season during warmer months (September-March)	During 2023 consultation, the DITT / NT Fisheries requested that where possible, activity is undertaken during warmer months (September-March) to avoid fish spawning season. Ongoing operations typically requires small vessel use to service and maintain the WHP and associated infrastructure as required, these activities are often not able to be delayed due to operational requirements.	✘
Substitute	N/A	N/A	N/A
Engineering	N/A	N/A	N/A
Isolation	N/A	N/A	N/A
Administrative	Chemical management procedures	Reduces the potential of spills and leaks (discharges) to the marine environment by controlling the storage, handling and clean-up of chemicals. Minor cost associated with implementing procedures.	✓ (CM-23)
	Procedure for chemical transfers from vessels to the WHP	Environmental benefit outweighs minor costs of implementing and complying with Eni's Marine Operations Manual and Chemical Storage Tank Filling Procedure (000036_DV_EX.OPS.0541.000). Minor cost associated with implementing procedure.	✓ (CM-25)
	Spill response kits on vessels	Environmental benefit outweighs minor costs in implementing and locating spill response kits in proximity to hydrocarbon storage and bunkering areas on vessels.	✓ (CM-24)


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	Selection of chemicals to reduce impact to ALARP and acceptable	The chemical risk assessment for operational WHP chemicals process will ensure any impact from chemical discharge is ALARP and acceptable. See Section 3.6.	✓ (CM-26)
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8.4.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	Blacktip operations comply with the EPBC approval conditions (EPBC 2003/1180).
Policy compliance	Management of accidental minor spills is aligned with Eni policies and standards. The residual risk is Low, which is acceptable (refer Table 6.5). The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.
Social acceptability	To date, no stakeholder concerns have been raised regarding accidental minor spills (refer to Section 5). An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.
Area sensitivity/ biodiversity	Eni has considered information in relevant recovery plans and approved conservation advice for cetaceans that identify deteriorating water quality and chemical discharge as a potential threat (as listed in Table 2.3). This includes the Recovery Plan for Marine Turtles in Australia 2017–2027 (Commonwealth of Australia, 2017b). The Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice. Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a) (refer to Table 4.9). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).
ESD principles	The risk of this unplanned event is consistent with the principles of ESD because: <ul style="list-style-type: none"> the impacts associated with unplanned minor loss or spills do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained conservative assumptions on scale of impact have been applied the health, diversity and productivity of the environment will be maintained, including for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

Given the infrequent nature and short duration of the vessel operations and visits to the WHP, the residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts are acceptable and ALARP.

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8.5 Spill Risk Assessment

8.5.1 Summary of Worst case Credible Unplanned Hydrocarbon Spill Scenarios

Worst case unplanned hydrocarbon spill scenarios have been identified in Table 8.2. The methods used to determine these worst case spills are consistent with guidance provided by AMSA (2015) and have been informed by industry experience. Hydrocarbon spills are uncommon events and typically involve much smaller volumes than those identified in Table 8.2. The release volumes presented make no allowance for any prevention, control, containment or clean-up measures; as in, the scenarios are entirely unmitigated and are therefore considered highly conservative and worst case.

The hydrocarbon spill scenarios (Table 8.2) do not encompass all possible spills; rather, are worst case and based on the maximum volume of hydrocarbons that could credibly be released during the Blacktip operations. Other scenarios may release small volumes; however, given the potential consequences of these spills are much smaller, they have not been modelled or been further assessed for impact.


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Table 8.2: Summary of credible unplanned release of hydrocarbon scenarios

Scenario	Volume	Release duration	Section	Modelled
Blacktip condensate at WHP				
Loss of well control during production operations resulting in a long-term (74 day) uncontrolled surface release of 4943m ³ Blacktip condensate.	4943m ³	74 days	8.6	Yes
Loss of well control during production operations as a result of an explosion or fire scenario (WHP collapse), resulting in short-term (three day) surface release and a long-term (71 day) uncontrolled surface release, total of 4943m ³ Blacktip condensate.	4943m ³	74 days		No
Blacktip condensate at SPM				
A failure of the export pipeline upstream of the PLEM during a condensate export operation at the SPM. Assuming it takes up to five minutes to detect the spill and stop the pumping operations (pumping at 450m ³ /hr), up to 40m ³ would be released until the pump is stopped.	40m ³	5 minutes	8.7	No
A failure of floating or submarine flexible hose at SPM (downstream of PLEM) during a condensate export operation.	40m ³	5 minutes		No
Blacktip condensate along the export pipeline				
A subsea leak during operations through a <50mm diameter hole at any point within Commonwealth waters along the export pipeline due to corrosion. A small leak would not result in sufficient pressure drop to trigger the low-pressure alarm. The export pipeline pressure is at 7 to 8 barg, and a low-pressure alarm is triggered at <5 barg. Therefore, a small leak could only be detected visually by vessel (e.g., bubbling at surface) or during survey or pigging, or through discrepancy between gas production rates at WHP and YGP during the history matching, which is conducted at least weekly.	150m ³	1 week	8.8	No



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Scenario	Volume	Release duration	Section	Modelled
A large leak (>70mm hole diameter) would trigger the low-pressure alarm and automatically trigger pipeline shut-in. A leak size between 50 and 70mm hole diameter would not necessarily trigger the low-pressure alarm but would result in a noticeable change in the pipeline flow rate and a pressure drop, which would be identified by the Control Room Operator who will shut in the pipeline. The volume of condensate released in these scenarios would be <50m ³ .	<50m ³	1 hour		No
MDO				
Surface release of MDO from a vessel as a result of an external impact (vessel collision), which ruptures an MDO tank.	100m ³	1 hour	8.9	Yes
Surface release of MDO due to leaking or ruptured bunker transfer equipment.	<40m ³	15minutes		No

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8.5.2 Spill Scenarios Assessed Using Hydrocarbon Spill Dispersion Modelling

Modelling was undertaken by RPS on behalf of Eni to predict the potential extent (and area) of a worst case spill event. The spill modelling was performed using an advanced 3D trajectory and fates model: Spill Impact Model Application Package. The model calculates the transport, spreading, entrainment and evaporation of spilled hydrocarbons at regular time steps, based on the prevailing wind and current conditions and the physical and chemical properties. For any hydrocarbons that contact a shoreline, the model records the accumulation of oil mass that arrives on the shoreline over time, less any mass that is lost to evaporation and subsequent removal by current and wind forces. The modelling does not consider any spill prevention or mitigation that would be implemented in response to the spill and is therefore highly conservative.

Modelling was conducted using a stochastic (or probabilistic) approach. The stochastic approach captures a wide range of potential weathering outcomes under varying environmental conditions, which is reflected in the aggregated spatial outcomes showing the potential hydrocarbon exposure in the marine environment at different thresholds (refer to Section 8.5.3).


Stochastic modelling compensates for the uncertainty associated with any single oil spill event, ensuring risk assessment and spill response planning are conservative, covering a wide range of possible scenarios. The footprint of an actual spill event is more accurately represented by only one of the simulations from the stochastic modelling, which results in a much smaller spatial footprint. Modelling of a single simulation, representative of a single spill event, is termed a deterministic run. The deterministic runs presented show the footprint (trajectory and fate) of a single worst case release resulting in the largest volume of oil ashore and the longest length of shoreline with oil accumulation.

8.5.3 Hydrocarbon Contact Exposure Thresholds

Hydrocarbons in the marine environment can be categorised into four separate phases, each with varying fates and impact mechanisms, being:

1. floating: surface
2. shoreline: accumulated hydrocarbon stranded onshore
3. entrained: in-water
4. dissolved: in-water.

Impact exposure thresholds are applied to the hydrocarbon spill modelling and used to inform the assessment of potential impacts and risks from a hydrocarbon release. Thresholds applied to each phase of hydrocarbons are summarised in Table 8.3 and described further in Table 8.4. Thresholds are aligned with guidance from NOPSEMA (2019b).

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The EMBA (refer to Section 4.1) is based on stochastic modelling using low exposure thresholds for each phase. The low thresholds are typically not expected to result in impacts to environmental receptors but are used for evaluating socioeconomic impacts, and are used in oil spill response preparations, such as operational and scientific monitoring, and in response arrangements. Moderate exposure area thresholds may be representative of an area of biological impact from hydrocarbons.

Table 8.3: Summary of environmental hydrocarbon thresholds applied to the environment that may be affected and moderate exposure area


Zone	Surface hydrocarbon (g/m ²)	Entrained hydrocarbon (ppb)	Dissolved aromatic hydrocarbon (ppb)	Shoreline contact hydrocarbon (g/m ²)
EMBA (low exposure)	1	10	6	10
ZPI (Moderate exposure)	10	100	50	100
High exposure area	50	-	400	1000

Table 8.4: Hydrocarbons exposure thresholds


Exposure	Exposure threshold	Evaluation
Floating (surface)		
Low	1g/m ²	<p>Floating hydrocarbons at a concentration of 1g/m² – equivalent to a thickness of 0.001 mm or 1 ml of oil per square metre – have a rainbow sheen in appearance, according to the Bonn Agreement Oil Appearance Code (Bonn Agreement, 2009).</p> <p>Although this is lower than the exposure value for ecological impacts, it may be relevant to environmental monitoring of oil spills, as contact at this threshold is considered to temporarily change ambient water quality and aesthetics.</p> <p>A threshold of 1g/m² has been used as the criteria for defining the EMBA.</p>
Moderate	10g/m ²	<p>Floating hydrocarbons at a concentration of 10g/m², or 10ml of oil per m², is used for registering biological impacts resulting from contact of surface hydrocarbons. They have been estimated by different researchers at approximately 10 to 25g/m². Potential impacts of surface slick concentrations in this threshold range may include harm to seabirds through ingestion from preening of contaminated feathers or the loss of the thermal protection of their feathers. This hydrocarbon exposure value is also considered appropriate for potential effects to turtles, sea snakes and marine mammals.</p>
High	25g/m ²	<p>Floating hydrocarbons at a concentration of 25g/m² may be visible on the surface with a metallic appearance (Bonn Agreement, 2009). At greater thicknesses, the potential for impact of surface oil to wildlife increases.</p>

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Exposure	Exposure threshold	Evaluation
Shoreline		
Low	10g/m ²	<p>French-McCay (2009) defines accumulated hydrocarbons $\geq 100\text{g/m}^2$ to be the threshold that could impact the survival and reproductive capacity of benthic epifaunal invertebrates living in intertidal habitat. As a conservative measure, a threshold of 10g/m^2 has been applied to represent shoreline impact and represents a low contact value for interpreting shoreline accumulation modelling results (French-McCay, 2005, 2006) and may be considered a temporary change to sediment quality and aesthetics.</p> <p>A threshold of 10g/m^2 has been used as the criteria for defining the EMBA.</p>
Moderate	100g/m ²	<p>Accumulated hydrocarbon of 100g/m^2 is derived from levels likely to cause adverse impacts to marine or coastal fauna and habitats.</p> <p>Environmental risk assessment studies (French-McCay, 2009) report an oil thickness of 0.1 mm (100g/m^2) on shorelines is assumed as the lethal exposure value for invertebrates on hard substrates and sediments. It is also likely to be representative of the minimum limit the oil can be effectively cleaned (AMSA, 2015; NOPSEMA, 2019) and is therefore used as a guide for shoreline clean-up planning.</p>
High	1000g/m ²	At greater thicknesses, the potential for impact of accumulated oil to shoreline receptors increases.
Entrained (in-water)		
Low	10 ppb	<p>The 10 ppb exposure threshold represents the very lowest concentration; it corresponds generally with the lowest trigger levels for chronic exposure for entrained hydrocarbons in water quality guidelines. Although this is lower than the exposure value at which most ecological impacts are expected to occur, it may be relevant in implementing environmental monitoring of oil spills.</p> <p>A 10 ppb exposure has been used as the criteria for defining the EMBA.</p>
Moderate	100 ppb	<p>The 100 ppb exposure threshold is considered conservative in terms of potential for toxic effects leading to mortality for sensitive mature individuals and early life stages of species. Entrained hydrocarbons are insoluble oil droplets suspended in the water column. A wider range of LC50 values have been reported for species of crustacea and fish, ranging from 100 to 258,000,000 ppb (Gulec <i>et al.</i>, 1997; Gulec and Holdway, 2000). This threshold has been defined to indicate a potential zone of acute exposure, which is more meaningful over shorter exposure durations. Contact within this threshold may result in impacts to the marine environment, such as sublethal impacts to most species and lethal impacts to sensitive species.</p>

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Exposure	Exposure threshold	Evaluation
Dissolved (in-water)		
Low	10 ppb	<p>The 10 ppb exposure threshold for species toxicity in the water column is based on global data from French <i>et al.</i> (1999) and French-McCay (2002, 2003), which showed species sensitivity (fish and invertebrates) to dissolved aromatics exposure greater than four days (96-hour LC50) under different environmental conditions varied from 6 ppb to 400 ppb, with an average of 50 ppb. This range covered 95% of aquatic organisms tested, which included species during sensitive life stages (eggs and larvae). Dissolved hydrocarbons include the monoaromatic hydrocarbons, which are compounds with a single benzene ring such as benzene, ethylbenzene, toluene and xylene (BTEX), and polycyclic aromatic hydrocarbons (PAHs), which are compounds with multiple benzene rings such as naphthalenes and phenanthrenes.</p> <p>A 10 ppb exposure threshold has been used as the criteria for defining the EMBA.</p>
Moderate	50 ppb	<p>Approximate potential toxic effects, particularly sublethal effects to sensitive species (see the above text). For most marine organisms, a concentration of between 50 and 400 ppb is considered more appropriate for risk evaluation.</p> <p>A 50 ppb exposure threshold has been used as an exposure value for potential toxic effects to sensitive species and life stages and potential sublethal effects for less sensitive species.</p>
High	400 ppb	<p>Approximate toxic effects, including lethal toxic effects to sensitive species.</p>

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8.6 Loss of Containment from Loss of Well Control (Risk ID U5)

8.6.1 Summary of Environmental Risk Assessment

Hazard	Loss of containment from a worst case well release – surface		
	Frequency	Severity	Risk
Inherent Risk	B	4	MH
Residual Risk	A	4	M

Hazard	Loss of containment from a worst case well release – surface then subsea		
	Frequency	Severity	Risk
Inherent Risk	A	4	M
Residual Risk	A	4	M

8.6.2 Description of Hazard


Credible spill scenarios for a production well (including rigless intervention activities) release are:

1. loss of well control during production operations (including rigless intervention activities) from a production well, resulting in a long-term (74 day) uncontrolled surface release (from the WHP) of less than 4943m³ Blacktip condensate
2. loss of well control during production operations from a production well as a result of an explosion or fire scenario, resulting in short-term (three day) surface release and a long-term (71 day) uncontrolled subsea release of less than 4943m³ Blacktip condensate.

Scenario 1 is the more credible scenario for production operation activities as the wellheads are located on the WHP; therefore, a release would be from the surface.

Scenario 2 would occur in the event of an explosion at the WHP. The WHP would sink due to an anticipated compromise in structural integrity and stability after a period of the well release occurring at the surface (e.g. three days). In the event the WHP sinks the well would then flow via the conductor on the seabed (no wellhead), until well control is established. It is assumed the surface modelling presented in Section 8.6.2.3 is representative for informing the approximate spatial extent of this scenario, reason being that the water depth is relatively shallow (less than 50 m) and therefore the well fluids are expected to rise quickly as a coherent plume, driven by the buoyancy of the gas, and spread radially in a surface layer (Fannelop and Sjoen, 1980; National Research Council, 2003).

Eni has a good history of implementing industry standard practice in well design. There have not been any Eni incidents resulting in offshore loss of well control events in Australia that have resulted in significant releases or significant environmental impacts.

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8.6.2.1 Release Duration

The 74 day release duration has been determined as a worst case duration and is based on the maximum depth of the hydrocarbon reservoir being open and the estimated time to drill a relief well under the AEP Mutual Aid Memorandum of Understanding (MoU). The 74 days of relief well drilling is based on the details within Table 8.5.

Table 8.5: Blacktip relief well drill times

Phase	Justification	Duration (days)
Mobilisation	Time to secure the rig and mobilisation duration ¹	35
Drill relief well	Based on Eni, production well design	25
Intersect and kill	Based on Eni, production well design	7
Plug and abandon	Based on Eni, production well design	7
Total days		74

Note 1: Access to a MODU to drill the relief well would be via the AEP MoU for mutual aid

8.6.2.2 Blacktip Condensate Characteristics and Weathering

The physical and chemical properties of Blacktip condensate used for the oil spill modelling were determined from the Blacktip Condensate Assay Report (Intertek, 2009).


Table 8.6 and Table 8.7 show the physical characteristics and boiling point ranges for Blacktip condensate. The hydrocarbon property category and hydrocarbon persistence classification were derived from AMSA (2015) guidelines. The classification is based on a hydrocarbon's specific gravity in combination with relevant boiling point ranges.

Table 8.6: Physical properties of Blacktip condensate (Intertek, 2009)

Physical properties	Blacktip condensate
Density (kg/m ³)	790.0 (at 15 °C)
API	46.7
Dynamic viscosity (cP)	0.975 (at 20 °C)
Pour point (°C)	-36.0
Hydrocarbon property category	Group I
Hydrocarbon persistence classification	Non-persistent

Table 8.7: Boiling-point breakdown of Blacktip condensate (Intertek, 2009)

Oil type	Volatiles (%)	Semi-volatiles (%)	Low volatiles (%)	Residual (%)	Aromatics (%)
Boiling point (°C)	<180 C4 to C10	180 to 265 C11 to C15	265 to 380 C16 to C20	>380 >C20	Of whole oil <380 BP
	Non-persistent			Persistent	
Blacktip condensate	63.6	35.0	0.4	1.0	15.8


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Blacktip condensate (API 46.7) contains a low proportion (1% by mass) of hydrocarbon compounds that will not evaporate at atmospheric temperatures. These compounds will persist in the marine environment. The whole condensate has low asphaltene content (<0.5%), indicating a low tendency for the hydrocarbons to take up water to form water-in-oil emulsion over the weathering cycle.

The condensate is composed of hydrocarbons that have a wide range of boiling points and volatilities at atmospheric temperatures, and which will begin to evaporate at different rates on exposure to the atmosphere. Evaporation rates will increase with temperature, but in general about 63.6% of the hydrocarbon mass should evaporate within the first 12 hours; a further 35% should evaporate within the first 24 hours and a further 0.4% should evaporate over several days.

A weathering study on Blacktip condensate by Intertek in 2013 showed the rate of evaporation of Blacktip condensate is rapid, with 67% of the volume of the condensate lost within the first two hours and 89% by eight hours. Between eight and 72 hours, only a further 7% is lost, reaching a maximum weathering at 72 hours (95% lost volume) (Intertek, 2013) (Figure 8.1).

The weathering test (Intertek, 2013) also presents changes in hydrocarbon composition due to evaporation. Composition change occurs in a systematic manner, with the lightest, most volatile compounds weathered first, followed by hydrocarbons with increasing boiling point (Figure 8.2). The relative percentage of wax content in Blacktip condensate increases from 4% in the original to 76% by 72 hours. Blacktip condensate was also monitored for the presence and change in BTEX and PAH concentrations in the oil. The results are in Table 8.8 and showed an overall decrease in the concentrations of what may be considered volatile aromatics, such as the BTEX compounds and naphthalene. The loss of most of this material is likely to be atmospheric. Of the remaining PAHs identified (fluorene and phenanthrene), slight increases in the levels can be observed, possibly due to the concentration of the oil over time (Intertek, 2013).

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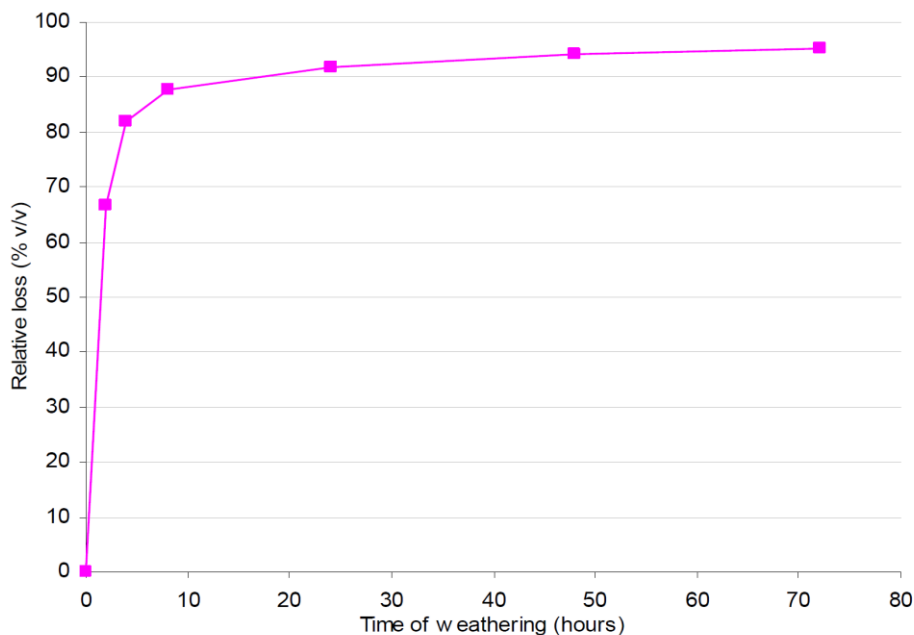


Figure 8.1: A summary of the weathering (loss) for the Blacktip condensate over 72 hours (Intertek, 2013)

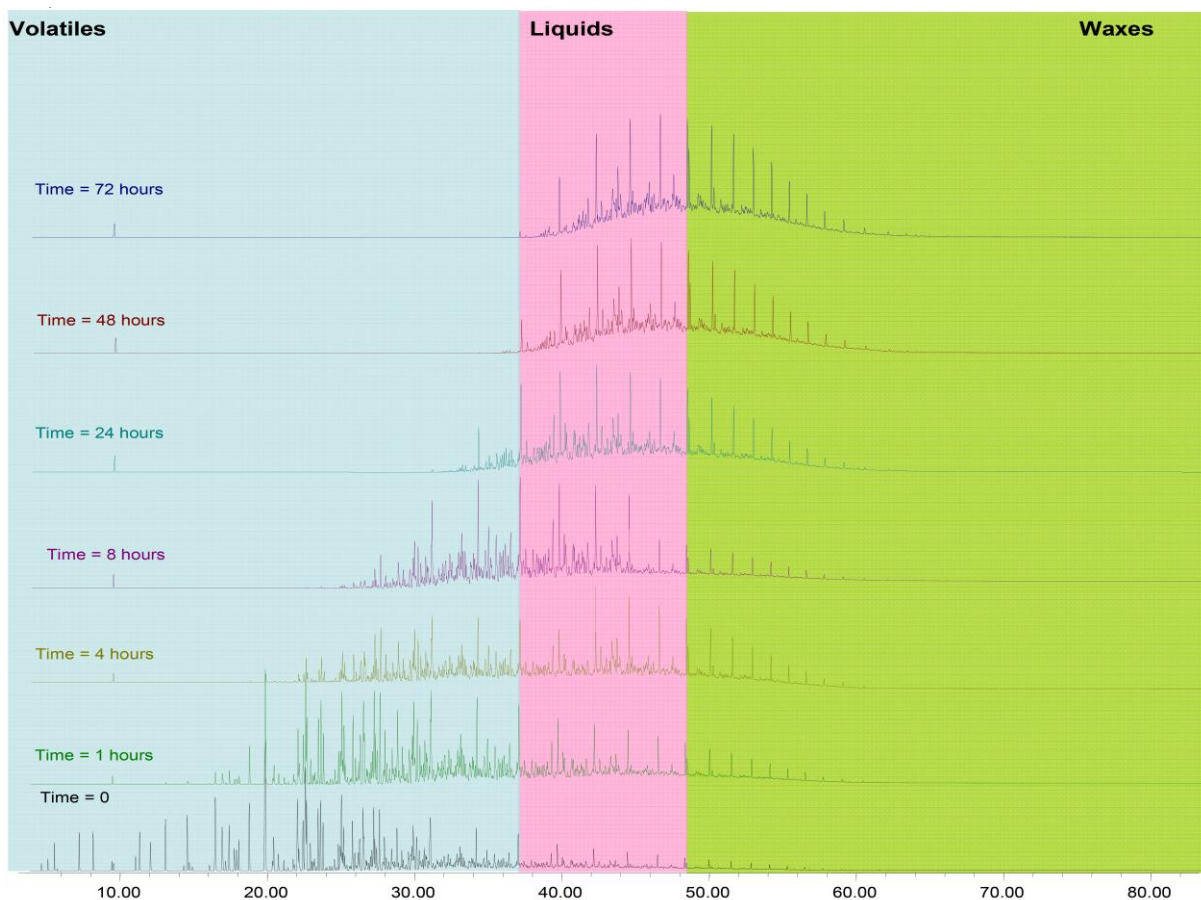


Figure 8.2: A summary of the weathering (loss) for the Blacktip condensate over 72 hours (Intertek, 2013)


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Table 8.8: Changes in benzene, toluene, ethylbenzene, xylene and polycyclic aromatic hydrocarbons content during weathering of the Blacktip condensate in winter and summer conditions over 72 hours

Compounds	Weathered time (hours)							
	Units	0	1	4	8	24	48	72
Naphthalene	ppb	204	409	502	579	215	nd	nd
Acenaphthalene	ppb	nd	nd	nd	nd	nd	nd	nd
Acenaphthene	ppb	nd	nd	nd	nd	nd	nd	nd
9H-Fluorene	ppb	42	99	135	194	250	266	366
Phenanthrene	ppb	33	86	113	167	224	320	426
Anthracene	ppb	nd	nd	nd	nd	nd	nd	nd
Fluoranthene	ppb	nd	nd	nd	nd	nd	nd	nd
Pyrene	ppb	nd	nd	nd	nd	nd	nd	nd
Benzo(a)anthracene	ppb	nd	nd	nd	nd	nd	nd	nd
Chrysene	ppb	nd	nd	nd	nd	nd	nd	nd
Benzo(b)fluoranthene	ppb	nd	nd	nd	nd	nd	nd	nd
Benzo(k)fluoranthene	ppb	nd	nd	nd	nd	nd	nd	nd
Benzo(a)pyrene	ppb	nd	nd	nd	nd	nd	nd	nd
Indeno(123cd)pyrene	ppb	nd	nd	nd	nd	nd	nd	nd
Dibenzo(ah)anthracene	ppb	nd	nd	nd	nd	nd	nd	nd
Benzo(ghi)perylene	ppb	nd	nd	nd	nd	nd	nd	nd
Benzene	ppm	610	nd	nd	nd	nd	nd	nd
Toluene	ppm	3338	300	33	nd	nd	nd	nd
Ethylbenzene	ppm	1395	450	45	nd	nd	nd	nd
Xylene	ppm	6429	3200	320	nd	nd	nd	nd

Note: nd = no data

Weathering modelling of a surface release (RPS, 2019) showed the condensate is highly susceptible to rapid evaporation or entrainment into the surface mixed layer of the water column (3 to 10m deep, depending on the conditions). There will be limited opportunity for floating hydrocarbons to travel significant distances, with only the residual compounds within the condensate persisting in the environment until degradation processes occur (over periods of weeks to months).

8.6.2.3 Hydrocarbon Spill Modelling

A 4943m³ condensate release was modelled (RPS, 2019) at a Blacktip production well and is considered appropriate, although conservative, for informing the approximate spatial extent of potential impacts from well releases during Blacktip operations. Table 8.9 presents the parameters and justification used in the modelling.


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Table 8.9: Summary of parameters and justifications for condensate spill modelling from a worst case well release

Parameter	Description
Number of spill simulations	100 per season
Hydrocarbon type	Blacktip condensate
Release type	Production well release
Total spill volume	4943m ³ over 74 days, assuming constant flow.
Spill volume justification	Flowrate
Release depth	Surface
Release depth justification	Most credible spill scenario is from the surface wellheads on the WHP (Scenario 1, Section 8.6.2). Assumed also representative for Scenario 2 (Section 8.6.2) as the WHP water depth is relatively shallow (less than 50 m) and therefore the well fluids are expected to rise quickly as a coherent plume.
Release duration	74 days
Release duration justification	Refer to Table 8.5

The sections below present the summary of the modelling results.

8.6.2.4 Floating Hydrocarbon

Low exposure thresholds

Hydrocarbons are predicted to remain relatively localised around the release location. The maximum distance to the outer extent of the 1g/m² is predicted to be 19km (Figure 8.3).

Moderate exposure thresholds

Floating hydrocarbon concentrations are not predicted to exceed 10g/m² at probabilities greater than 1%.



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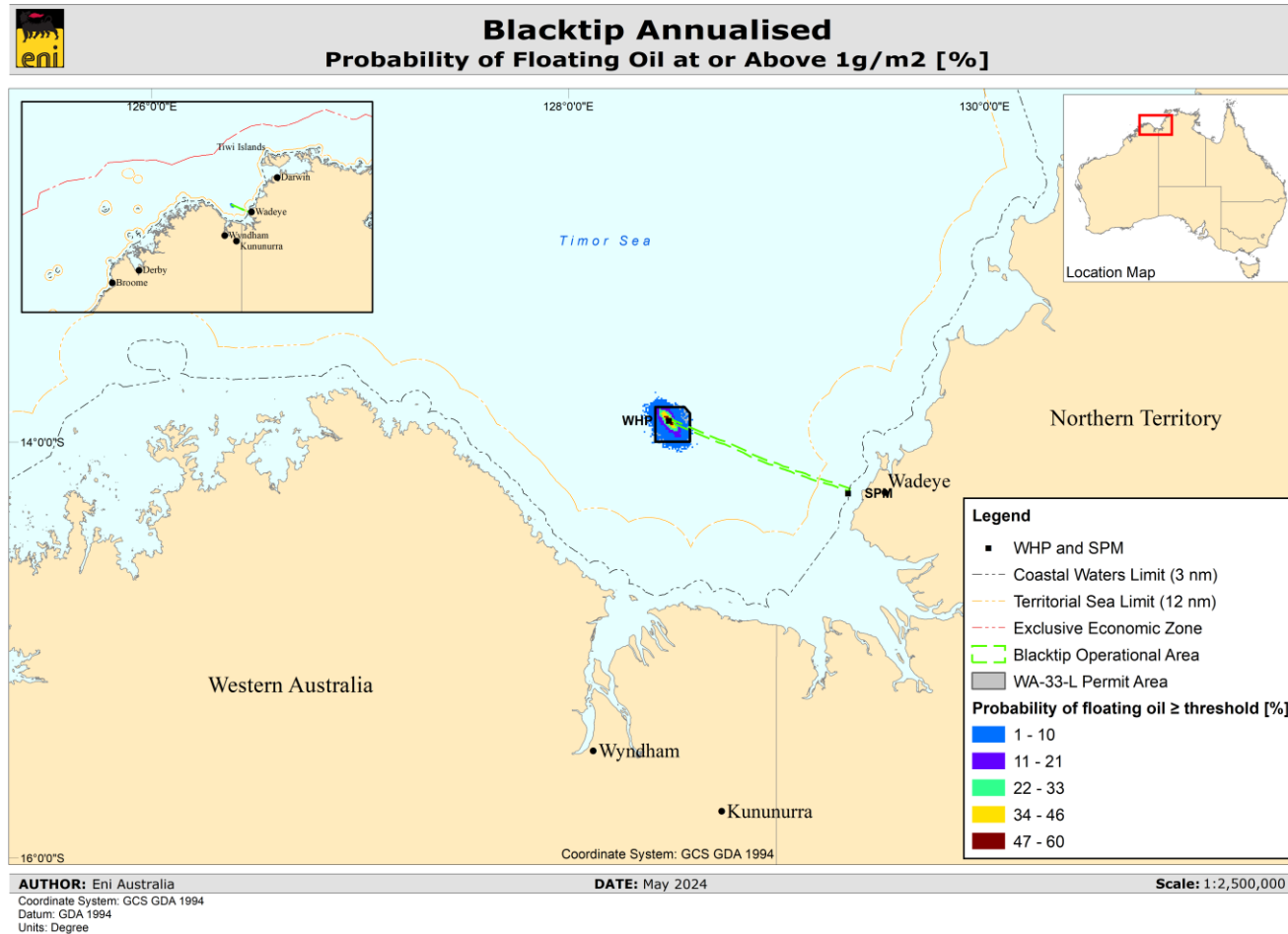



Figure 8.3: Predicted annualised probability of floating hydrocarbon concentrations at or above 1g/m² resulting from a 74 day surface release of Blacktip condensate

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8.6.2.5 Shoreline Hydrocarbon

Low and moderate exposure thresholds

Kimberley Coast, JBG East and JBG West receptors are predicted to have a 1% probability of receiving shoreline hydrocarbon at or above 10g/m², with corresponding minimum times of arrival forecast as 47 days (1130 hours), 50 days (1194 hours) and 85 days (2049 hours), respectively, refer Figure 8.4.

A worst case local shoreline accumulated concentration of 61g/m² and volume of 10m³ is forecast at the JBG East receptor. Table 8.10 presents shoreline hydrocarbon outcomes at other sensitive receptors contacted.

Table 8.10: Expected annualised shoreline oil outcomes at sensitive receptors resulting from a 74 day surface release of Blacktip condensate

Receptor	Maximum accumulated concentration (g/m ²)	Maximum accumulated volume (m ³)
Joseph Bonaparte Gulf East	61	10
Joseph Bonaparte Gulf West	11	<1
Kimberley Coast	26	<1



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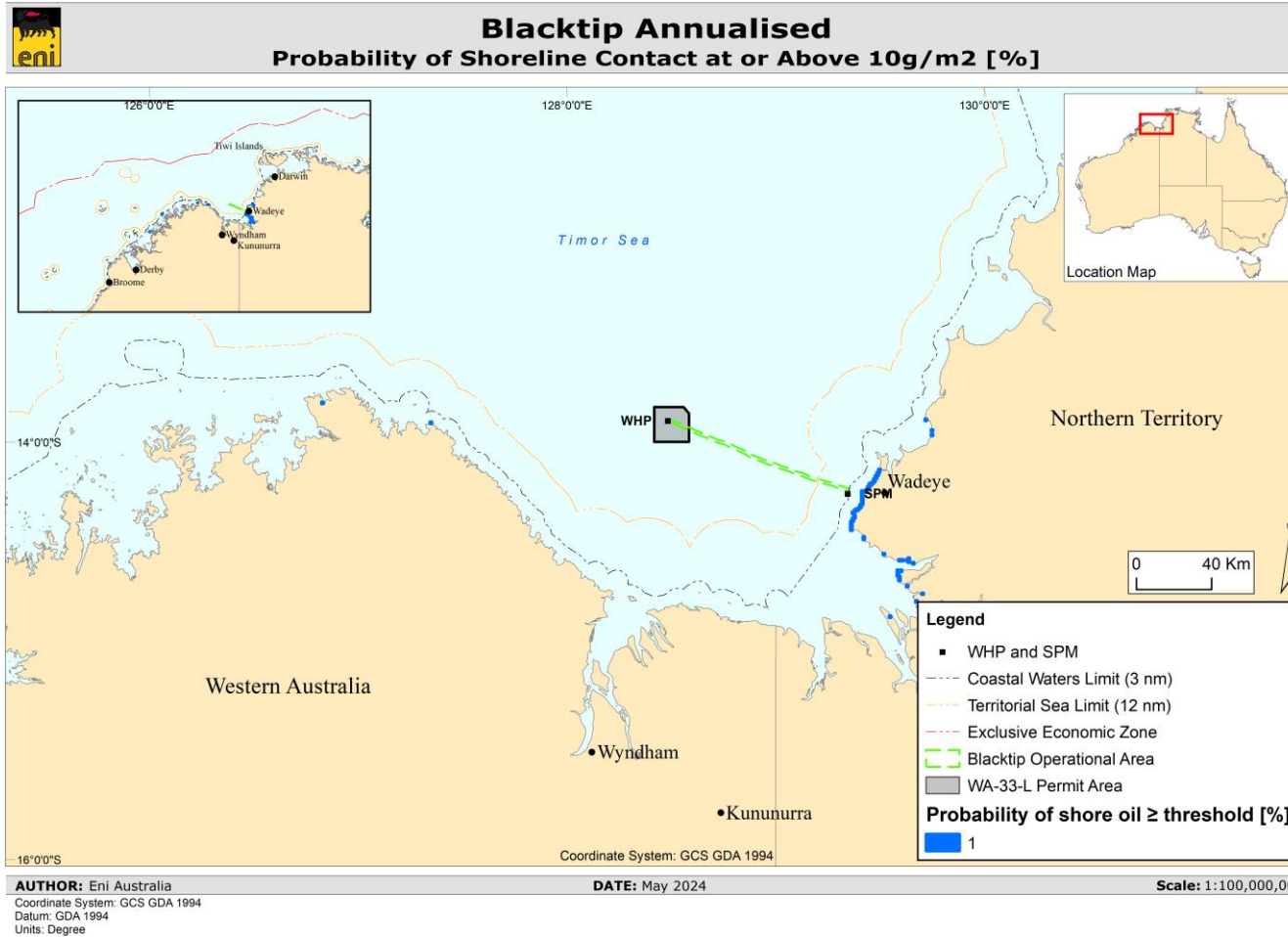



Figure 8.4: Predicted annualised probability of shoreline hydrocarbon concentrations at or above 10g/m² resulting from a 74 day surface release of Blacktip condensate

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8.6.2.6 Entrained Hydrocarbon

Low exposure threshold

Entrained hydrocarbon concentrations at or greater than 10 ppb could travel up to 975km from the release location (refer Figure 8.5).

The probabilities of contact by entrained oil concentrations are predicted to be greatest at the Carbonate Bank and Terrace System of the Sahul Shelf KEF (84% at 10 ppb), Joseph Bonaparte Gulf AMP (31% at 10 ppb), Kimberley Marine Park (18% at 10 ppb) and the Kimberley Coast (17% at 10 ppb) (refer Table 8.11).

Table 8.11: Expected annualised entrained oil outcomes (≥ 10 ppb) at receptors resulting from a 74 day surface release of Blacktip condensate

Receptor	Probability of entrained hydrocarbon (%)	Minimum time to receptor waters (hours)	Maximum entrained hydrocarbon concentration (ppb)
Joseph Bonaparte Gulf East	1	844	20
Joseph Bonaparte Gulf West	17	104	77
Kimberley Coast	17	107	110
Eugene McDermott Shoal	1	2106	11
Camden Sound	2	630	33
King Sound	2	677	37
North West Coast	1	1163	31
Joseph Bonaparte Gulf AMP	31	1	186
Carbonate Bank and Terrace System of the Sahul Shelf	84	26	256
Kimberley AMP	18	95	104



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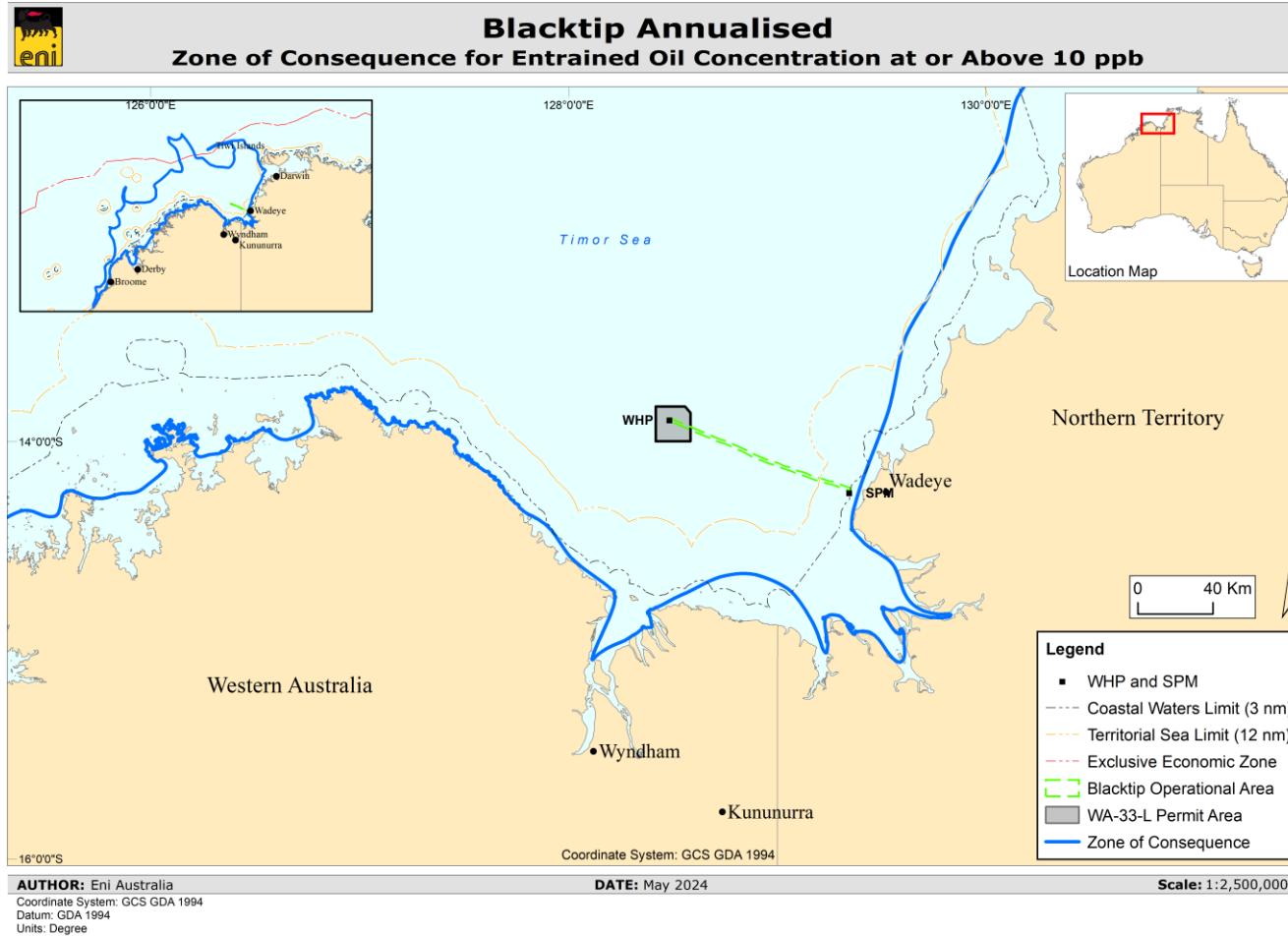



Figure 8.5: Predicted annualised environment that may be affected by entrained hydrocarbon concentrations at or above 10 ppb resulting from a 74 day surface release of Blacktip condensate

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Moderate exposure threshold

Entrained oil concentrations at or greater than 100 ppb could travel up to 310km from the release location (refer Figure 8.6). Concentrations are not predicted to exceed 500 ppb. Probability contours calculated for entrained oil at or greater than 100 ppb reveal oil will typically migrate in longshore directions towards Darwin to the north and Broome to the south, with each of these opposing trajectories more likely in certain seasons.

The probabilities of contact by entrained oil concentrations are predicted to be greatest at the Carbonate Bank and Terrace System of the Sahul Shelf KEF (4% at 100 ppb), Joseph Bonaparte Gulf AMP (1% at 100 ppb), Kimberley Marine Park (1% at 100 ppb) and the Kimberley Coast (1% at 100 ppb) (refer Table 8.12).

Minimum times of arrival at the 100 ppb entrained oil thresholds are predicted for the Carbonate Bank and Terrace System of the Sahul Shelf KEF (34 hours at 100 ppb), Joseph Bonaparte Gulf AMP (319 hours at 100 ppb), the Kimberley Marine Park (1077 hours at 100 ppb) and the Kimberley Coast (671 hours at 100 ppb) (refer Table 8.12).

The worst case instantaneous entrained oil concentration at any receptor is predicted at the Carbonate Bank and Terrace System of the Sahul Shelf KEF as 256 ppb.

Table 8.12: Expected annualised entrained oil outcomes (≥ 100 ppb) at receptors resulting from a 74 day surface release of Blacktip condensate

Receptor	Probability (%) of entrained hydrocarbon	Minimum time to receptor waters (hours)	Maximum entrained hydrocarbon concentration (ppb)
Carbonate Bank and Terrace System of the Sahul Shelf KEF	4	34	256
Joseph Bonaparte Gulf AMP	1	319	186
Kimberley Marine Park	1	1077	104
Kimberley Coast	1	671	110



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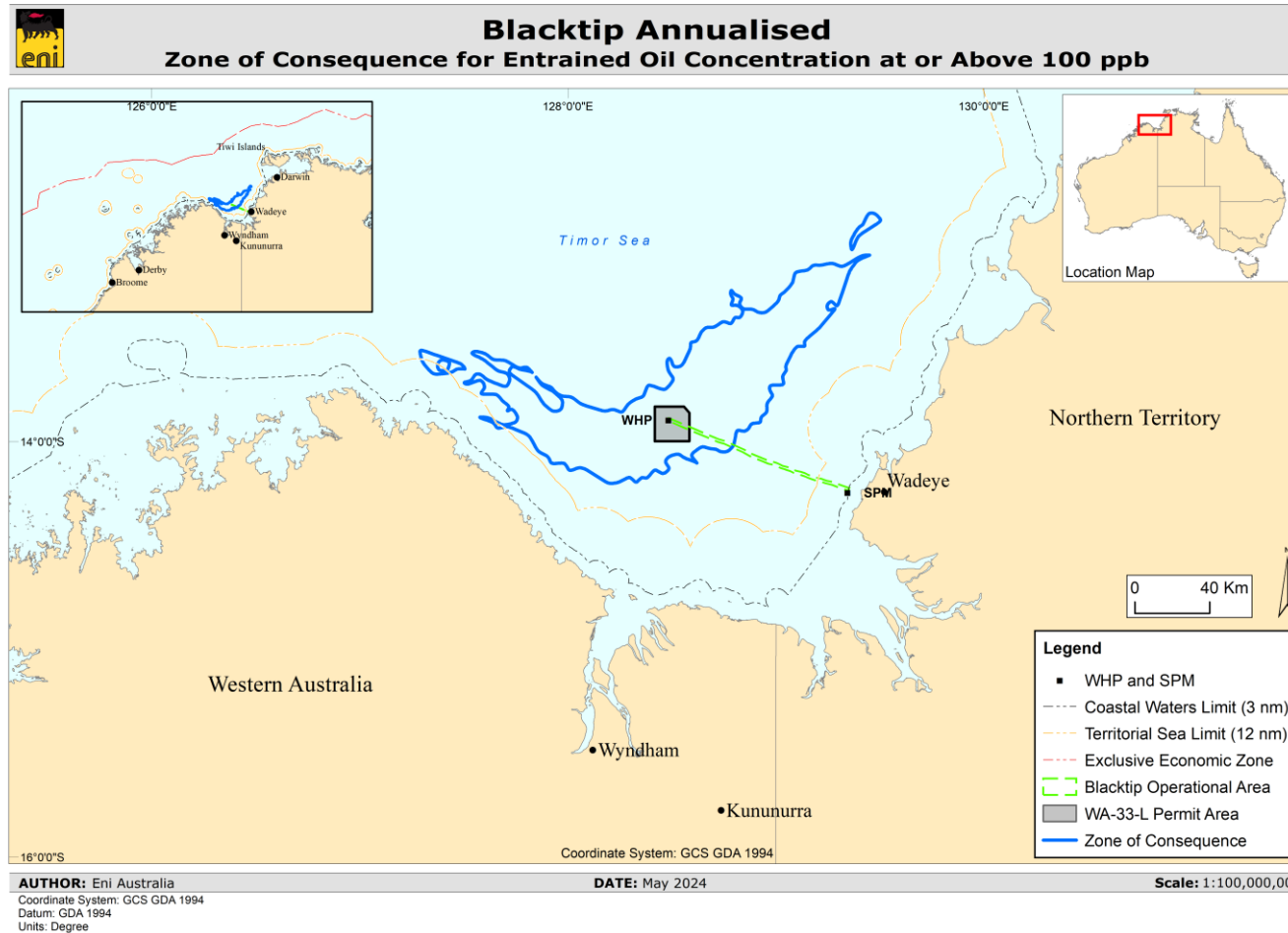



Figure 8.6: Predicted annualised environment that may be affected of entrained hydrocarbon concentrations at or above 100 ppb resulting from a 74 day surface release of Blacktip condensate

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8.6.2.7 Dissolved Aromatic Hydrocarbons

Low exposure threshold

Dissolved aromatic hydrocarbon concentrations at or greater than 6 ppb could travel up to 532km from the release location. The probability contours calculated for dissolved aromatic hydrocarbons reveal the directions of travel follow those of the entrained oil (refer Table 8.13).

The probabilities of contact by dissolved aromatic hydrocarbon concentrations are predicted to be greatest at the Carbonate Bank and Terrace System of the Sahul Shelf KEF, Joseph Bonaparte Gulf AMP, Joseph Bonaparte Gulf West and Kimberley AMP, with probabilities of 28%, 3%, 1% and 1% at the 6 ppb threshold, respectively (Table 8.13).

The worst case instantaneous dissolved aromatic hydrocarbon concentration at any receptor is predicted at the Carbonate Bank and Terrace System of the Sahul Shelf KEF as 44 ppb.

Table 8.13: Expected annualised dissolved aromatic hydrocarbon (>6 ppb) outcomes at sensitive receptors resulting from a 74 day surface release of Blacktip condensate

Receptor	Probability (%) of dissolved aromatic hydrocarbon concentration contact	Maximum entrained hydrocarbon concentration (ppb)
Carbonate Bank and Terrace System of the Sahul Shelf KEF	28	44
Joseph Bonaparte Gulf AMP	3	20
Joseph Bonaparte Gulf West	1	7
Kimberley AMP	1	26

Moderate exposure threshold

Dissolved aromatic hydrocarbon concentrations at or greater than 50 ppb could travel up to 24km from the release location (refer Figure 8.8). No sensitive receptors are contacted.



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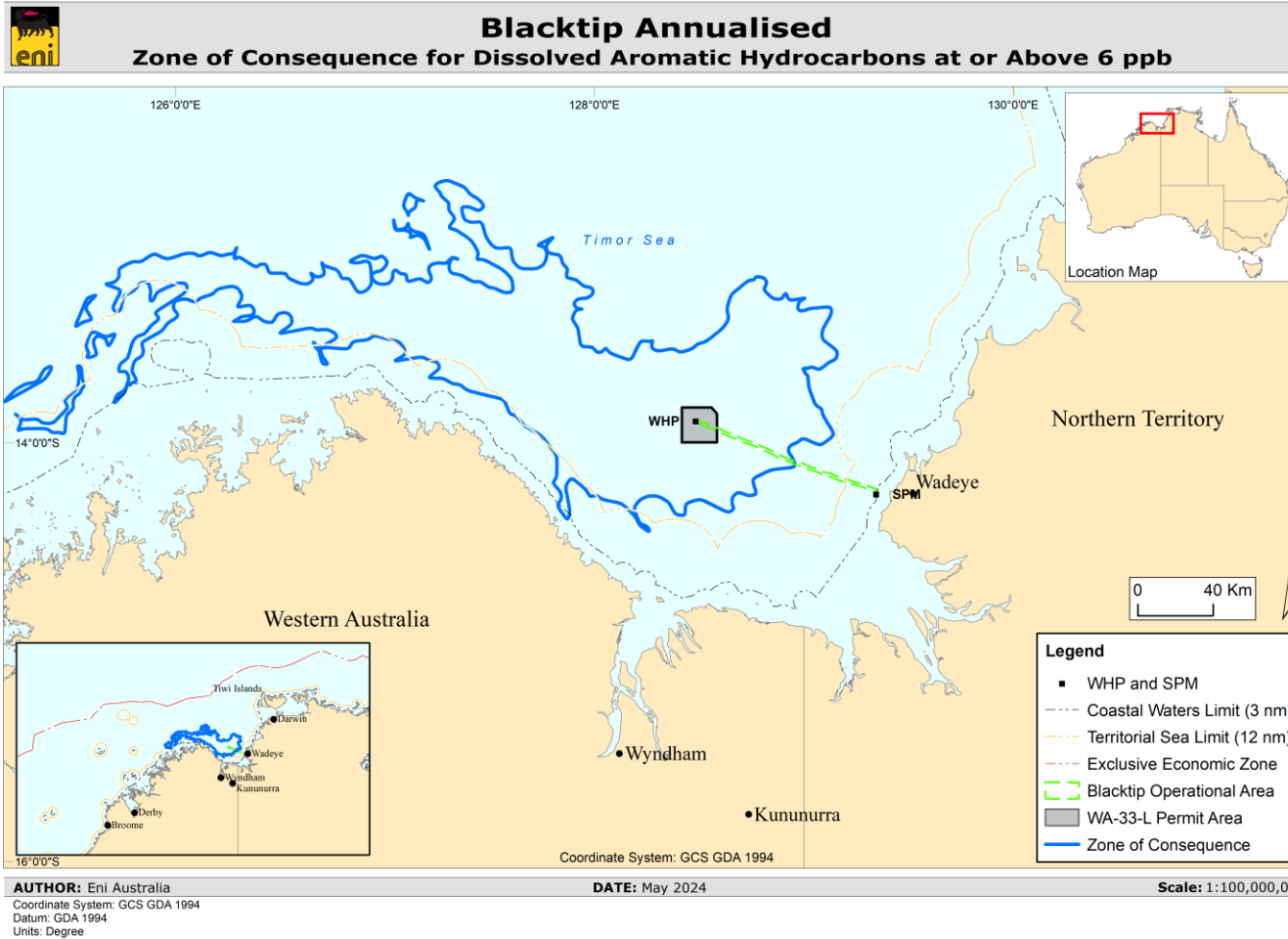


Figure 8.7: Predicted annualised environment that may be affected by dissolved aromatic hydrocarbon concentrations at or above 6 ppb resulting from a 74 day surface release of Blacktip condensate



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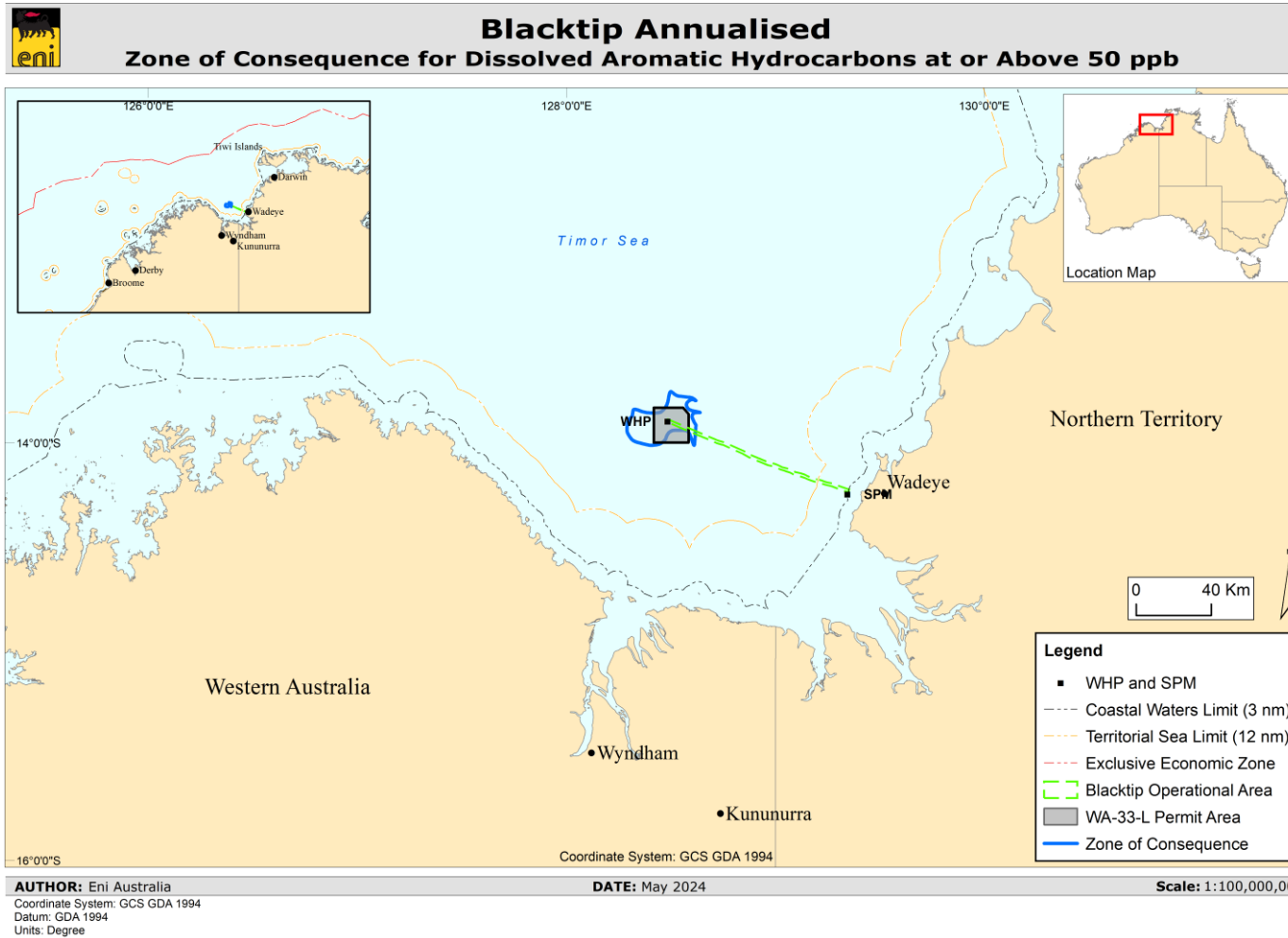



Figure 8.8: Predicted annualised environment that may be affected of dissolved aromatic hydrocarbon concentrations at or above 50 ppb resulting from a 74 day surface release of Blacktip condensate

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8.6.3 Potential Environmental Impact

A loss of 4943m³ Blacktip condensate to the marine environment would result in a localised reduction in water quality on the sea surface. As described above, the maximum distance a surface spill could travel at 1g/m² is predicted to be 19 km. Entrained oil concentrations at the 10 ppb thresholds could potentially be found up to 975km from the release location and forms the extent of the EMBA for a worst case well release event.

The Kimberley Coast, JBG East and JBG West receptors are predicted to have a 1% probability of receiving shoreline oil at 10g/m², with corresponding minimum times of arrival forecast as 47 days (1130 hours), 50 days (1194 hours) and 85 days (2049 hours), respectively. Maximum accumulated shoreline concentration is predicted to be 61g/m² at the JBG East shoreline. Shoreline impact is not anticipated, as the threshold that could impact the survival and reproductive capacity of intertidal benthic epifaunal is $\geq 100\text{g/m}^2$, based on French-McCay (2009). The volumes of accumulated hydrocarbons (maximum 10m³) are relatively minor (refer Table 8.10). It is therefore not anticipated shorelines will be significantly impacted from for a worst case well release.

Several sensitive receptors have the potential to receive concentrations of entrained (at 10 ppb and 100 ppb thresholds) and dissolved aromatics (at 6 ppb), at low probabilities and concentrations. Potential impacts, however, may include the contamination of sediments, impacts to benthic fauna and habitats, and associated impacts to demersal fish populations, resulting in reduced biodiversity (refer Table 8.14).

Table 8.14 further describes the nature and scale of the hydrocarbon spills for this activity on marine fauna and socioeconomic receptors found within the EMBA and moderate exposure area.

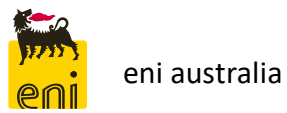
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Table 8.14: Nature and scale of hydrocarbon spills on environment and socio-economic receptors

Receptor	Impacts of a hydrocarbon spill (Blacktip condensate and MDO)		
	Surface	Entrained and dissolved aromatic hydrocarbons	Shoreline
Marine fauna			
Plankton (including zooplankton, fish and coral larvae)	Surface hydrocarbons will have no impact on plankton as they are in the water column only.	<p><u>Moderate threshold</u></p> <p>Modelling results show the hydrocarbon concentrations are greatest in the upper portion of the water column and surface. Effects to plankton are expected to be greatest in the upper 10m of the water column and areas close to the spill source where hydrocarbon concentrations are likely to be highest.</p> <p>Direct exposure of plankton to hydrocarbon may result in lethal or sublethal impacts. Studies have shown no obvious influence of oil spills on plankton, especially on community structure (Varela <i>et al.</i>, 2006), which could be a result of rapid replacement of stocks from adjacent areas due to water circulation, and will usually prevent any impact at the population or community level (Batten <i>et al.</i>, 1998). Other studies, however, have found the concentrations of phytoplankton reduced in the short term and in the medium term, as outbreaks of algal blooms occurred where the Chlorophyll-a concentration increased (Lee <i>et al.</i>, 2009; Sheng <i>et al.</i>, 2011; Pan <i>et al.</i>, 2012). Phytoplankton blooms generally occur during the growth season of phytoplankton, under warmer weather conditions (Tang <i>et al.</i>, 2019). Small amounts of oil spills are unable to trigger blooms in the open ocean; however, in low-energy environments such as coastal coves, large-scale oil spills could lead to blooms (Zhou <i>et al.</i>, 2014).</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to plankton. The low threshold exposure value applied to the EMBA represents the very lowest concentration and corresponds generally with the lowest trigger levels for chronic exposure for entrained hydrocarbons in the ANZECC & ARMCANZ (2000) water quality guidelines.</p>	N/A
	<p><u>Moderate threshold</u></p> <p>Plankton may be exposed to hydrocarbons. However, considering the spatial and temporal variation of phytoplankton and zooplankton communities within marine waters, significant impacts to plankton communities are unlikely. The concentrations of hydrocarbons in the water column will decrease over time once the release has stopped, due to processes such as dispersion, dilution, physical and biological degradation, and evaporation. Plankton are expected to rapidly recover on cessation of hydrocarbon release.</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to plankton.</p>		N/A
Marine mammals	<p><u>Moderate threshold</u></p> <p>Marine mammals can come into contact with surface hydrocarbon exposure when they surface to breathe. Marine mammals can be exposed to hydrocarbons externally – for example, suffering external oiling when swimming through surface slick or entrained hydrocarbon – or internally, such as swallowing the hydrocarbon, consuming oil affected prey, or inhaling volatile oil related compounds.</p> <p>The hydrocarbons associated with potential Blacktip spills will rapidly evaporate and disperse. Condensate modelling a worst case well release indicates the maximum distance to the outer extent of the 1g/m² surface hydrocarbons is predicted to be 19km and floating hydrocarbon concentrations are not predicted to exceed 10g/m² and 25g/m² thresholds at probabilities greater than 1% and in local proximity to the release. Similarly, MDO modelling from the vessel</p>	<p><u>Moderate threshold</u></p> <p>Marine mammals can come into contact with dissolved and entrained hydrocarbons in the water column, particularly the upper portion. Direct physical contact with entrained or dissolved aromatic hydrocarbons may result in surface fouling, ingestion of hydrocarbons (from prey, water and sediments), and aspiration of oily water or droplets (Deepwater Horizon Oil Spill Natural Resource Trustee Council, 2016). Effects such as irritation of eyes/mouth and potential illness may occur.</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts.</p>	N/A

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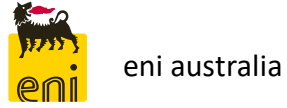
Receptor	Impacts of a hydrocarbon spill (Blacktip condensate and MDO)		
	Surface	Entrained and dissolved aromatic hydrocarbons	Shoreline
	<p>scenario shows the floating hydrocarbon concentrations at 10g/m² are predicted within 20km of the release. Based on the modelling, the impact area from surface hydrocarbons is largely confined to around the spill site and not the wider Joseph Bonaparte region. French-McCay (2009) identifies that a 10 to 25m oil thickness threshold has the potential to impart a lethal dose to species; however, also estimates a probability of 0.1% mortality if they encounter these thresholds based on the proportion of time spent at the surface.</p> <p>Behavioural disturbance – as in, avoiding spilled hydrocarbons – in some instances has been observed for several species of cetacean, suggesting they can detect and avoid surface slicks. However, observations during the Deepwater Horizon spill in the Gulf of Mexico noted larger whales (both mysticetes and odontocetes) and smaller delphinids travelling through and feeding in oil slicks (Aichinger Dias <i>et al.</i>, 2017). Other observations have noted marine mammals have swum directly into areas affected by hydrocarbons without appearing to detect or actively avoid the area (Volkman <i>et al.</i>, 1994; NOAA, 2017).</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to marine mammals.</p>		
	<p><u>Moderate threshold</u></p> <p>Ten migratory marine mammal species were identified by the EPBC Protected Matters search (Section 4.4). Of these, three are listed as threatened and one as vulnerable:</p> <p>Humpback whale: No BIA for humpback reproduction is within the moderate exposure area (nearest BIA is 370km south-west). It is possible, but unlikely, humpback whales may be present; however, significant numbers are not expected. Given the rapid evaporation of hydrocarbons, humpback whales are unlikely to be impacted.</p> <p>Blue whales: Blue whales show preference for water deeper than 500m, far in excess of the JBG. However, it is possible a small number of individuals may encounter entrained hydrocarbons. The absence of any known feeding, resting or breeding areas in JBG means significant numbers are unlikely to be impacted.</p> <p>Fin whale: In the unlikely event of a hydrocarbon spill, transient individuals may encounter entrained and surface hydrocarbons. The moderate threshold area is 500km from the BIA for pygmy blue whale migration BIA.</p> <p>Sei whale: In the unlikely event of a hydrocarbons spill, transient individuals may encounter entrained and surface hydrocarbons. However, the absence of any known feeding, resting or breeding areas in the moderate threshold area means significant numbers are unlikely to be impacted.</p> <p>Other migratory marine mammals may encounter either surface or entrained hydrocarbons; however, the absence of any known feeding, resting or breeding areas means significant numbers are unlikely to be impacted.</p> <p>Dugong: Dugongs have been reported to be present along the coastline from Cape Hay to Point Pearce, with main concentrations of species around Dorcherty Island (Woodside, 2004), 10km to the east of the moderate threshold area. However, seagrass habitat is limited (Woodside, 2004) and the JBG is therefore not expected to provide a habitat for dugong. Significant numbers are not expected to be impacted by surface, entrained or dissolved aromatic hydrocarbons.</p> <p>Indo-Pacific Humpback Dolphin: Given the shallow water depths (less than 100m) in the moderate threshold area and the Operational Area (20 to 50m), as well as the distance from shore that the species have been observed (up to 55km from shore), it is possible Indo-Pacific humpback dolphins may transit through the moderate threshold area. However, significant numbers are not expected to be exposed to surface, entrained or dissolved aromatic hydrocarbons.</p> <p>Australian Snubfin Dolphin: Sightings indicate Australian snubfin dolphins occur mostly in protected shallow coastal waters, and near river and creek mouths (Parra, 2006; Parra & Corkeron, 2001; Parra <i>et al.</i>, 2002). The species is likely to occur in the nearshore areas of the JBG. Significant numbers are not expected to be impacted by surface, entrained or dissolved aromatic hydrocarbons, particularly given most hydrocarbons will remain in offshore waters.</p>		N/A

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Receptor	Impacts of a hydrocarbon spill (Blacktip condensate and MDO)		
	Surface	Entrained and dissolved aromatic hydrocarbons	Shoreline
	<p>Hydrocarbons are expected to weather rapidly when released to the environment. Relatively fresh hydrocarbons (closer to the release location) are considered to have the greatest potential for impact. Given the wide distribution of marine mammal species in the region and the nature of the potential impacts, which are likely to be temporary and limited to a number of individuals, impact to an entire population or the population's overall viability is not anticipated.</p> <p><u>EMBA (low threshold)</u> Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to marine mammals. Marine mammals within the EMBA have been identified in Section 4.4 and further described in Appendix B.</p>		
Marine reptiles	<p><u>Moderate threshold</u> Marine turtles may be exposed to surface hydrocarbons when at the sea surface, such as breathing and basking, and are not expected to avoid floating hydrocarbon slicks. Effects include irritation of eyes and mouth and potential illness. Irritation of mucous membranes in the nose, throat and eyes has been observed to cause inflammation and infection (NOAA, 2010). Surface respiration could lead to accidental ingestion of hydrocarbons or result in the coating of sensitive epidermal surfaces and may also impact turtles if they inhale toxic vapours. This can lead to lung damage and congestion, interstitial emphysema, inhalant pneumonia and neurological impairment (NOAA, 2010). The hydrocarbons associated with potential Blacktip spills (MDO, condensate) will rapidly evaporate and disperse. Condensate modelling from a worst case well release indicates the maximum distance to the outer extent of the 1g/m² surface hydrocarbons is predicted to be 19km and floating hydrocarbon concentrations are not predicted to exceed 10g/m² and 25g/m² thresholds at probabilities greater than 1% and in local proximity to the release. Similarly, the MDO modelling from vessel scenario shows the floating hydrocarbon concentrations at 10g/m² are predicted within 20km of the release. It is therefore predicted the impact area from surface hydrocarbons is confined to around the spill site and not the wider JBG region. Other spill scenarios for surface impacts are considered to be within the above-mentioned distances. <u>EMBA (low threshold)</u> Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts.</p>	<p><u>Moderate threshold</u> Marine turtles can come into contact with dissolved and entrained hydrocarbons in the water column, particularly the upper water column. Contact with hydrocarbons may result in irritation of mucous membranes in the nose, throat and eyes, subsequently causing inflammation and infection (NOAA, 2010). <u>EMBA (low threshold)</u> Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts.</p>	<p>Shoreline-accumulated hydrocarbons may result in toxic impacts to turtle nesting habitat potentially impacting adults, eggs and hatchlings. A significant flatback turtle nesting area occurs on the north side of Cape Domett, WA (75km to the south of the Operational Area and nesting sites are also located on Lacrosse Island and Pelican Island in the same region. Stranded hydrocarbons are anticipated to be <1m³ on the north Kimberley coastline where these beaches are located. Given the volume of stranded hydrocarbon, significant impacts are not anticipated. Other areas of the Kimberly coastline (including Beagle Bay, Dampier Peninsula – as reported by the Nyul-Nyul Traditional Owners) are also reported as a turtle nesting beaches, however shoreline accumulation is not predicted (offshore waters may be subject to in-water hydrocarbons at low thresholds only). Turtles were monitored during construction of the Blacktip facilities in 2009. This confirmed a maximum of 12 nests being laid on Yelcherr Beach (7km from the Operational Area). These beaches have the potential to receive very low volumes of condensate for a worst case well release (<10m³ across all JBG East shorelines) and have the potential to receive relatively low volumes of MDO from a vessel release (maximum 46m³ across all Thamarrurr region shorelines). While the impacts to individual nesting turtles, eggs and hatchlings may be severe, the small volumes and quick evaporation of Blacktip condensate and MDO and the short duration of persistence means the number of individuals potentially affected would be very low and population level impacts will not occur.</p>
	<p><u>Moderate threshold</u> Seven species of threatened marine reptile were identified as possibly being impacted by a hydrocarbon spill. Short-nosed sea snake, flatback, hawksbill, leatherback, green, olive ridley and loggerhead turtles are widely dispersed in the JBG. In the unlikely event of a hydrocarbon spill occurring, individuals traversing open water may come into contact with entrained, dissolved aromatic or surface hydrocarbons. Given the distance to turtle nesting beaches (nearest is Yelcherr Beach, 7km from the SPM location), should a spill occur during hatchling season, a small number of hatchlings could be contacted. However, MDO and condensate spills will quickly weather and evaporate and the number of hatchlings or transient adults encountering hydrocarbons is likely to be low and would not represent a significant proportion of the local population. Given the wide distribution of marine reptile species and the nature of the potential impacts, which are likely to be temporary and limited to a number of individuals, impact to an entire population or a population's overall viability is not anticipated. <u>EMBA (low threshold)</u> Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to marine reptiles. Marine reptiles within the EMBA have been identified in Section 4.4 and further described in Appendix B.</p>		

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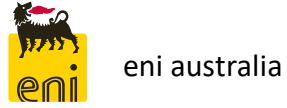
Receptor	Impacts of a hydrocarbon spill (Blacktip condensate and MDO)		
	Surface	Entrained and dissolved aromatic hydrocarbons	Shoreline
Seabirds	<p><u>Moderate threshold</u></p> <p>Seabirds are particularly vulnerable to surface hydrocarbons, as most fish survive beneath floating slicks and will continue to attract foraging seabirds, which typically do not exhibit avoidance behaviour. Smothering of feathers can lead to reduced water proofing and ingestion while preening. In addition, hydrocarbons can erode feathers, causing chemical damage to the feather structure that subsequently affects the ability to thermoregulate and maintain buoyancy on water.</p> <p>The hydrocarbons associated with potential Blacktip spills (MDO, condensate) will rapidly evaporate and disperse. Condensate modelling from a worst case well release indicates the maximum distance to the outer extent of the 1g/m² surface hydrocarbons is predicted to be 19km and floating hydrocarbon concentrations are not predicted to exceed 10g/m² and 25g/m² thresholds at probabilities greater than 1% and in local proximity to the release. Similarly, MDO modelling from the vessel scenario shows the floating hydrocarbon concentrations at 10g/m² are predicted within 20km of the release. It is therefore predicted the impact area from surface hydrocarbons is confined to around the spill site and not the wider JBG region.</p>	<p><u>EMBA (low threshold)</u></p> <p>Seabirds may encounter entrained and dissolved aromatics while diving and foraging, leading to physical and toxic effects such as irritation of eyes and mouth and potential illness.</p>	<p>Shorebirds are generally not as susceptible to direct oiling when compared to seabirds and accumulated hydrocarbons will evaporate quickly in the temperatures experienced in the JBG. However, reduced prey may be available to foraging shorebirds due to mortality or avoidance, and nesting individuals may be temporarily disrupted.</p> <p>A variety of endemic and migratory bird species depend on the productive feeding grounds of the NT mangroves and intertidal flats. Some species are mangrove specialists, such as the mangrove robin, white-breasted whistler, mangrove honeyeater and mangrove kingfisher. Wading and waterbirds that use mangroves include jabiru and various egret and heron species.</p> <p>Beaches have the potential to receive very low volumes of condensate (<10m³ across all JBG East shorelines) and have the potential to receive relatively low volumes of MDO from a vessel release (maximum 46m³ across all shorelines). Small volumes and quick evaporation of the potentially stranded hydrocarbons and the short duration of persistence means the number of individuals potentially affected would be low.</p>
	<p><u>Moderate threshold</u></p> <p>As identified in Section 4.4, seabird and shorebird species may occur in the Operational Area and over the wider region. The species that have pollution as a key threat listed in their conservation advice are:</p> <ul style="list-style-type: none"> • Abbott's booby • curlew sandpiper • red knot • eastern curlew • bar-tailed godwit (baueri) • northern Siberian bar-tailed godwit • Australian painted snipe. <p>Due to the quick evaporation and dispersion of the hydrocarbons, significant impacts are not anticipated. Condensate modelling from a worst case well release indicates the maximum distance to the outer extent of the 1g/m² surface hydrocarbons is predicted to be 19km and floating hydrocarbon concentrations are not predicted to exceed 10g/m² and 25g/m² thresholds at probabilities greater than 1% and in local proximity to the release. Similarly, MDO modelling from the vessel scenario shows the floating hydrocarbon concentrations at 10g/m² are predicted within 20km of the release. While the great frigatebird, lesser frigatebird, roseate tern, and red-footed booby have BIAs for reproduction over the moderate threshold, these areas do not overlap the surface hydrocarbon and species are unlikely to be significantly impacted.</p> <p>The quick weathering of the hydrocarbons (MDO, Blacktip condensate) limits the area of surface exposure. Impacts to seabirds in offshore waters are expected to primarily consist of effects such as reduced prey abundance.</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to seabirds. Seabirds within the EMBA have been identified in Section 4.4 and further described in Appendix B.</p>		
Fish and sharks	<p><u>Moderate threshold</u></p> <p>Since the MDO and Blacktip condensate are expected to fully disperse and evaporate within eight hours and 24 hours (90% evaporated), the probability of prolonged exposure to a surface slick by fish and shark species is very low at the sea surface. Condensate modelling from a worst case well release indicates the maximum distance to the outer extent of the 1g/m² surface hydrocarbons is</p>	<p><u>Moderate threshold</u></p> <p>Hydrocarbon droplets can physically affect fish and sharks exposed for an extended duration (weeks to months). Smothering through coating of gills can lead to the lethal and sub-lethal effects of reduced oxygen exchange, and coating of body surfaces may lead to increased incidence of irritation and infection. Fish may also ingest hydrocarbon droplets or contaminated food, leading to reduced growth.</p>	N/A

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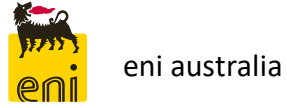
Receptor	Impacts of a hydrocarbon spill (Blacktip condensate and MDO)		
	Surface	Entrained and dissolved aromatic hydrocarbons	Shoreline
	<p>predicted to be 19km and floating hydrocarbon concentrations are not predicted to exceed 10g/m² and 25g/m² thresholds at probabilities greater than 1% and in local proximity to the release. Similarly, MDO modelling from the vessel scenario shows the floating hydrocarbon concentrations at 10g/m² are predicted within 20km of the release.</p> <p>As fish and sharks dwell in the water column, impacts are most likely from the entrained hydrocarbons, through the pathways of ingestion or the coating of gill structures. This could lead to respiratory problems or accumulation of hydrocarbons in tissues. In the worst instance, this could lead to mortality or sub-lethal stress.</p> <p><u>Moderate threshold</u></p> <p>The JBG supports a diverse assemblage of fish, particularly in shallower water near the mainland. As identified in Section 4.4, fish and shark species may occur in the Operational Area and over the wider region. Given the wide distribution of fish species in the region and the nature of the potential impacts, which are likely to be temporary and limited to individuals, impact to an entire population or a population's overall viability is not anticipated.</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to fish and sharks. Fish and sharks within the EMBA have been identified in Section 4.4 and further described in Appendix B. Exposure to entrained and dissolved hydrocarbons could result in the accumulation of oil in fish tissues to the extent that could result in hydrocarbon taint of fish flesh. This is discussed under the Socioeconomic section of this table. An exposure at the low threshold could have some potential slight negative effect if the receptor is exposed for a significant duration.</p>	<p>Site-attached fish, such as reef fish, have small home ranges and are at higher risk from hydrocarbon exposure than more wide-ranging species. Effects will be greatest in the upper 10m of the water column and areas close to the spill source, where hydrocarbon concentrations are predicted to be highest.</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts.</p>	
Benthic habitats			
Benthic habitats	<p>Benthic habitats within and in proximity to the Operational Area are expected to consist of predominantly burrowers and crinoids, filter feeders and macroalgae, with a substantial portion of the area also supporting no benthic habitat. Hydrocarbon exposure at or above moderate thresholds are not expected to exceed depths of approximately 25m; therefore, limited direct sediment contact is predicted to occur in the deeper offshore waters.</p> <p>Benthic habitats and communities may be exposed to in-water (entrained and dissolved) hydrocarbons in shallow and nearshore areas and may be subject to acute and chronic toxic effects. Many benthic fauna species have planktonic larval phases, such as corals, echinoderms and sponges, that produce very high numbers of larvae, which are more susceptible to hydrocarbon exposure. Hydrocarbon releases may result in increased mortality of benthic fauna, particularly during larvae stages, which are also subject to high natural mortality; however, this is not expected to result in population-scale impacts.</p>		
Shoreline habitats			
Sandy beaches	<p>Typically, sandy beach ecosystems are attributable to the benthic invertebrate fauna – such as polychaetes, molluscs, marine crustaceans, semi terrestrial crustaceans and insects – inhabiting the sediments. However, sandy beaches also provide important habitats for nesting turtles, breeding and foraging seabirds, and shorebirds.</p> <p>Beaches have the potential to be receive very low volumes of condensate (<10m³ across all JBG East shorelines) and have the potential to receive relatively low volumes of MDO from a vessel release (maximum 46m³ across all shorelines). Given the relatively small volumes potentially making contact with shorelines, and the rapid evaporation of hydrocarbons, impacts are expected to be temporary and slight. Contact at <10g/m² is anticipated to result in a minor reduction in visual amenity of shorelines only.</p>		
Intertidal/subtidal habitats			
Intertidal reefs (including coral communities, intertidal limestone pavement and macroalgae communities)	<p><u>Moderate threshold</u></p> <p>Physical effects from entrained oil have the potential to coat contacted coral reefs. The phenomena of smothering of exposed coral surfaces or polyps by oil spills has only been reported where very large oil spill quantities, or very sticky oil slicks, have been encountered. Response to hydrocarbon exposure can include impaired feeding, fertilisation, larval settlement and metamorphosis, larval and tissue death, and decreased growth rates. Entrained oil also has the potential to impact reef fauna (fish, turtles, and marine mammals), as outlined in rows above.</p> <p>Significant impacts to intertidal reef habitats are not expected, due to the quick dispersal and evaporation of hydrocarbons in the marine environment and the low concentrations of entrained hydrocarbon which could contact the intertidal areas of the Kimberley (less than 110ppm, see Table 8.12). Impacts to species associated with intertidal habitats are assessed above.</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to intertidal reefs.</p>		
Submerged reefs	<p><u>Moderate threshold</u></p> <p>Submerged reefs and shallow shoals are found at the Carbonate Bank and Terrace System of the Sahul Shelf KEF.</p> <p>The likelihood of surface hydrocarbons contacting submerged reefs and shoals is low, largely due to the distance between the sea surface and the submerged habitat. Modelling results show the hydrocarbon concentrations are not expected to exceed depths of approximately 25m, with higher concentrations in the upper portion of the water column and surface.</p>		

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Receptor	Impacts of a hydrocarbon spill (Blacktip condensate and MDO)		
	Surface	Entrained and dissolved aromatic hydrocarbons	Shoreline
	<p>Physical effects from entrained oil have the potential to coat contacted coral reefs. The phenomena of smothering of exposed coral surfaces or polyps by oil spills has only been reported where very large oil spill quantities, or very sticky oil slicks, have been encountered. Response to hydrocarbon exposure can include impaired feeding, fertilisation, larval settlement and metamorphosis, including larval and tissue death and decreased growth rates (Villanueva <i>et al.</i>, 2008).</p> <p>Filter feeders such as molluscs are especially liable to ingest oil with lethal and various sub-lethal effects. This includes alteration in respiration rates, decreases in filter-feeding activity, reduced growth rates, biochemical effects, increased predation, reproductive failure, and mechanical destruction by waves due to inability to maintain a hold on substrate (Connell & Miller, 1981). Entrained oil also has the potential to impact marine fauna (fish, turtles, marine mammals), as outlined in rows above. Impacts are expected to be temporary and slight.</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to submerged reefs. Submerged reefs that may be contacted by entrained hydrocarbons have been identified in Table 8.12. Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts. The low threshold exposure value applied to the EMBA represents the very lowest concentration and corresponds generally with the lowest trigger levels for chronic exposure for entrained hydrocarbons in the ANZECC & ARMCANZ (2000) water quality guidelines. An exposure at the low threshold could have some potential slight negative effect if the receptor is exposed for a significant duration.</p>		
Mangroves	<p><u>Moderate threshold</u></p> <p>Intertidal mangrove habitats occur throughout the coastlines of the JBG and are vulnerable to floating, entrained and dissolved hydrocarbon above moderate exposure thresholds. Hydrocarbons entering mangrove forests in tidal areas do so at or near high tide, smothering aerial roots and potentially leaves. The severity of exposure for mangroves largely depends on the amount and type of oil entering the intertidal zone (Duke, 2016). While heavy oils (high specific gravity) are particularly proficient at coating and smothering small plants and aerial root systems, lighter oils with low specific gravity, such as MDO and condensates, are more toxic to mangroves (Hensel <i>et al.</i>, 2014; Connolly <i>et al.</i>, 2020). The potential for toxicity effects from hydrocarbons may be reduced by weathering processes that should serve to lower the content of soluble aromatic components before contact occurs. Hydrocarbons are expected to be highly weathered before reaching shallower areas where intertidal mangrove habitats may occur, limiting any impact.</p> <p><u>EMBA (low threshold)</u></p> <p>Exposure at the low hydrocarbon threshold is not anticipated to result in biological impacts to mangroves.</p>		
Socioeconomic			
Fisheries	<p>Exclusion zones surrounding surface hydrocarbons can directly impact fisheries by restricting access; however, this is predicted to be very temporary due to the rapid evaporation and dispersion of MDO and condensates.</p> <p>Given the large spatial extent of managed fisheries in the area potentially contacted above moderate exposure thresholds, a spill is unlikely to result in complete closure of a fishery.</p>	<p>State and Commonwealth commercial fisheries areas may be contacted by hydrocarbons (refer to Section 4.6.1).</p> <p>Entrained hydrocarbons can have toxic effects on fish, reducing catch rates and rendering fish unsafe for consumption. Exposure to entrained and dissolved hydrocarbons could result in the accumulation of oil in fish tissues to the extent that could result in hydrocarbon taint of fish flesh. Connell and Miller (1981) compiled a summary of studies listing the exposure value concentrations at which tainting occurred for hydrocarbons. The results contained in their review indicate tainting of fish occurs when they are exposed to ambient concentrations of four to 300ppm (4000 to 300,000 ppb) of hydrocarbons in the water, for durations of 24 hours or more. In general, fish are not expected to retain a taint for longer than a week after exposure to entrained or dissolved hydrocarbons (Gagnon & Holdway, 2000, cited in Westera & Babcock, 2016)</p> <p>The potential for toxicity effects of hydrocarbons may be reduced by weathering processes that should serve to lower the content of soluble PAH components over time, reducing the likelihood of tainting. However, there remains a potential for economic impact to commercial fisheries. Impact is likely to remain for a period long after any actual risk has subsided due to concerns around seafood safety.</p>	N/A
Traditional Indonesian fishing	<p>Surface hydrocarbons are not predicted to contact the MoU box (refer to Section 4.6.2), where Traditional Indonesian fishing may occur.</p>	<p>Traditional Indonesian fishing activity occurs within the MoU box (refer to Section 4.6.2), which is located approximately 500km to the west the Operational Area and lies within the EMBA (low exposure threshold). Traditional fishing is concentrated around banks, shoals, island and reefs; refer to Intertidal/subtidal habitats in the above rows for discussion of potential impacts to these receptors.</p> <p>As described above (Fisheries) entrained hydrocarbon can have toxic effects on fish, reducing catch rates and rendering fish unsafe for consumption. Exposure to entrained and dissolved oil could result in the accumulation of oil in fish tissues to the extent that could result in hydrocarbon taint of fish flesh.</p>	N/A

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Receptor	Impacts of a hydrocarbon spill (Blacktip condensate and MDO)		
	Surface	Entrained and dissolved aromatic hydrocarbons	Shoreline
		Hydrocarbon exposure may impact upon the biological resources exploited by traditional Indonesian fishers, such as fish and benthic invertebrates (e.g. sea cucumbers and trochus shells). Impacts to these biological resources may result in effects on traditional fishers, such as reduced catch rates. Given the distance between the release locations and the MoU box, impacts to traditional Indonesian fishing activities are considered to be unlikely and would be slight.	
KEFs	KEFs contacted by hydrocarbons are presented in Section 4.5.4. While some features associated with the KEFs are subtidal or submerged and would not be directly contacted by floating hydrocarbons, they all may support increased productivity or abundance of marine fauna that use the waters above the features – including plankton, pelagic invertebrates and fish, marine mammals, marine reptiles and seabirds – which may be impacted by entrained or dissolved hydrocarbons. Impacts to marine fauna are described above.		N/A
Tourism and recreational fishing	In the waters immediately surrounding the Operational Area, tourism activities are expected to be low. However, nearer shore areas, there are many sources of marine-based tourism within the EMBA. Expedition cruise boats operate in the dry months (April to October) between Broome and Wyndham and Darwin, exploring the Kimberley coastline. Recreational fishing over the area is possible; occasional passing private motor vessels or yachts may also occur. A hydrocarbon spill may temporarily displace these users and impact their use for a period. It is considered highly unlikely there will be long-term impacts to tourism and recreation activities. Exclusion zones surrounding a spill will reduce access for vessels for the duration of the response undertaken for spill clean-up (if applicable).		Stranding of condensate on sandy beaches is anticipated to be very low (<10m ³ on JBG East and less than 1m ³ on the Kimberley Coastline). Shorelines have the potential to receive relatively low volumes of MDO from a vessel release (maximum 46m ³ across all shorelines). Tourism activity on the JBG beaches is very low and, given the low volumes of accumulated hydrocarbons, impact is not anticipated to be significant or lasting. Contact at <10g/m ² is anticipated to result in a reduction in visual amenity of shorelines only.
Shipping	There is limited activity in the JBG. Exclusion zones surrounding surface hydrocarbons will reduce access for shipping vessels for the duration of the response undertaken for spill clean-up (if applicable); vessels may have to take large detours, leading to potential delays and increased costs. Any impact is predicted to be very temporary due to the rapid evaporation and dispersion of MDO and condensates. Interference of shipping due to a hydrocarbon release is likely to be very minimal.		N/A
Defence	Defence activities occur in airspace only; therefore, interference of defence activities due to a hydrocarbon spill are likely to be minimal.		N/A
Shipwrecks	The potential for in-water hydrocarbons to impact on shipwrecks is poorly documented. However, it has been proposed that exposure to oil may alter bacterial community composition (biofilms) inhabiting shipwrecks, possibly altering corrosion potential (Salerno <i>et al.</i> , 2016).		N/A
First Nations heritage	Sea Country is valued for First Nations cultural identity, health and wellbeing (Section 4.6.9).. Across Australia, First Nations people have been sustainably using and managing their Sea Country for tens of thousands of years. First Nations Heritage consisting of Cultural Heritage Values and Sea Country are considered as socially important Receptors. These include coastal and marine Aboriginal heritage sites and places, some of which are registered Aboriginal sites and sacred sites. An unplanned large-scale spill has the potential to impact First Nations Heritage consisting of Cultural Heritage Values including coastal areas and Sea Country. Maintaining relationships and facilitating ongoing discussions with Traditional Owners and communities connected to the Sea allowing opportunities for ongoing improvements to spills preparedness, prevention and mitigation, building resilience and capacity in the community as well as the protection of Socially Important Receptors (Joseph Bonaparte Gulf AMP discussed in section 4.5.1 and Appendix B). Coastal areas and Sea Country in the JBG are most likely to be affected in the event of an unplanned large-scale spill such as loss of well containment. A unplanned large-scale spill will impact Sea Country within the JBG for a period, while the spill disperses and weathers. Impacts to the range of species to which Traditional Owner groups may have cultural connections has been discussed throughout this section. Section 4.6.9 provides information on Traditional Owners knowledge and First Nations Heritage specific to this region and Section 6.1 discusses ENIs approach to engaging these and other relevant persons in such conversation. It must be noted that that the likelihood of a hydrocarbon spill occurring is assessed as highly unlikely and the actual area that may be affected from any single spill event would be considerably smaller than represented by the EMBA or ZPI (Section 8.5).		Archaeological sites may exist in intertidal landscapes within the EMBA and may be exposed to hydrocarbon from an unplanned spill; however, there is no anticipated impact pathway from the presence of hydrocarbons on archaeological values, as this is not expected to impact the fabric or context of sites on an exposed shoreline site.

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Receptor	Impacts of a hydrocarbon spill (Blacktip condensate and MDO)		
	Surface	Entrained and dissolved aromatic hydrocarbons	Shoreline
	<p>Combining Traditional Owner knowledge and Spill Modelling Data that considers geographic and metocean data as well as hydrocarbon exposure types, thresholds, concentrations, transport, dispersal, fate, and weathering (Section 8.5) assists with understanding potential impacts on social receptors in the EMBA or ZPI.</p> <p>Visible sheen resulting from floating hydrocarbons is predicted to remain relatively localised and only extend up to 19 km from the release location which is not expected to impact First Nations/ Traditional owners values sensitivities or Sea Country.</p> <p>Accumulation of oil on shorelines has not been predicted to exceed concentrations in excess of the 100 g/m2 (Table 8.9). Therefore, significant impact to traditional owner sensitivities or values aligning with the protection of coastal ecological receptors, fauna and habitat is not anticipated.</p> <p>In the unlikely event that coastal areas within the EMBA are exposed to lower concentrations, short term changes to sediment quality and aesthetics along shorelines may occur presenting minimal and temporary impact on Traditional Owner values, sensitivities and sea country.</p> <p>Release of condensate resulting from loss of well containment could result in concentrations of entrained hydrocarbons (at 10ppb and 100ppb thresholds) and dissolved aromatics (at 6ppb), at low probabilities and concentrations. There is potential for values and sensitivities associated with Aboriginal traditional use of resources to be affected by entrained and dissolved aromatic hydrocarbon exposure. Aboriginal traditional use of resources (seafood quality and employment) could be impacted due to entrained/dissolved oil. The impact to fish communities from exposure to entrained and dissolved hydrocarbons above threshold values, is primarily associated with toxicity resulting in impacts to seafood quality.</p> <p>Access to Country within the EMBA would be limited to temporary exclusion in areas where there are hydrocarbons present, including shoreline accumulation.</p> <p>Submerged archaeological sites (locations undefined) may exist within the broader EMBA. An unplanned hydrocarbon spill is not expected to impact the seabed or archaeological material on or within it. Therefore, there is no anticipated impact pathway to submerged archaeological sites in the EMBA.</p> <p>While the presence of Songlines is generally raised in the literature (refer to Section 4.6.9), no specific details have been identified over the EMBA, therefore no impacts are anticipated.</p>		
Existing oil and gas activity	There is no oil and gas infrastructure in the vicinity of the surface hydrocarbons. Any impact is predicted to be very temporary due to the rapid evaporation and dispersion of MDO and condensates.		N/A
Protected areas/ marine parks	<p>Marine parks (Australian and State) in the moderate threshold area and EMBA are presented in Section 4.5.1.</p> <p>Given the GEP overlaps the Joseph Bonaparte Gulf AMP, there is the potential for immediate contact with MDO from a vessel spill or condensate from a GEP release. Other AMPs are more than 200km from the Operational Area; therefore, any contact will be with highly weathered hydrocarbons, reducing the potential impacts. Hydrocarbons contacting marine parks may impact the value of the marine parks for a period. These values include:</p> <ul style="list-style-type: none"> • natural • cultural • socioeconomic. <p>Appendix B details the values of the individual marine parks.</p> <p>Extensive contact with deeper features such as KEFs associated with the marine parks is not predicted, given the modelling predicts hydrocarbon concentrations are not predominantly within the upper water column. Marine parks support increased productivity or abundance of marine fauna that use the waters – including plankton, pelagic invertebrates and fish, marine mammals, marine reptiles and seabirds – which may be impacted by hydrocarbons, as previously described in this table.</p> <p>Table 8.15 discusses further the impact to each of the values, as identified in the Australian Marine Parks North Network Management Plan (DNP, 2018a).</p>		N/A

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Given the Operational Area overlaps the Joseph Bonaparte Gulf AMP, an assessment against the consistency of the Blacktip operations and hydrocarbon release risk against the visions and objectives detailed within the Australian Marine Parks North Network Management Plan (DNP, 2018a) has been made in Table 8.15.

Table 8.15: Assessment of the Blacktip operations and hydrocarbon release risk on the vision from the Australian Marine Parks North Network Management Plan

Vision	Assessment of consistency
The vision of the Director of National Parks (the Director) is that marine parks are healthy, resilient and well managed to enhance Australia's wellbeing. This means ensuring that:	
1. Natural, cultural, socio-economic and heritage values are understood, appreciated and conserved	<p>Not inconsistent</p> <p>Section 3.7 presents the natural, cultural, socio-economic and heritage values that may be contacted by hydrocarbons, as informed by conservative hydrocarbon modelling. Table 8.14 provides an impact assessment of a hydrocarbon release from Blacktip operations.</p> <p>Extensive contact with the natural features of the Joseph Bonaparte Gulf Marine Park is not anticipated. Hydrocarbon exposure at or above moderate exposure thresholds are expected to be limited to the upper water column; therefore, limited direct seabed contact is predicted.</p> <p>The AMP supports a range of species, including species listed as 'threatened' or 'migratory' under the EPBC Act. Impacts to the range of species the marine park supports has been discussed throughout Table 8.14.</p> <p>Appropriate controls have been evaluated and adopted to manage potential impacts and risks from a hydrocarbon release to the AMP to ALARP and acceptable levels for the duration of the Blacktip operations.</p> <p>An assessment against the natural, cultural, socio-economic and heritage values of the AMP is in Table 8.16. Impacts will occur for a short period while the condensate disperses and weathers; however, lasting impact is not anticipated.</p>
2. Marine parks support jobs and businesses, providing multiple benefits to regional communities and the economy	<p>Not inconsistent</p> <p>Table 8.14 provides an impact assessment of a hydrocarbon release from the Blacktip operations.</p> <p>Appropriate controls have been evaluated and adopted to manage potential impacts and risks from a hydrocarbon release to the AMP to ALARP and acceptable levels for the duration of the Blacktip operations.</p> <p>Table 8.16 provides a further assessment on the socio-economic values of the park. Impact on socio-economic values will occur for a short period while the condensate disperses and weathers; however, lasting impact is not anticipated.</p>
3. People have opportunities to enjoy marine parks	
4. Visitors and tourists can enjoy world-class nature-based experiences in marine parks	

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5. Indigenous people and marine park users are partners in managing marine parks	<p>Not inconsistent</p> <p>Eni consults with the First Nations peoples and AMP users who may use or have interest in the AMP (refer to Section 5).</p>
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The values of the Joseph Bonaparte Gulf AMP which may be impacted for a period include:

- natural
- cultural
- socio-economic.

Table 8.16 discusses the impact to each of the values, as identified in the Australian Marine Parks North Network Management Plan (DNP, 2018a). It is not anticipated the values will be compromised or significantly impacted.

Table 8.16: Assessment of the Blacktip operations and hydrocarbon release risk against the values of the Joseph Bonaparte Australian Marine Park

Value	Assessment
Natural	<p>The KEF in the AMP is the carbonate bank and terrace system of the Sahul Shelf, characterised by terraces, banks, channels and valleys supporting sponges, soft corals, sessile filter feeders, polychaetes and ascidians. These features may be impacted from entrained hydrocarbons; however, the high evaporation and light components of the condensate and MDO will reduce the entrainment volume within the water column.</p> <p>The JBG experiences a mixed semidiurnal tide with a very large range in tidal elevations and correspondingly strong tidal currents (Przeslawski <i>et al.</i>, 2011). High energy tidal currents along much of the coastline stimulate mixing and sediment movement throughout the year, contributing to the highly turbid environment that will further evaporation and dispersion of the condensate and MDO.</p> <p>The AMP supports a range of species, including species listed as threatened, migratory, marine or cetacean under the EPBC Act. BIAs within the AMP include foraging habitat for marine turtles and the Australian snubfin dolphin. Impacts to the range of species which the AMP supports have been discussed in Table 8.14.</p> <p>Environmental values of the Joseph Bonaparte Gulf Marine Park may be impacted for a period while the hydrocarbons disperse and weather; however, lasting impact is not anticipated.</p>
Cultural	<p>The Miriuwung, Gajerrong, Doolboong, Wardenybeng and Gija and Balangarra people have responsibilities for Sea Country in the AMP (DNP, 2018a). Sea Country is valued for First Nations cultural identity, health and wellbeing. Across Australia, First Nations people have been sustainably using and managing their Sea Country for tens of thousands of years.</p> <p>A large-scale spill will impact the Sea Country within the AMP for a period, while the spill disperses and weathers. Impacts to the range of species to which Traditional Owner groups may have cultural connections have been discussed in Table 8.14.</p> <p>A condensate spill will impact the AMP for a short period while the condensate disperses and weathers; however, lasting impact is not anticipated.</p>

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Value	Assessment
Socio-economic	Tourism, commercial fishing, and recreation including fishing, are important activities in the AMP. As described above, a condensate spill will impact the AMP for a short period while the hydrocarbon disperses and weathers; however, lasting impact is not anticipated. Impacts have been discussed further in Table 8.14.

8.6.4 Environmental Performance Outcomes and Control Measures

EPOs relating to this risk include:

- no loss of containment of hydrocarbons to the marine environment (EPO-15).


CMs relating to this risk include:

- NOPSEMA-accepted WOMP (CM-27)
- NOPSEMA-accepted OPEP (CM-28)
- Eni Source Control Response Plan (ENI-WOP-PL-001) (CM-29)
- Relevant well site personnel hold International Well Control Forum certificates (CM-30)
- Mutual Aid MoU for relief well drilling (CM-31)
- asset integrity systems (CM-09).


EPSs and MC relating to the above are presented in Table 9.2.

8.6.5 As Low as Reasonably Practicable Demonstration


Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	Eliminate production activity	Production activities are required to continue supply of gas and condensate to the YGP and the activities cannot be eliminated.	*
Substitute	NA	NA	NA
Engineering	NA	NA	NA
Isolation	NA	NA	NA

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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Administrative	Accepted WOMP	<p>The WOMP describes the systems in place to ensure well design and integrity are managed. The WOMP ensures the risks to well integrity are managed to ALARP.</p> <p>At least two isolation barriers are in place between the reservoir and the environment, reducing the likelihood of a release occurring. A release may occur in the unlikely event of simultaneous failure of all barriers and cannot be isolated further.</p> <p>An accepted WOMP is a legislative requirement under the OPGGS Act.</p>	<p>✓ (CM-27)</p>
	Accepted Oil Pollution Emergency Plan	<p>Implements response plans to manage an unplanned hydrocarbon release quickly and efficiently to reduce impacts to the marine environment.</p> <p>An accepted OPEP is a legislative requirement under the OPGGS Act.</p>	<p>✓ (CM-28)</p>
	Eni Source Control Response Plan (ENI-WOP-PL-001)	<p>The Eni Source Control Response Plan details steps to expedite the drilling of a relief well, including:</p> <ul style="list-style-type: none"> • relief well design • simulation of the dynamic kill • high-level requirement for the rig and the equipment, volumes and pumping pressures. <p>Following the Source Control Response Plan in the event of a loss of well control will reduce the time taken control the well, limiting the volume released to the environment.</p> <p>Environmental benefit outweighs the administrative costs of preparing documents and large costs of preparing for and implementing response strategies.</p>	<p>✓ (CM-29)</p>
	Relevant well site personnel hold International Well Control Forum certificates	<p>Ensures well site personnel are competent in well control practices.</p>	<p>✓ (CM-30)</p>

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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
	Mutual Aid MoU for relief well drilling	<p>Mutual aid MoU for relief well drilling is in place which allows for expedited use of drilling rig for relief well drilling.</p> <p>Environmental benefit outweighs the administrative costs of preparing and maintaining MOU.</p>	<p>✓ (CM-31)</p>
	Asset integrity systems	<p>Asset integrity systems provide processes and requirements for maintenance, inspection and corrosion management of the WHP.</p> <p>Compliance to the systems detects external features, damage or signs of damage and deterioration that could present an integrity release risk, reducing the likelihood of a release occurring. Minor cost involved in complying and implementing.</p>	<p>✓ (CM-09)</p>
	MODU on standby for relief well drilling	<p>Could reduce the length of time taken to drill a relief well and may reduce the timeframe for stopping a well release by up to two weeks; although planning, approval and setup requirements mean the reduction would likely be less.</p> <p>The cost of having a MODU, personnel and equipment on standby would be excessive (US\$350,000 to US\$600,000 per day for a minimum negotiated contract term), making operations unviable. Introducing a MODU and support equipment and personnel on standby would result in additional environmental and safety risks.</p> <p>Cost outweighs environmental benefit. It is envisaged a MODU would be made available through the AEP-administered MoU (MODU and Well Services).</p>	<p>✗</p>

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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
	Drill top holes of a relief well	<p>Would enable a relief well to be drilled slightly faster (one week), as the top holes have been drilled.</p> <p>Significant additional costs associated with the MODU drilling, which is estimated at approximately \$550,000 per day.</p> <p>Additional environmental and safety risks associated with drilling.</p>	*

8.6.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>Management of the risk of accidental hydrocarbon releases is consistent with Australian and international requirements, including the OPGGS Act, which require:</p> <ul style="list-style-type: none"> • accepted WOMP for all well activities • accepted OPEP for all petroleum activities. <p>EPBC approval conditions (EPBC 2003/1180) were considered for this risk. Condition number 3 relates to potential spills. The Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17) is considered to meet this condition.</p>
Policy compliance	<p>Management of loss of condensate is aligned with Eni policies and standards. The residual risk is Medium, which is acceptable given the review of the risk reduction measures for the activity that has been undertaken (refer Table 6.5).</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>


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Demonstration of acceptability	
Social acceptability	<p>Stakeholders have been consulted. To date, no stakeholder concerns have been raised regarding loss of condensate (refer to Section 5).</p> <p>During 2023 consultation, the DITT / NT Fisheries requested that where possible, activity is undertaken during warmer months (September-March) to avoid fish spawning season. Ongoing operations typically requires small vessel use to service and maintain the WHP and associated infrastructure as required, these activities are often not able to be delayed due to operational requirements.</p> <p>A number of relevant persons raised concerns that their functions, activities or interests may be impacted by a worst-case hydrocarbon spill. These included DBCA, TLC, Bardi Jawi Niimidiman Aboriginal Corporation RNTBC, MG Corporation, Gogolanyngor Aboriginal Corporation, Nyangunmartka Karajarri Aboriginal Corporation and Nyul Nyul PBC Aboriginal Corporation. The potential impacts to their key values and sensitivities or functions, activities and interests was assessed in Section 8.6.3.</p> <p>Bardi Jawi Niimidiman Aboriginal Corporation RNTBC raised concerns that regarding potential groundwater contamination. The potential impact from operational discharges and waste during onshore spill response activities is assessed in Section 8.6.3, which is expected to generate minimal amounts of waste due to the hydrocarbon characteristics of Blacktip condensate. Waste management control measures during spill response are described in Section 8.5.5 of the OPEP.</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>See Table 8.14.</p> <p>Habitat modification, degradation, disruption and loss, deteriorating water quality and marine pollution are identified as potential threats to marine fauna species in relevant recovery plans and conservation advice (as listed in Table 2.3). Eni has considered information in relevant recovery plans for marine fauna that identify marine pollution as a threat. Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a) and the IUCN principles of the zones of the marine park (refer to Table 4.9). Blacktip operations are not inconsistent with the IUCN principles and North Marine Parks Network Management Plan objectives (refer Table 8.15 and Table 8.16).</p>

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Demonstration of acceptability	
ESD principles	<p>The impacts from the loss of condensate are inherently inconsistent with some of the principles of ESD, as the impact to environmental resources in the event of spills may be significant and may also prevent others exercising their right to access environmental resources.</p> <p>However, as this is an unplanned event, the risk associated with the event occurring is consistent because:</p> <ul style="list-style-type: none"> • while the nature and scale of impacts have the potential to result in significant impacts, the controls that will be implemented reduce the risk to an acceptable level • conservative assumptions have been applied to the impact assessment, including: <ul style="list-style-type: none"> - identifying and modelling worst case credible spill scenario, which is highly conservative in volume and statistics indicate the vast majority of unplanned spills are significantly smaller - using a stochastic modelling approach for numerical modelling of the worst case credible spill scenarios that includes a large number of model runs over three seasons and present unmitigated spill trajectories - applying environmentally conservative hydrocarbon exposure values for impact assessment purposes • even in the unlikely event of a spill, the health, diversity and productivity of the environment will be maintained, including for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

Given the controls that will be implemented, the residual risk is considered moderate, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5) once assessed to ALARP (Section 8.6.5). Potential impacts are acceptable and ALARP.

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8.7 Loss of Condensate at the Single Point Mooring (Risk ID U7)

8.7.1 Summary of Environmental Risk Assessment

Hazard	Loss of containment at the SPM - failure of the PLEM valve		
	Frequency	Severity	Risk
Inherent Risk	C	2	M
Residual Risk	B	2	L

Hazard	Loss of containment at the SPM - failure of floating or submarine flexible hose		
	Frequency	Severity	Risk
Inherent Risk	C	2	M
Residual Risk	B	2	L

8.7.2 Description of Hazard

Credible scenarios for a loss of Blacktip condensate at the SPM are:

1. a failure of the PLEM valve during a condensate export operation
2. a failure of floating or submarine flexible during a condensate export operation.


Scenarios which were considered but determined 'not credible'

Loss of containment from the SPM hoses is not credible outside offtake activities, as the hoses normally contain only residual hydrocarbons, seawater and corrosion inhibitor when not in use. At the end of each offtake, a mixture of seawater and corrosion inhibitor is used to displace condensate inside the hoses and partially along the CEP and push the condensate back to the YGP, and the floating hose is capped. At the start of each offtake, this oily water mixture is collected on the tanker as condensate is pumped out to the SPM.

A failure of the CEP upstream of the PLEM during a condensate export operation at the SPM is also not credible because:

- CEP pigging will identify any integrity issues prior to the offtakes occurring
- condensate is only supplied to the SPM two or three times per year; during other times condensate is within the CEP at a low pressure (6 bar)
- the portion of the CEP in Commonwealth waters is only 1km and is not within a known area of high shipping or commercial fishing, therefore there is not a risk of external impact.

It should be noted the transfer of condensate through the NT/PL3 facilities to a tanker is part of a petroleum activity, but the tanker itself and any potential cargo spills are not regulated under the OPGGS Act and therefore is outside the scope of this EP.

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Condensate export operations are governed by the Terminal Handbook (refer to Section 3.5.5) with which all offtake tankers are required to comply. The Terminal Handbook describes all the marine and onshore operations involved in preparing for and executing a condensate offtake and securing the facilities afterwards.

8.7.2.1 Failure of the Pipeline End Manifold valve

Loss of containment from the subsea PLEM valve is credible under the assumption the hydraulically actuated PLEM ball valve fails to open during offtake. Should the PLEM valve fail during offtake, this could potentially expose the entire content of the pipeline inventory upstream of the PLEM. If the SPM hose also disconnects or fails, condensate would discharge into the sea until the pressure in the pipeline and the pressure at the point of the leak equilibrate (24 hours) by seawater and the spill is contained. Assuming it takes up to five minutes to detect the loss and stop the pumping operations (pumping at 450m³/hr), up to 40m³ would be released until the pump is stopped.

8.7.2.2 Failure of Floating or Submarine Flexible Hose

Loss of containment from a floating or submarine flexible hose is credible under the assumption of multiple and simultaneous failures of controls in place. These may include vessel impact, operator error, loss of vessel positioning, or loss of integrity of equipment. Major loss of containment would be detected and result in almost instantaneous emergency shutdown. Assuming it takes up to five minutes to detect the loss and stop the pumping operations (pumping at 450m³/hr), up to 40m³ would be released until the pump is stopped.


8.7.3 Potential Environmental Impact

For potential environmental impacts from a hydrocarbon spill, refer to Table 8.14. A release of Blacktip condensate from the SPM will be much reduced in terms of spatial and temporal scales compared to a worst case loss of Blacktip condensate from the loss of well control, assessed and modelled in Section 8.6. Any impact from a release at the SPM will be localised to the release location, given the release volume (40m³).

A surface release of condensate at the SPM may temporarily impact water quality for a short period while the release disperses and evaporates. Based on the weathering study on Blacktip condensate by Intertek in 2013, the rate of evaporation of Blacktip condensate is rapid, with 67% of the volume of the condensate lost within the first two hours and 89% by eight hours. Between eight and 72 hours, only a further 7% is lost, reaching a maximum weathering at 72 hours (95% lost volume) (Intertek, 2013).

For marine fauna that may be exposed to the aromatic components the condensate, toxic effects are considered unlikely, since these species are mobile and therefore will not be constantly exposed for the extended durations needed to cause any major toxic effects.

While the marine fauna may transit through the release, contact is unlikely to result in impacts greater than a minor short-term behavioural change, limited to one or a few individuals. Impact to overall population viability or ecosystems is not anticipated.

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Individual turtles may be encountered and come into contact with the released hydrocarbons; however, considering the water depths at the SPM (20m), large numbers of the species are not expected, and any impact will be limited to one or a few individuals. Impact to overall population viability or ecosystems is not anticipated.

Given the temporary and highly localised nature of a release of this size, as well as the transient nature of marine fauna, impacts from exposure to a reduction in water quality are not expected, but at worst, would be limited to a small number of individuals. Given the rapid dilution and dispersion of the condensate, any impact is anticipated to be minor and will not result in impacts at a population level.

Although the release originates within the Joseph Bonaparte Gulf AMP, given the low maximum concentrations, the rapid weathering of condensate and the low aromatics and persistent fraction (see Section 8.6.2), impacts to the AMP are not considered significant and it is not anticipated the values of the AMP will be impacted for any lasting period. The impact to values of the AMP has been assessed for the significantly larger loss of well control hydrocarbon release, refer to Section 8.6.

8.7.4 Environmental Performance Outcomes and Control Measures


EPOs relating to this risk include:

- no loss of containment of hydrocarbons to the marine environment (EPO-15).

CMs relating to this risk include:


- Terminal Handbook (000036_DV_PR.DPM.0486.000) (CM-32)
- SPM Floating Hose Testing Guidelines (000036_DV_PR.DPM.1072.000) (CM-33)
- asset integrity systems (CM-09)
- NOPSEMA-accepted OPEP (CM-28)
- vessel spill response plans (CM-34).

EPSs and MC relating to the above are presented in Table 9.2.


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8.7.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
Eliminate	Eliminate condensate export	Eliminating the risk from the condensate export entirely would mean ceasing production. Condensate is a by-product of gas processing and export is required to recover the hydrocarbon resource, so ceasing production is not a viable alternative.	✘
	Eliminate risk of spill from the CEP when offtake tanker is not present	At the end of each offtake, seawater dosed with corrosion inhibitor is used to push the condensate in the CEP back to the YGP, and the CEP and flexible hose remain sealed outside of offtakes.	✓ (Adopted in concept)
Substitute	Use alternative method for exporting or removing condensate, such as: <ul style="list-style-type: none"> • export by road or barges from YGP • supplying to the local community • burning/flaring 	Export by road is not possible year-round, as the road is impassable during the wet season. Significant new infrastructure and cost would be needed to export condensate by road or barge (e.g., new port facilities). The volume of condensate produced is too great for use locally and there is not a ready market for use. Burning the condensate as a waste product would be a waste of a valuable resource and would add to GHG emissions.	✘
Engineering	Cathodic protection as per Eni Offshore Cathodic Protection Design, Doc No. 00710300DSRC0026 2	Cathodic protection monitors the subsea infrastructure, including the PLEM valve for integrity issues. Ensures integrity is maintained.	✓ (Adopted in concept)
Isolation	N/A	N/A	N/A

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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Administrative	Terminal Handbook (000036_DV_PR.DP M.0486.000) (refer to Section 3.5.5)	<p>Offtake operations must comply with the Terminal Handbook (000036_DV_PR.DPM.0486.000) which includes requirements to prevent loss of hydrocarbons during offtakes. Includes parameters (such as metocean) for offtake to occur.</p> <p>Offtake tankers are subject to acceptance criteria stated in the Terminal Handbook (000036_DV_PR.DPM.0486.000). Acceptance criteria are used to assess the suitability of the proposed offtake tanker to comply with the equipment and operational procedures developed to ensure safe offtake.</p> <p>Minor cost involved in complying and implementing the handbook.</p>	<p>✓</p> <p>(CM-32)</p>
	Asset integrity systems	<p>Asset integrity management systems and pipeline integrity management systems (PIMS) provide processes and requirements for maintenance, inspection and corrosion management of the SPM (including pigging and inspection requirements, refer to Section 3.5.3). The asset integrity management systems and PIMS include maintenance requirements (refer to Section 3.5.3) to detect external features, damage or signs of damage on the SPM, and deterioration that could present a risk.</p> <p>Compliance with the systems reduces the likelihood of a spill or leak occurring. Minor cost involved in complying and implementing.</p>	<p>✓</p> <p>(CM-09)</p>
	SPM floating hose testing guidelines (000036_DV_PR.DP M.1072.000)	<p>SPM floating hose is inspected and tested before offtake in accordance with the testing guidelines (000036_DV_PR.DPM.1072.000).</p> <p>Testing and inspecting the floating hose before offtake will reduce the likelihood of a spill occurring, as leaks will be identified before offtake. Minor cost involved in testing and implementing as per the guidelines.</p>	<p>✓</p> <p>(CM-33)</p>

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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
	Accepted Oil Pollution Emergency Plan	<p>Implements response plans to manage an unplanned hydrocarbon release quickly and efficiently to reduce impacts to the marine environment.</p> <p>An accepted OPEP is a legislative requirement under the OPGGS Act.</p>	<p>✓</p> <p>(CM-30)</p>
	Vessel spill response plans	<p>Implements response plans (Shipboard OPEP/Marine Pollution Emergency Plan) aboard vessels to deal with unplanned hydrocarbon releases and spills quickly and efficiently to reduce impacts to the marine environment.</p> <p>Administrative costs of preparing documents. Generally undertaken by vessel contractor.</p>	<p>✓</p> <p>(CM-34)</p>

8.7.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>EPBC approval conditions (EPBC 2003/1180) were considered for this risk. Condition number 3 relates to potential spills. The Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17) is considered to meet this condition.</p>
Policy compliance	<p>Management of loss of condensate is aligned with Eni policies and standards. The residual risk is Low, which is acceptable.</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>Stakeholders have been consulted. To date, no stakeholder concerns have been raised regarding loss of condensate stakeholder (refer Table 6.5).</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>Habitat modification, degradation, disruption and loss, deteriorating water quality and marine pollution are identified as potential threats to marine fauna species in relevant recovery plans and conservation advice (as listed in Table 2.3). Eni has considered information in relevant recovery plans for marine fauna that identify marine pollution as a threat. Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a) (refer to Table 4.9). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>

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ESD principles	The risk of this unplanned event is consistent with the principles of ESD because: <ul style="list-style-type: none"> controls that will be implemented reduce the risk the impacts associated with unplanned condensate spill do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained conservative assumptions on scale of impact have been applied the health, diversity and productivity of the environment will be maintained, including for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

Given controls that will be implemented, the residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts are acceptable and ALARP.

8.8 Loss of Condensate and Gas from the Gas Export Pipeline (Risk ID U8)

8.8.1 Summary of Environmental Risk Assessment

Hazard	Condensate leak along the gas export pipeline		
	Frequency	Severity	Risk
Inherent Risk	C	3	M
Residual Risk	A	3	L

8.8.2 Description of Hazard

Credible scenarios for loss of Blacktip condensate and gas from the GEP are:

- a subsea leak during operations through a <50mm diameter hole at any point within Commonwealth waters along the GEP due to corrosion.


Scenarios which were considered but determined 'not credible'

A dropped object from the WHP pedestal crane resulting in subsea rupture of the GEP is considered not credible. The WHP pedestal crane is positioned on the opposite side of the WHP to the GEP; therefore, a dropped object from the WHP could not contact it.

Pipelines on the seabed may present a hazard to marine users due to the potential for snagging. However the Blacktip GEP was designed to withstand credible loads during design. There is also an absence of historical bottom trawl fishing over the GEP (refer to Section 4.6.1). The risk of GEP rupture from snagging has been determined not credible.

8.8.2.1 Subsea Leak Due to Corrosion

Corrosion could occur anywhere along the GEP, but more likely where water collects. It is assumed a worst case leak from the GEP could occur at the Commonwealth/State water boundary. Two leak scenarios are credible, being:

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1. small leak not triggering the low-pressure alarm
2. large leak triggering the low-pressure alarm.

Small leak

A small leak would not result in sufficient pressure drop to trigger the low-pressure alarm. The GEP pressure is at 7 to 8 barg, and a low-pressure alarm is triggered at less than 5 barg. Therefore, a small leak could only be detected visually by vessel (e.g., bubbling at surface) or during survey/pigging or through discrepancy between gas production rates at the WHP and YGP during history matching, which is conducted at least weekly.

In a worst case scenario, a leak could occur for a week at a rate of 21 m³ condensate per day. This could result in a spill of 150m³ over the week before emergency shutdown is activated and the pipeline is shut-in, containing the spill.

Large leak


A large leak (more than 70mm hole diameter) would trigger the low-pressure alarm and automatically trigger pipeline shut-in. A leak size between 50 and 70mm hole diameter would not necessarily trigger the low-pressure alarm but would result in a noticeable change in the pipeline flow rate and a pressure drop, which would be identified by the Control Room Operator who will shut in the pipeline. The volume of condensate released in these scenarios would be less than 50m³.

8.8.3 Potential Environmental Impact

For potential environmental impacts from a hydrocarbon spill, refer to Table 8.14. A release of Blacktip condensate from the GEP will be much reduced in terms of spatial and temporal scales compared to a worst case loss of Blacktip condensate from the loss of well control and MDO release, assessed and modelled in Section 8.6 and Section 8.9 respectively. Any impact from a release at the GEP will be localised to the release location, given the maximum release volume (150m³ condensate over a one-week period).

A subsea leak of condensate at the GEP may temporarily impact water quality for a short period while the release disperses and evaporates. Based on the weathering study on Blacktip condensate by Intertek in 2013, the rate of evaporation of Blacktip condensate is rapid, with 67% of the volume of the condensate lost within the first two hours and 89% by eight hours. Between eight and 72 hours, a further 7% is lost, reaching a maximum weathering at 72 hours (95% lost volume) (Intertek, 2013). It is anticipated only a small amount of condensate will be visible at the surface and will evaporate and weather within 24 hours, assisted by the metocean conditions in the JBG.

For marine fauna that may be exposed to the aromatic components of the hydrocarbon, toxic effects are considered unlikely, as these species are mobile and therefore will not be constantly exposed for extended durations that would be needed to cause any major toxic effects.

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While the marine fauna may transit through the release, contact is unlikely to result in impacts greater than a minor short-term behavioural change, limited to one or a few individuals. Impact to overall population viability or ecosystems is not anticipated.

Individual turtles may be encountered and come into contact with the released condensate; however, considering the water depths at the shallowest point of the GEP (20m), large numbers of the species are not expected, and any impact will be limited to one or a few individuals. Impact to overall population viability or ecosystems is not anticipated.

Given the temporary and highly localised nature of a release of this size, as well as the transient nature of marine fauna, impacts from exposure to a reduction in water quality are not expected, but at worst, would be limited to a small number of individuals. Given the rapid dilution and dispersion of the condensate, any impact is anticipated to be minor and will not result in impacts at a population level.

Although the release originates within the Joseph Bonaparte Gulf AMP, given the low maximum concentrations, the weathering of condensate and the low aromatics and persistent fraction (see Section 8.6.2), impacts to the Joseph Bonaparte Gulf AMP are not considered significant and it is not anticipated the values of the AMP will be impacted. An assessment of the impact to values of the Joseph Bonaparte Gulf AMP has been assessed for the significantly larger loss of well control hydrocarbon release; refer to Section 8.6.

8.8.4 Environmental Performance Outcomes and Control Measures


EPOs relating to this risk include:

- no loss of containment of hydrocarbons to the marine environment (EPO-15).

CMs relating to this risk include:


- asset integrity systems (CM-09)
- NOPSEMA-accepted OPEP (CM-27).

EPSs and MC relating to the above are presented in Table 9.2.

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8.8.5 As Low as Reasonably Practicable Demonstration


Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
Eliminate	Cease transport of gas from the WHP to YGP	Eliminating the risk would mean ceasing production completely and is therefore not feasible.	*
	Eliminate the potential of GEP rupture during Blacktip WHP crane operations	The crane is positioned on the opposite side of the WHP to the GEP; therefore, a dropped object from the pedestal crane cannot make contact. This eliminates the risk completely. This control is already adopted and in place and was adopted during design.	✓ (adopted in design)
Substitute	N/A	N/A	N/A
Engineering	Low pressure alarm is triggered at <5 barg	The low-pressure alarm detects a drop in pipeline pressure which could be a sign of a leak. The alarm will trigger the pipeline shut-in, limiting a release of condensate to the marine environment. This control helps detect if a release has occurred but does not prevent loss. This control is already adopted and in place and was adopted during design.	✓ (Adopted in design)
	Eni pipeline wall thickness design	The pipeline wall thickness was designed to prevent loss from leaks, corrosion and impact events. This control is already adopted and in place and was adopted during design.	✓ (Adopted in design)
Isolation	N/A	N/A	N/A
Administrative	Asset integrity systems)	Asset integrity management systems and PIMS provide processes and requirements for maintenance, inspection and corrosion management of the pipeline (including pigging and inspection requirements, refer to Section 3.5.3). The asset integrity management systems and PIMS include maintenance requirements (refer to Section 3.5.3) to detect external features, damage or signs of damage on the CEP and GEP, and deterioration that could present a risk Compliance with the system reduces the likelihood of a spill or leak occurring. Minor cost involved in complying and implementing.	✓ (CM-09)

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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
	Accepted Oil Pollution Emergency Plan	<p>Implements response plans to manage an unplanned hydrocarbon release quickly and efficiently to reduce impacts to the marine environment.</p> <p>An accepted OPEP is a legislative requirement under the OPGGS Act.</p>	<p>✓</p> <p>(CM-27)</p>

8.8.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>EPBC approval conditions (EPBC 2003/1180) were considered for this risk. Condition number 3 relates to potential spills. The Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17) is considered to meet this condition.</p>
Policy compliance	<p>Management of loss of condensate is aligned with Eni policies and standards. The residual risk is Low, which is acceptable (refer Table 6.5). The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>Stakeholders have been consulted. To date, no stakeholder concerns have been raised regarding loss of condensate.</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>Habitat modification, degradation, disruption and loss, deteriorating water quality and marine pollution are identified as potential threats to marine fauna species in relevant recovery plans and conservation advice (as listed in Table 2.3). Eni has considered information in relevant recovery plans for marine fauna that identify marine pollution as a threat. Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>The risk of this unplanned event is consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> controls that will be implemented reduce the risk the impacts associated with unplanned condensate spill do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained conservative assumptions on scale of impact have been applied the health, diversity and productivity of the environment will be maintained, including for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

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Given controls that will be implemented, the residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts are acceptable and ALARP.

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8.9 Loss of Marine Diesel Oil (ID U6)

8.9.1 Summary of Environmental Risk Assessment

Hazard	MDO spills to sea - vessel collision		
	Frequency	Severity	Risk
Inherent Risk	B	3	M
Residual Risk	A	3	L

Hazard	MDO spills to sea - bunkering incident		
	Frequency	Severity	Risk
Inherent Risk	C	2	M
Residual Risk	B	2	L

8.9.2 Description of Hazard

Credible scenarios that could result in a of loss of MDO during Blacktip operations are:


1. surface release of MDO from a vessel as a result of an external impact (vessel collision) which ruptures an MDO tank
2. surface release of MDO from a refuelling or bunkering incident.

Ruptured vessel tank

A collision scenario between a vessel and another vessel (third-party or other Eni vessel) or with the WHP and SPM could occur due to factors such as human error, poor navigation, vessel equipment failure or poor weather. Prerequisite conditions must exist for a vessel collision to result in the loss of fuel to the environment:

1. The vessel must be involved in a collision: collisions involving offshore support vessels, comparable to those that will used during the activity, are very uncommon. Statistics compiled by the Australian Transport Safety Bureau indicated offshore support vessels were involved in only one collision-related incident between 2011 and 2012. No pollution-related incidents from offshore support vessels were recorded in the same time period.
2. The collision must occur with enough force to rupture a fuel tank: fuel tanks are typically located at various positions around a vessel within the hull.
3. The rupture must be of such a nature that the fuel can be released into the environment: a tank rupture must be above or near the fuel level within the tank to result in a loss of containment from the tank. Once lost from the tank, fuel may leak to the environment or drain into the vessel hull. Fuel from ruptured tanks may be transferred to other tanks onboard, reducing the volume in the ruptured tank.

Blacktip vessels could have a fuel capacity of up to 100m³ (refer Table 3.12). All Blacktip vessels will be fuelled using MDO or lighter fuels (such as marine gas oil). Heavier fuel types, such as intermediate fuel oil or heavy fuel oil, will not be used. It is not credible that the total storage volume of the vessel would be lost, as MDO is stored in more than one tank.

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Blacktip vessel operations are not constant within the Operational Area. Therefore, the risk is limited to specific periods such as:

- support vessel and ROV activities associated with routine and non-routine IMR activities, as presented in Table 3.11
- condensate offtake tanker and support vessel movements, as described in Section 3.5.5.

It is considered that a worst case scenario would be the instantaneous loss of 100m³ MDO to the sea surface at the GEP Commonwealth/State water boundary (nearest location to the shoreline).

Refuelling or bunkering incident

Refuelling or bunkering at sea may occur in the rare unplanned event that a vessel is required for an extended period within the Operational Area (e.g., emergency event). Spills of MDO to the sea surface during refuelling or bunkering from vessel to vessel can be caused by:

- damaged refuelling hose
- coupling failures
- loss of connection
- operator error.


Spills resulting from overfilling will be contained within the vessel drains and slops tank system. The maximum credible spill volume during refuelling is calculated as transfer rate multiplied by five minutes of flow, which is determined as an appropriate duration because refuelling will be constantly supervised. Based on a typical expected pumping rate of 150m³/hour, a total spill volume of approximately 10 to 15m³ is considered the worst case credible volume.

Scenarios which were considered but determined 'not credible'

A tank rupture resulting from vessel grounding was considered but determined not credible since the water depths are approximately 20 to 50m and there are no emergent features within the Operational Area.

8.9.2.1 Marine Diesel Oil Characteristics

MDO has a density of 890.0kg/m³ at 25°C (API of 24.0) and a low pour point of -14°C. The low viscosity (14 cP) indicates this oil will spread quickly when released and will form a thin to low thickness film on the sea surface, increasing the rate of evaporation.

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Generally, about 4% of the MDO mass should evaporate within the first 12 hours (boiling point (BP) < 180°C); a further 32.0% should evaporate within the first 24 hours (180°C < BP < 265°C); and an additional 54.0% should evaporate over several days (265°C < BP < 380°C). Approximately 10% (by mass) of MDO will not evaporate, though will decay slowly over time. It is categorised as a Group II oil (light persistent) according to the International Tanker Owners Pollution Federation (ITOPF, 2020) and US Environmental Protection Agency/US Coast Guard classifications. The classification is based on the specific gravity of hydrocarbons in combination with relevant boiling point ranges.

It is important to note that some of the heavier components contained in the MDO (i.e., low volatile and persistent portions) will have a strong tendency to physically entrain into the upper water column in the presence of moderate winds (i.e., >12 knots) and breaking waves, but can re-float to the surface if these energies abate.

Table 8.17 and Table 8.18 show the physical characteristics and boiling point ranges for MDO.

Table 8.17: Physical properties of marine diesel oil

Properties	Value
Density (kg/m ³)	829 (at 25°C)
API	24
Dynamic viscosity (cP)	14 (at 25 °C)
Pour point (°C)	-9
Hydrocarbon property category	Group II
Hydrocarbon property classification	Light persistent

Table 8.18: Boiling point ranges for marine diesel oil

Name	Volatiles (%)	Semi-volatiles (%)	Low volatiles (%)	Residual (%)
Boiling point (°C)	< 180	180 to 265	265 to 380	> 380
	Non persistent			Persistent
MDO	4.0	32.0	54.0	10.0

8.9.2.2 Hydrocarbon Spill Modelling

A 100m³ MDO surface release was modelled by RPS (2023) at the Commonwealth/ State waters boundary (closest part of the Operational Area to the coastline) for summer, winter and transitional seasons and is considered appropriate, although conservative, for informing the approximate spatial extent of potential impacts from a vessel collision event during the Blacktip operations.

Table 8.19 presents the parameters and justifications used in the modelling.


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Table 8.19: Summary of parameters and justifications for marine diesel spill modelling

Parameter	Description
Description	MDO vessel spill at the Commonwealth/State Waters boundary
Number of spill simulations	300 total (100 per season)
Seasons	Summer (January, February, December) Transitional (March, September to November) Winter (April to August)
Spill volume	100m ³
Oil type	Marine diesel oil
Release depth	Surface
Release duration	1 hour
Simulation length	30 days
Spill volume justification	Largest tank volume of a vessel used during operations (refer to Section 0)

8.9.2.3 Floating Hydrocarbon

Table 8.10 summarises the maximum distances from the release location to floating hydrocarbon exposure zones. Floating oil concentrations exceeding 1g/m² could extend up to 30km from the release location. The distances reduce to 20km and 3km as the thresholds increase to 10g/m² and 50g/m², respectively.

Table 8.21 presents the predicted floating oil exposure to receptors for each season.

Figure 8.9 to Figure 8.11 illustrate the extent of floating oil exposure zones for each season.

Table 8.20: Maximum distances from the release location to floating oil exposure thresholds from a surface vessel spill for each season. Results were calculated from 100 spill simulations per season

Season	Distance and direction travelled	Floating oil exposure thresholds		
		Low	Moderate	High
Summer	Maximum distance (km) from release location	24	19	1
	Direction	Northeast	South	East
Transitional	Maximum distance (km) from release location	25	20	3
	Direction	South	South	North
Winter	Maximum distance (km) from release location	30	20	N/A
	Direction	South	South	N/A


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Table 8.21: Summary of floating oil exposure receptors from a surface vessel spill for each season; results were calculated from 100 spill simulations per season

Receptor	Summer						Transitional						Winter					
	Probability (%) of floating oil at			Minimum time before floating oil exposure (hours) at			Probability (%) of floating oil at			Minimum time before floating oil exposure (hours) at			Probability (%) of floating oil at			Minimum time before floating oil exposure (hours) at		
	1g/m ²	10g/m ²	50g/m ²	1g/m ²	10g/m ²	50g/m ²	1g/m ²	10g/m ²	50g/m ²	1g/m ²	10g/m ²	50g/m ²	1g/m ²	10g/m ²	50g/m ²	1g/m ²	10g/m ²	50g/m ²
Darwin Coastal	10	2	-	4	5	-	10	1	-	4	7	-	9	1	-	6	6	-
Cambridge-Bonaparte	5	1	-	5	6	-	4	2	-	4	6	-	6	2	-	4	5	-
Thamarrurr	10	2	-	4	5	-	10	1	-	4	7	-	9	1	-	6	6	-



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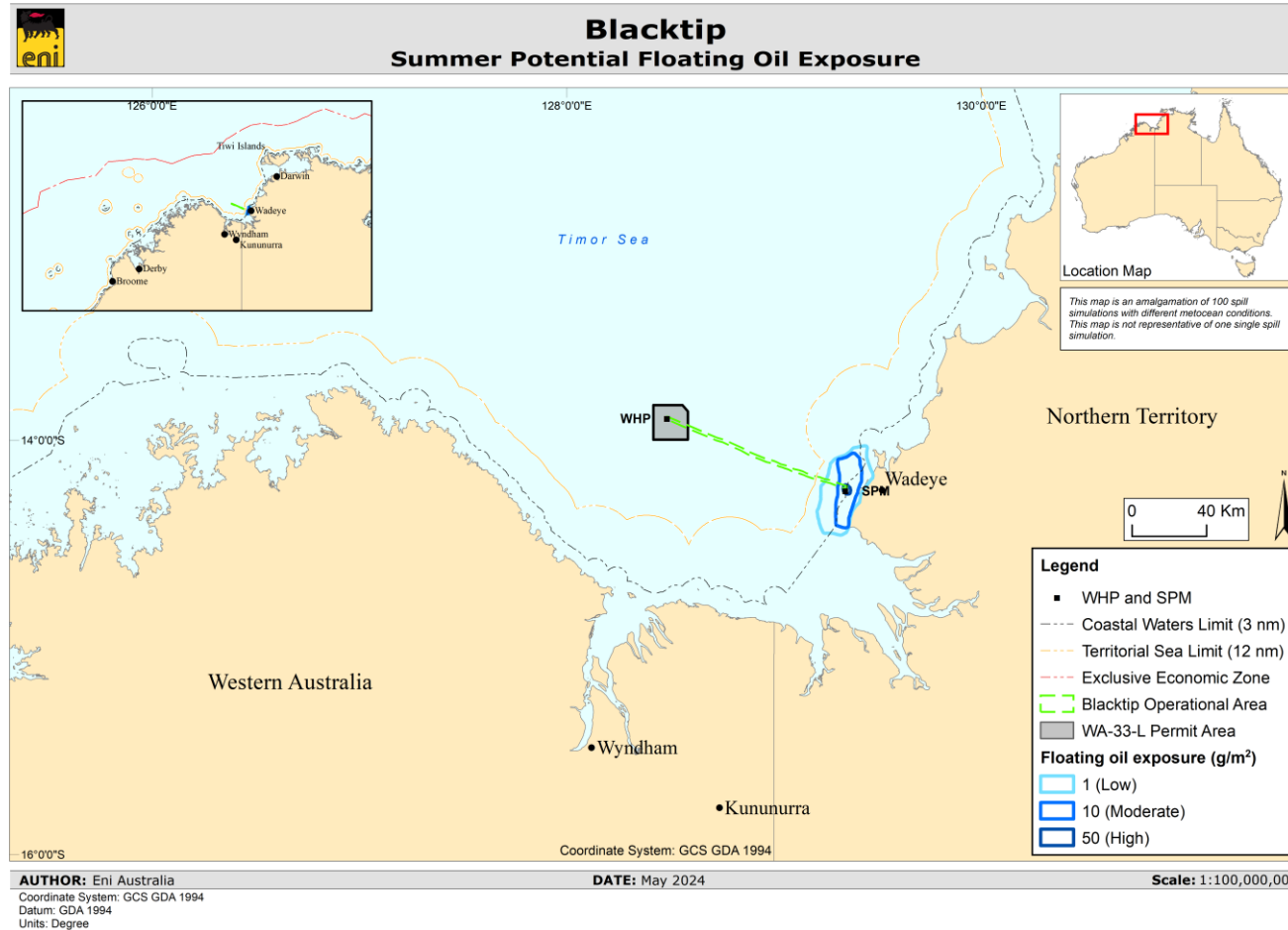


Figure 8.9: Zones of potential floating oil exposure from a surface vessel spill during summer conditions; the results were calculated from 100 spill simulations



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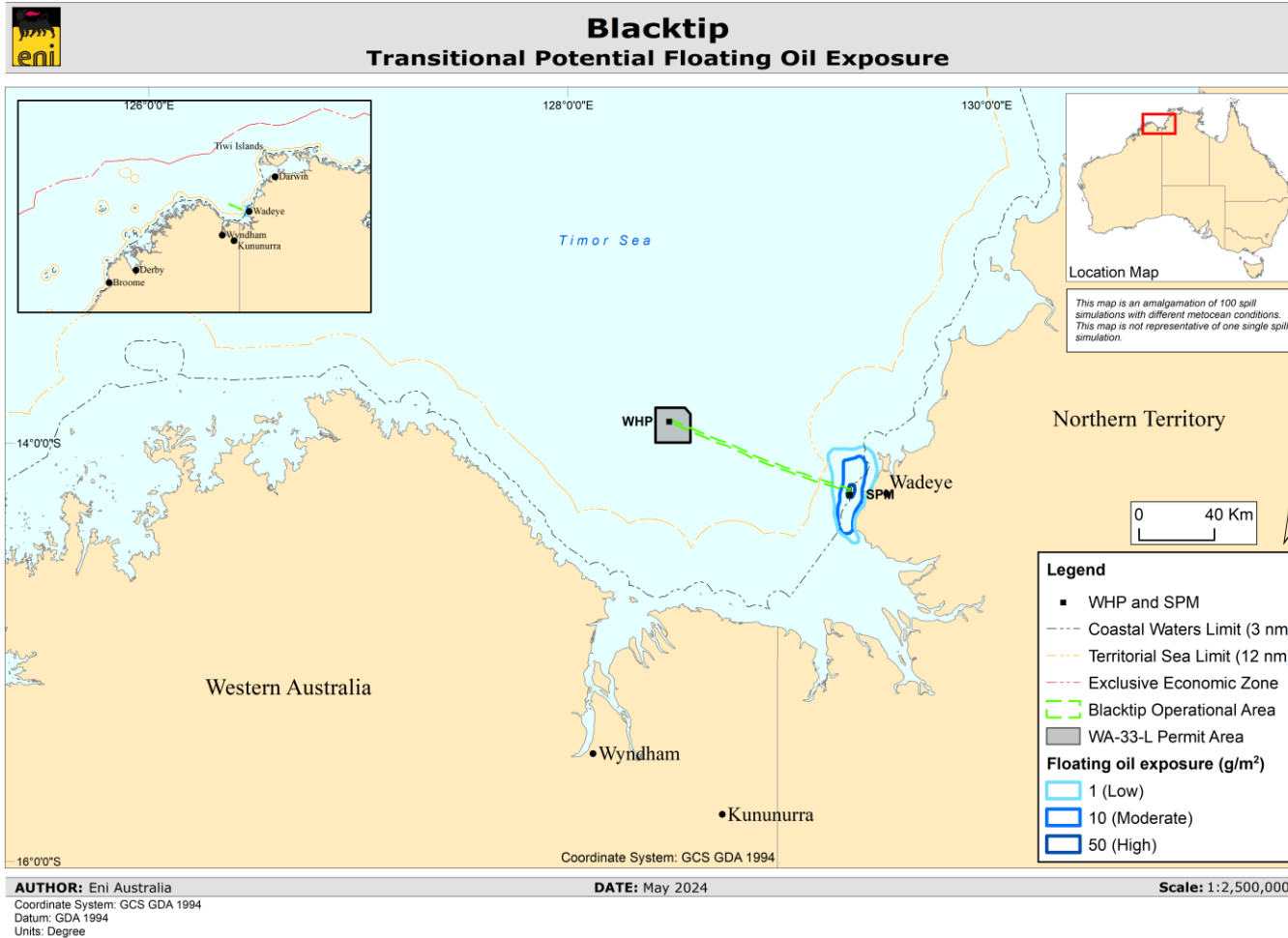


Figure 8.10: Zones of potential floating oil exposure from a surface vessel spill during transitional conditions; the results were calculated from 100 spill simulations



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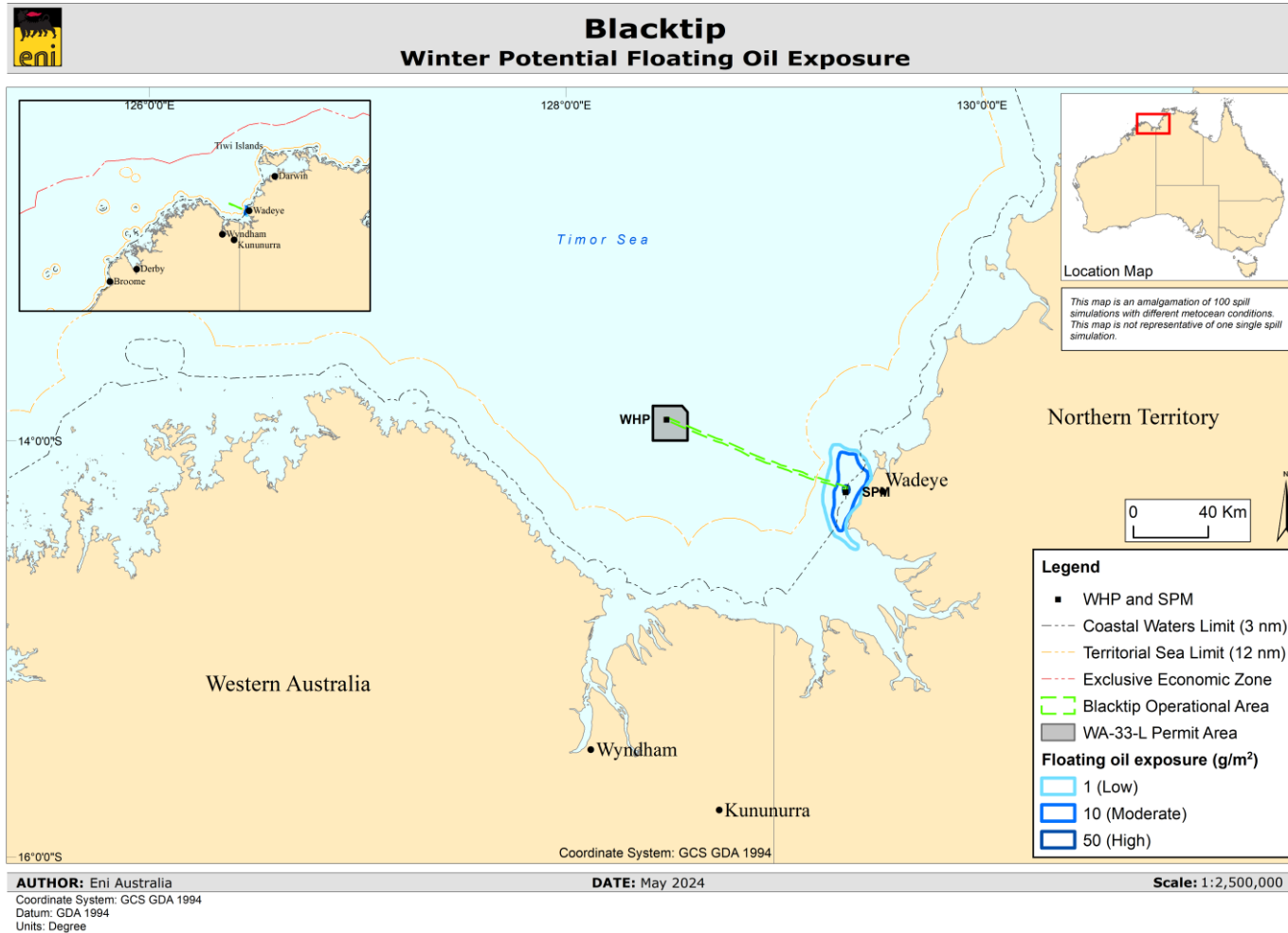



Figure 8.11: Zones of potential floating oil exposure from a surface vessel spill during winter conditions; the results were calculated from 100 spill simulations

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8.9.2.4 Shoreline Hydrocarbon

Table 8.10 summarises the predicted hydrocarbon accumulation on any shoreline during each season. The highest probability at the 10g/m² threshold was during summer conditions at 81% and the minimum time before the hydrocarbon had reached any shoreline was five hours during summer and transitional seasons. The maximum volume ashore was 46m³ during summer.

Table 8.23 to Table 8.25 summarise the hydrocarbon accumulation on shoreline sectors during each season. The highest probability of accumulation at the 10g/m² threshold during summer, transitional and winter conditions was forecast for Thamarrurr, immediately adjacent to the release location, with probabilities of 57%, 46% and 16% during summer, transitional and winter, respectively. The absolute maximum volume of hydrocarbon ashore was forecast for Thamarrurr at 46m³ during summer.

The quickest time before oil had reached the shorelines at the 10g/m² threshold was five hours during summer and transitional for the Thamarrurr coast.

The maximum potential shoreline loading for each season are presented in Figure 8.12 to Figure 8.14.

Table 8.22: Summary of oil accumulation on any shoreline from a surface vessel spill during each season; results were calculated from 100 spill simulations per season

Shoreline statistics	Summer	Transitional	Winter
Probability of accumulation on any shoreline (%) at or above the 10g/m ² threshold	81	56	24
Absolute minimum time before oil ashore (hours) at or above the 10g/m ² threshold	5	5	12
Maximum volume of hydrocarbons ashore (m ³)	46	44	37
Average volume of hydrocarbons ashore (m ³)	4.6	4.6	2.0
Maximum length of the shoreline at 10g/m ² (km)	15	16	14
Average shoreline length (km) at 10g/m ² (km)	5.1	4.5	1.3
Maximum length of the shoreline at 100g/m ² (km)	7	6	6
Average shoreline length (km) at 100g/m ² (km)	0.8	0.9	0.3
Maximum length of the shoreline at 1000g/m ² (km)	2	2	1
Average shoreline length (km) at 1000g/m ² (km)	<0.1	<0.1	<0.1

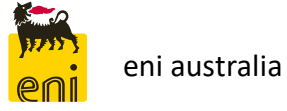
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Table 8.23: Summary of oil accumulation on any shoreline from a surface vessel spill during summer conditions; results were calculated from 100 spill simulations per season

Shoreline sector	Maximum probability of shoreline accumulation (%) at			Minimum time before shoreline accumulation (hours) at			Load on shoreline		Volume on shoreline		Mean length of shoreline accumulation (km) at			Maximum length of shoreline accumulation (km) at		
	≥10g/m ²	≥100g/m ²	≥1000g/m ²	≥10g/m ²	≥100g/m ²	≥1000g/m ²	(g/m ²)		(m ²)		≥10g/m ²	≥100g/m ²	≥1000g/m ²	≥10g/m ²	≥100g/m ²	≥1000g/m ²
							Mean	Peak	Mean	Peak						
Dorcherty Island	19	-	-	37	-	-	6.2	73	0.2	2.3	0.4	-	-	6	-	-
Thamarrurr	57	11	1	5	7	17	62	1217	4.4	46	4.8	0.8	<0.1	14	7	2
Victoria Daly	1	-	-	342	-	-	0.4	13	<0.1	0.6	<0.1	-	-	1	-	-

Table 8.24: Summary of oil accumulation on any shoreline from a surface vessel spill during transitional conditions; results were calculated from 100 spill simulations per season

Shoreline sector	Maximum probability of shoreline accumulation (%) at			Minimum time before shoreline accumulation (hours) at			Load on shoreline		Volume on shoreline		Mean length of shoreline accumulation (km) at			Maximum length of shoreline accumulation (km) at		
	≥10g/m ²	≥100g/m ²	≥1000g/m ²	≥10g/m ²	≥100g/m ²	≥1000g/m ²	(g/m ²)		(m ²)		≥10g/m ²	≥100g/m ²	≥1000g/m ²	≥10g/m ²	≥100g/m ²	≥1000g/m ²
							Mean	Peak	Mean	Peak						
Dorcherty Island	20	1	-	30	31	-	11	552	0.3	12	0.5	<0.1	-	13	2	-
Thamarrurr	46	18	2	5	6	16	76	2083	4.3	44	4.1	0.9	<0.1	16	6	2
Victoria Daly	1	-	-	374	-	-	0.3	17	<0.1	0.4	<0.1	-	-	1	-	-

Table 8.25: Summary of oil accumulation on any shoreline from a surface vessel spill during winter conditions; results were calculated from 100 spill simulations per season

Shoreline sector	Maximum probability of shoreline accumulation (%) at			Minimum time before shoreline accumulation (hours) at			Load on shoreline		Volume on shoreline		Mean length of shoreline accumulation (km) at			Maximum length of shoreline accumulation (km) at		
	≥10g/m ²	≥100g/m ²	≥1000g/m ²	≥10g/m ²	≥100g/m ²	≥1000g/m ²	(g/m ²)		(m ²)		≥10g/m ²	≥100g/m ²	≥1000g/m ²	≥10g/m ²	≥100g/m ²	≥1000g/m ²
							Mean	Peak	Mean	Peak						
Dorcherty Island	5	1	1	55	1	1	2.1	90	<0.1	1.7	<0.1	-	-	2	-	-
Thamarrurr	16	7	1	12	13	17	57	1654	1.9	37	1.2	0.3	<0.1	14	6	1
Victoria Daly	2	-	-	251	-	-	0.7	26	0.1	0.9	<0.1	-	-	2	-	-



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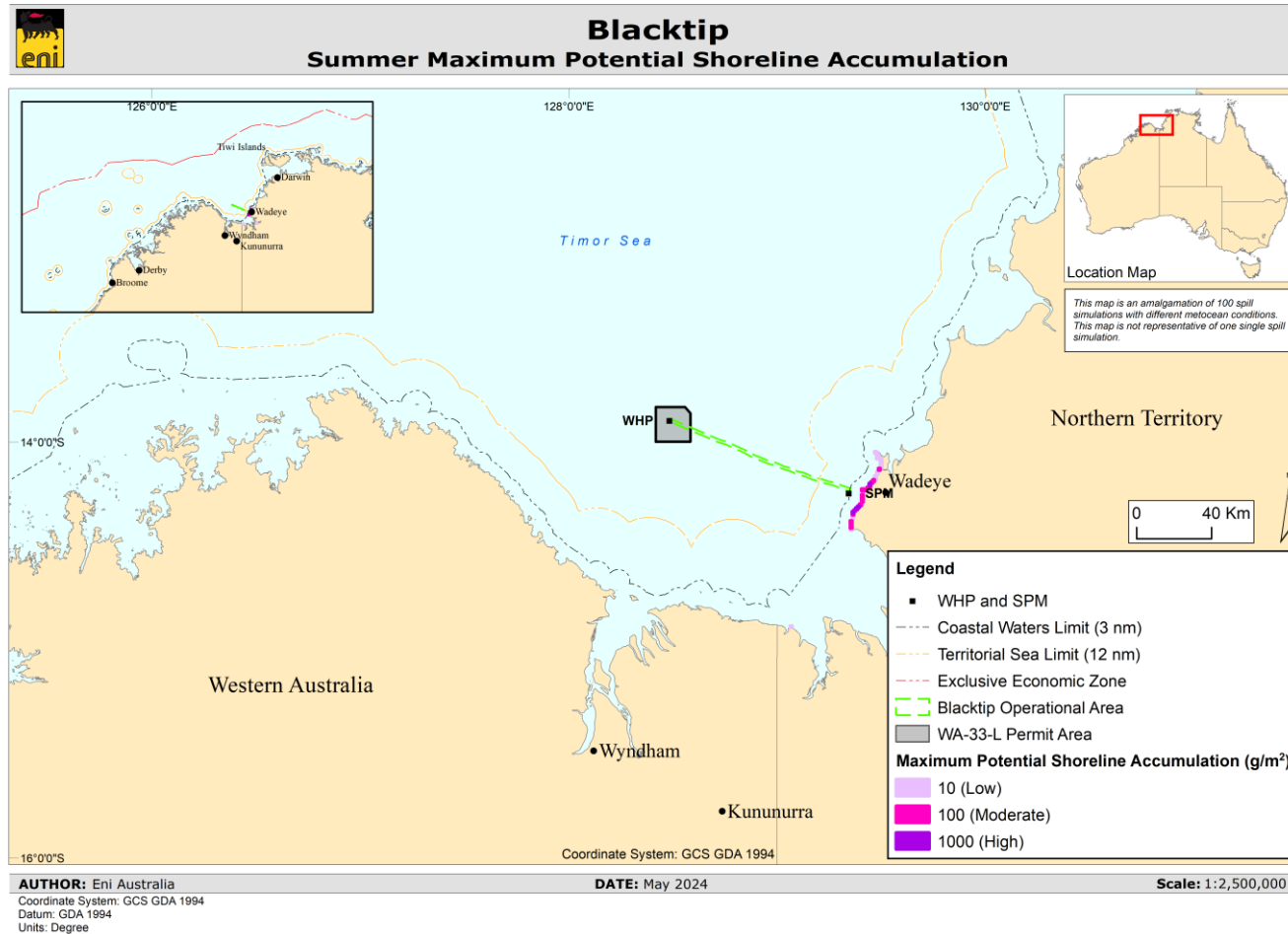


Figure 8.12: Maximum potential shoreline loading from a surface vessel spill during summer conditions; results were calculated from 100 spill simulations



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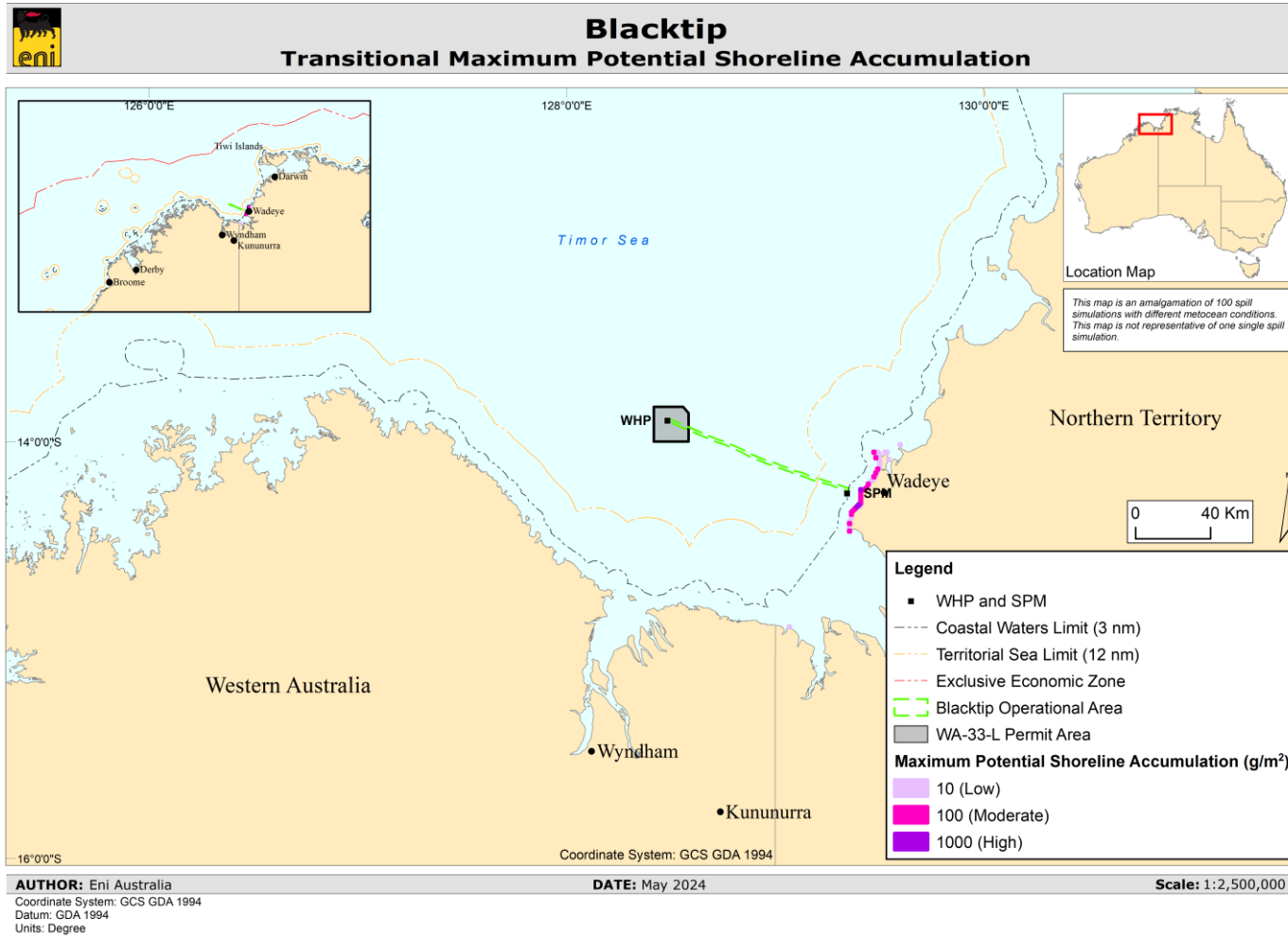


Figure 8.13: Maximum potential shoreline loading from a surface vessel spill during transitional conditions; results were calculated from 100 spill simulations



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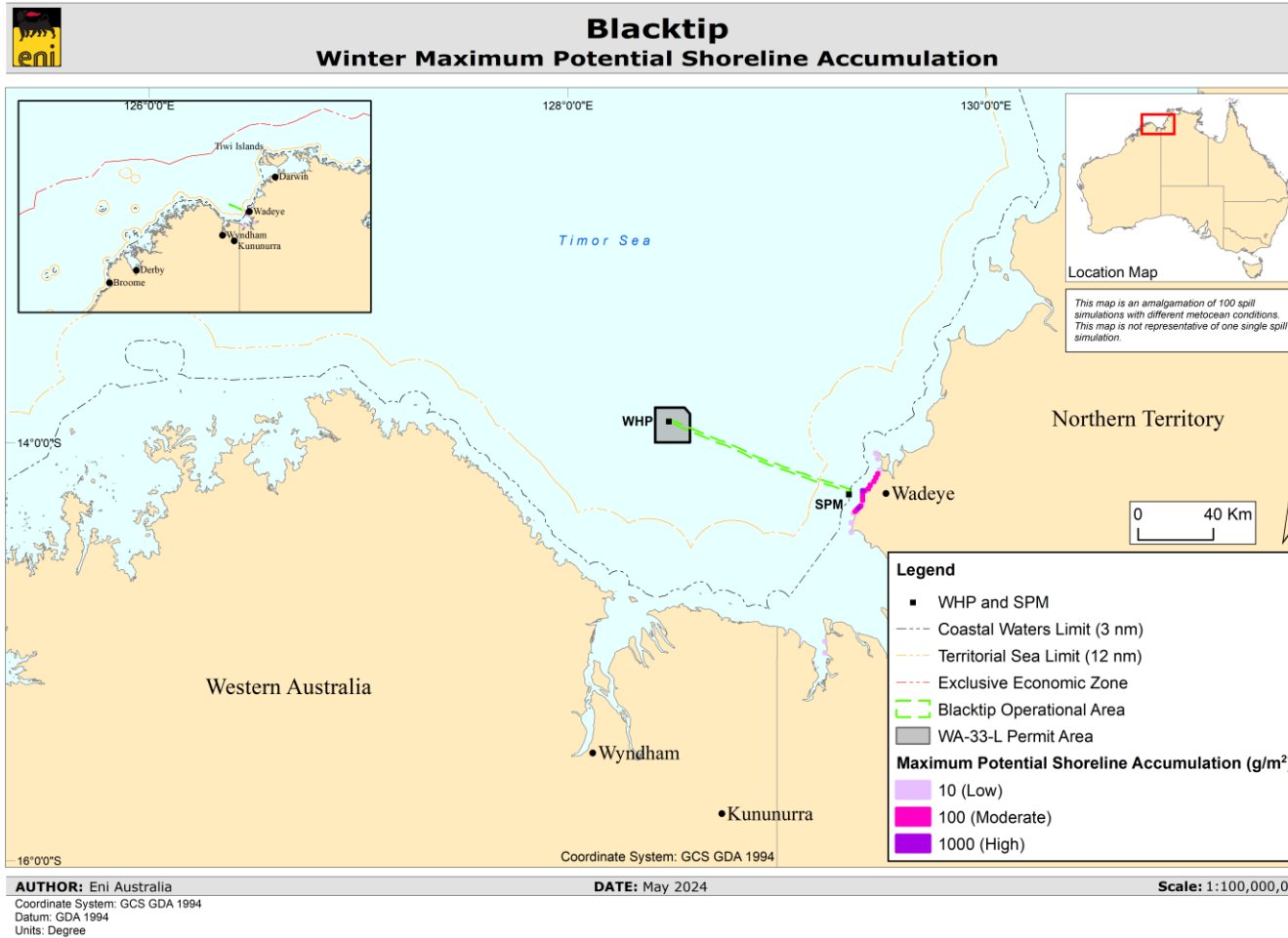



Figure 8.14: Maximum potential shoreline loading from a surface vessel spill during winter conditions; results were calculated from 100 spill simulations

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8.9.2.5 Entrained Hydrocarbon

Table 8.26 summarises the maximum distances from the release location to entrained hydrocarbon thresholds for each season. Concentrations exceeding 10 ppb may potentially occur 176km from the release location, with the distance reducing to 67km as the threshold increases to 100 ppb.

Table 8.27 summarises the predicted exposure to receptors (or above receptors in the water column) for each season. The Darwin Coastal and Thamarrurr nearshore waters both recorded the same highest probabilities of exposure at concentrations exceeding 10 and 100 ppb for summer (87% and 56%), transitional (64% and 26%) and winter (25% and 11%) conditions.

The quickest time for exposure at, or above, 100 ppb was four hours for the Darwin Coastal (Interim Biogeographic Regionalisation for Australia) and Thamarrurr nearshore waters and Cambridge-Bonaparte IMCRA during summer, and the Cambridge-Bonaparte IMCRA during transitional and winter conditions.

The highest concentration of entrained hydrocarbons was 2150 ppb, predicted at the Cambridge-Bonaparte IMCRA during winter conditions.

Figure 8.15 to Figure 8.17 present the entrained hydrocarbon exposure zones for each season.

The entrained hydrocarbons above 10 ppb were shown to occur to a depth of approximately 20m approaching the seafloor.

Table 8.26: Maximum distances from the release location to entrained hydrocarbon exposure thresholds from a surface vessel spill during each season; results were calculated from 100 spill simulations per season

Season	Distance and direction travelled	Entrained hydrocarbon exposure thresholds	
		10 ppb	100 ppb
Summer	Maximum distance (km) from release location	103	67
	Direction	South	Northeast
Transitional	Maximum distance (km) from release location	154	46
	Direction	West	South
Winter	Maximum distance (km) from release location	176	42
	Direction	West	South



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Table 8.27: Summary of the entrained hydrocarbon exposure to receptors from a surface vessel spill during each season; results were calculated from 100 spill simulations per season

Receptor	Summer					Transitional					Winter				
	Highest entrained concentration (ppb)	Probability (%) entrained hydrocarbon exposure at		Minimum time (hours) before entrained hydrocarbon exposure at		Highest entrained concentration (ppb)	Probability (%) entrained hydrocarbon exposure at		Minimum time (hours) before entrained hydrocarbon exposure at		Highest entrained concentration (ppb)	Probability (%) entrained hydrocarbon exposure at		Minimum time (hours) before entrained hydrocarbon exposure at	
		10 ppb	100 ppb	10 ppb	100 ppb		10 ppb	100 ppb	10 ppb	100 ppb		10 ppb	100 ppb	10 ppb	100 ppb
Darwin Coastal	1482	87	56	4	4	644	64	26	4	5	510	25	11	6	10
Keep	34	2	-	139	-	20	6	-	120	-	41	4	-	125	-
Bonaparte Gulf	14	2	<1	239	-	35	9	-	149	-	48	9	-	131	-
Cambridge-Bonaparte	2016	32	13	4	4	1,276	55	20	3	4	2,150	83	47	4	4
Carbonate bank and terrace system of the Sahul Shelf	-	-	-	-	-	16	2	-	324	-	15	2	-	340	-
Clump Island	15	1	-	248	-	14	2	-	164	-	29	2	-	125	-
Daly	18	2	-	321	-	15	1	-	450	-	-	-	-	-	-
Dorcherty Island	249	80	21	30	55	172	53	12	31	31	116	15	1	51	109



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Receptor	Summer					Transitional					Winter				
	Highest entrained concentration (ppb)	Probability (%) entrained hydrocarbon exposure at		Minimum time (hours) before entrained hydrocarbon exposure at		Highest entrained concentration (ppb)	Probability (%) entrained hydrocarbon exposure at		Minimum time (hours) before entrained hydrocarbon exposure at		Highest entrained concentration (ppb)	Probability (%) entrained hydrocarbon exposure at		Minimum time (hours) before entrained hydrocarbon exposure at	
		10 ppb	100 ppb	10 ppb	100 ppb		10 ppb	100 ppb	10 ppb	100 ppb		10 ppb	100 ppb	10 ppb	100 ppb
Quoin Island	-	-	-	-	-	11	1	-	163	-	16	2	-	136	-
Thamarrurr	1482	87	56	4	4	644	64	26	4	5	510	25	11	6	10
Turtle Point	-	-	-	-	-	14	3	-	264	-	14	2	-	211	-
Victoria Daly	24	1	-	271	-	20	6	-	288	-	41	4	-	142	-
Whale Flat	34	2	-	139	-	13	3	-	120	-	20	2	-	125	-
Wyndham-East Kimberley	-	-	-	-	-	15	1	-	349	-	13	2	-	583	-
Emu Reefs	161	2	1	66	66	-	-	-	-	-	-	-	-	-	-



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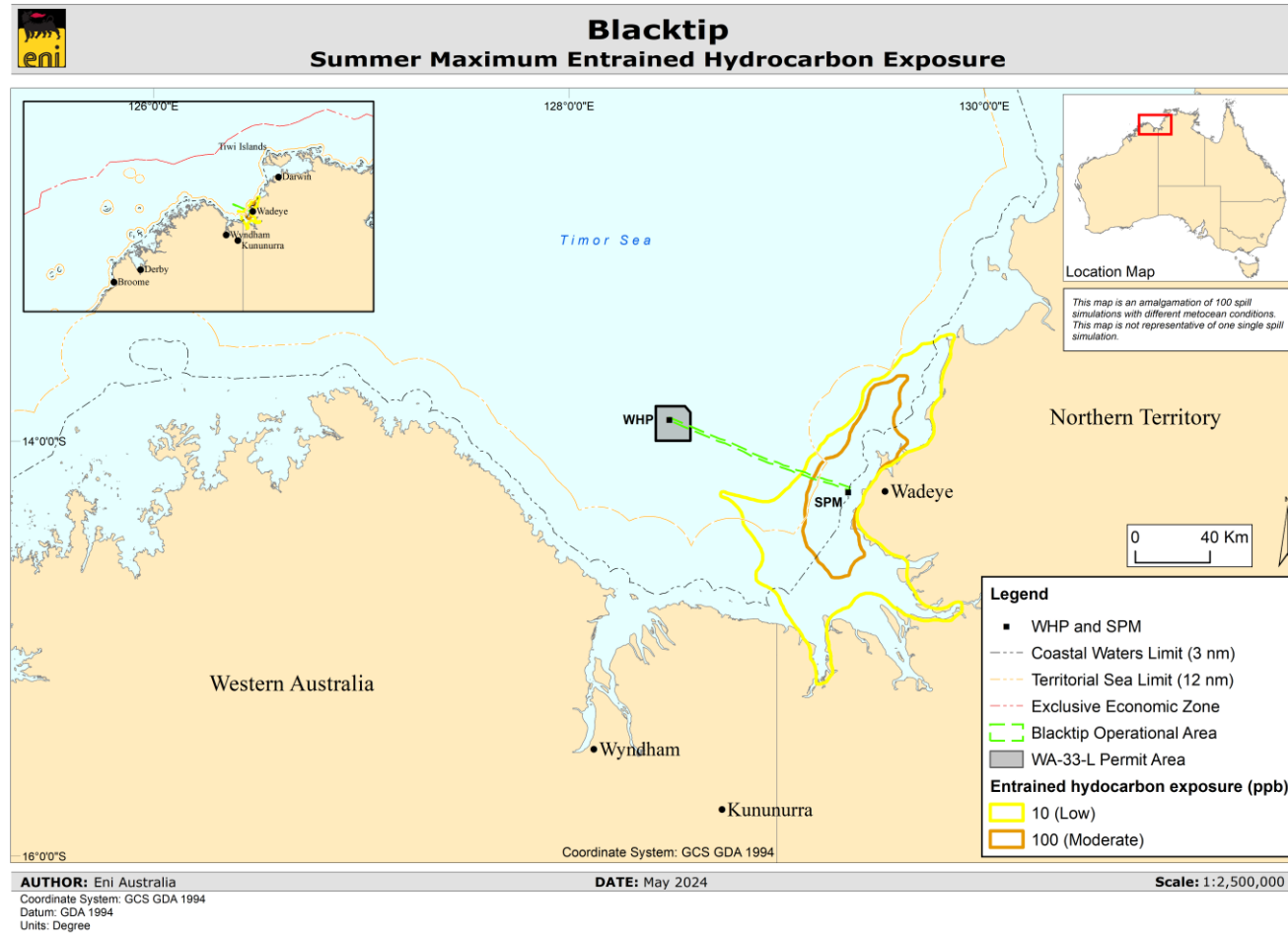


Figure 8.15: Predicted zones of entrained hydrocarbon exposure from a surface vessel spill during summer conditions; results were calculated from 100 spill simulations



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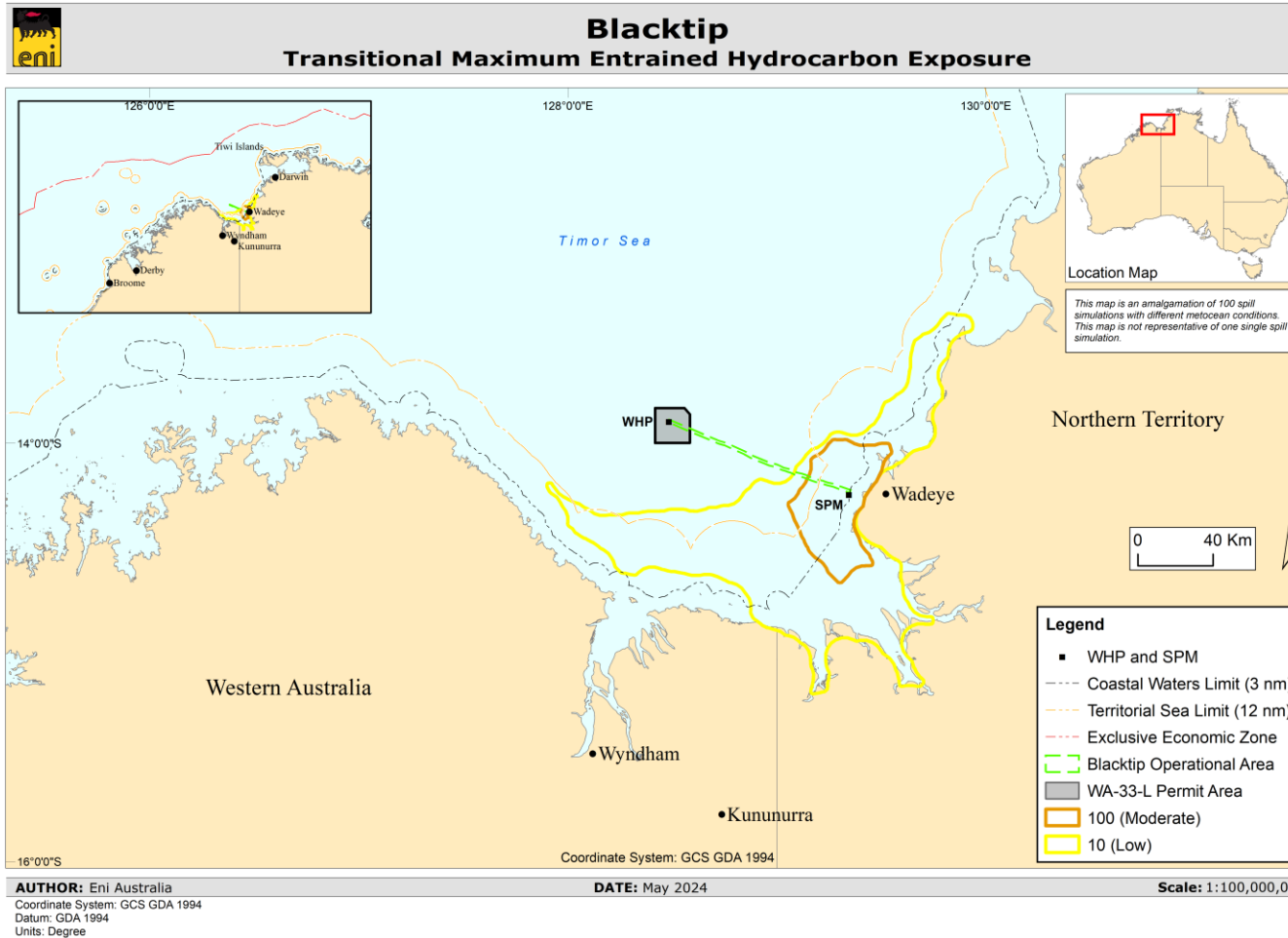


Figure 8.16: Predicted zones of entrained hydrocarbon exposure from a surface vessel spill during summer conditions; results were calculated from 100 spill simulations



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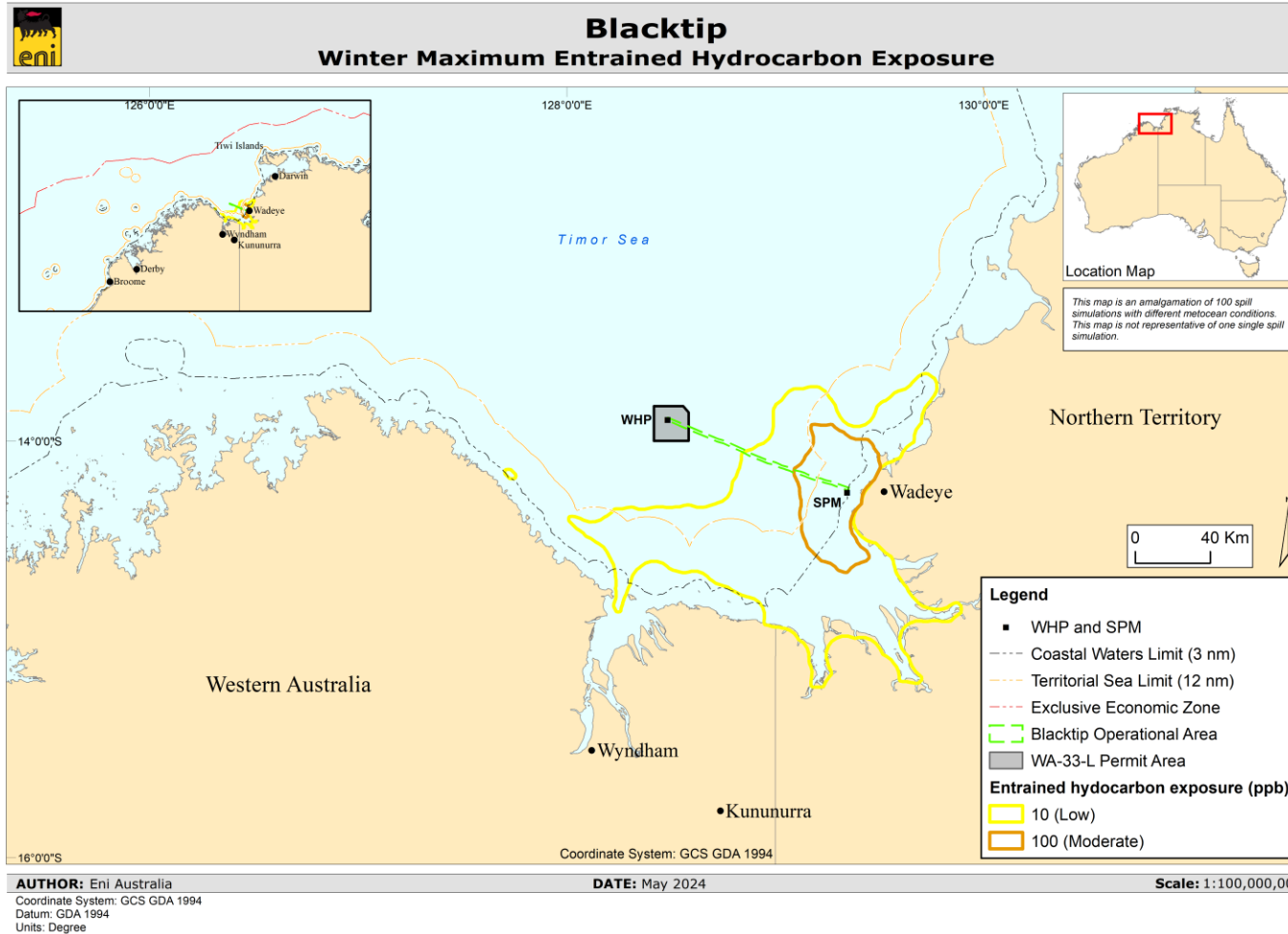



Figure 8.17: Predicted zones of entrained hydrocarbon exposure from a surface vessel spill during winter conditions; results were calculated from 100 spill simulations

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8.9.2.6 Dissolved Aromatic Hydrocarbons

Table 8.28 summarises the maximum distances from the release location to dissolved hydrocarbons exposure thresholds. Concentrations exceeding 10ppb may occur 25km from the release location. No exposure was predicted as the threshold increases to 50ppb and 400ppb, respectively.

The dissolved hydrocarbons above 10ppb were shown to occur to a depth up to 25m approaching the seafloor.

Table 8.28: Maximum distances from the release location to dissolved hydrocarbon exposure thresholds from a surface vessel spill during each season; results were calculated from 100 spill simulations per season


Season	Distance and direction travelled	Entrained hydrocarbon exposure thresholds		
		10ppb	50ppb	400ppb
Summer	Maximum distance (km) from release location	25	-	-
	Direction	South	-	-
Transitional	Maximum distance (km) from release location	21	-	-
	Direction	North	-	-
Winter	Maximum distance (km) from release location	24	-	-
	Direction	South	-	-

8.9.3 Potential Environmental Impact

For potential environmental impacts from a hydrocarbon spill, refer to Table 8.14. A release of MDO will be much reduced in terms of spatial and temporal scales compared to a worst case loss of Blacktip condensate from the loss of well control, assessed and modelled in Section 8.6. Any potential impacts from a release from the vessel will be local to the east of the JBG and along its eastern coastlines.

Generally, about 4% of the MDO mass should evaporate within the first 12 hours (BP < 180°C); a further 32.0% should evaporate within the first 24 hours (180°C < BP < 265°C); and an additional 54.0% should evaporate over several days (265°C < BP < 380°C). Approximately 10% (by mass) of MDO will not evaporate, though will decay slowly over time. Given the low aromatics in the MDO, the high evaporation potential, and the weathering to which the MDO will be subject, impacts to the marine environment are considered local and recovery will be rapid once the MDO disperses.

For marine fauna that may be exposed to the aromatic components of MDO as it weathers, impacts are considered unlikely, since these species are mobile and therefore will not be constantly exposed for extended durations that would be needed to cause any major toxic effects.

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While the marine fauna may transit through the release, contact is unlikely to result in impacts greater than a minor short-term behavioural change, limited to one or a few individuals. Impact to overall population viability or ecosystems is not anticipated.

Individual turtles may be encountered and come into contact with the released hydrocarbons; however, considering the water depths at the shallowest point of the Operational Area (20m), large numbers of the species are not expected, and any impact will be limited to one or a few individuals. Impact to overall population viability or ecosystems is not anticipated.

Given the temporary and localised nature of a release of this size, as well as the transient nature of marine fauna, impacts from exposure to a reduction in water quality are not expected, but at worst, would be limited to a small number of individuals. Given the rapid dilution and dispersion of the MDO, any impact is anticipated to be minor and will not result in impacts at a population level.

There is the potential for up to 46m³ of MDO accumulating on the shorelines; the maximum length of the shoreline contacted at 100g/m² is 7km (predominantly along the Thamarrurr region coastlines). Shoreline-accumulated hydrocarbons may result in toxic impacts to turtle nesting habitat, potentially impacting adults, eggs and hatchlings. Turtles were monitored during construction of the Blacktip facilities in 2009. This confirmed a maximum of 12 nests being laid on Yelcherr Beach (7km from the vessel release location). While the impacts to individual nesting turtles, eggs and hatchlings may be severe, the small volumes and quick evaporation of MDO and the short duration of persistence means the number of individuals potentially affected would be very low and population-level impacts will not occur.

Although the release may originate within the Joseph Bonaparte Gulf AMP, given the low maximum concentrations, the weathering of MDO, and the low aromatics and persistent fractions, impacts to the Joseph Bonaparte Gulf AMP are not considered significant and it is not anticipated the values of the AMP will be significantly impacted. The impact to values of the Joseph Bonaparte Gulf AMP has been assessed for the significantly larger loss of well control hydrocarbon release; refer to Section 8.6.


8.9.4 Environmental Performance Outcomes and Control Measures

EPOs relating to this risk include:

- no loss of containment of hydrocarbons to the marine environment (EPO-15).

CMs relating to this risk include:

- navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes) (CM-01)
- navigational charting of infrastructure (CM-02)
- 500m PSZ around the WHP and SPM (CM-03)
- consultation with relevant persons, including ongoing consultation and notifications (CM-04)
- vessel fuel quality (CM-07)
- NOPSEMA accepted OPEP (CM-28)


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- vessel spill response plans (CM-34)
- refuelling transfer procedures (CM-35).


EPSs and MC relating to the above are presented in Table 9.2.

8.9.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/ management	Evaluation	Adoption?
Eliminate	Eliminate the use of vessels in the Operational Area	Interactions between the vessels, SPM and WHP and other maritime traffic cannot be eliminated, though the risk is extremely low, given the low volume of shipping traffic through the Operational Area.	✘
	Remove infrastructure	Would remove a collision hazard. However, the WHP, SPM and GEP have been in the JBG since 2009 and are fixed for the duration of field life. Removal is not feasible for the operations to occur.	✘
Substitute	N/A	N/A	N/A
Engineering	Navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes)	Ensures the vessels and surface infrastructure (WHP and SPM) are seen by other marine users, thereby reducing the risk of collisions. A radar beacon unit is installed on the WHP, which would appear on the display of the triggering radars, providing range, bearing and identification information. Would alert vessels of WHP position, reducing collision risk. Vessels will comply with standard maritime safety and navigation procedures, including AMSA Marine Order 30 (Prevention of Collisions) 2009.	✓ (CM-01)
	Contract double hulled vessels only	Vessels are subject to availability and must meet Eni standards. Double-hull vessel requirement would be of high cost and subject to vessel availability, which could cause project delay.	✘
Isolation	N/A	N/A	N/A
Administrative	Vessel fuel quality (in compliance with Marine Order 97)	Requires using low-sulphur fuel in accordance with Marine Order 97. Only MDO is used on Blacktip operations vessels. MDO is lighter than intermediate or heavy fuel oil and will evaporate faster and persist less in the marine environment. MDO is already used on the vessels and MODU in accordance with Marine Orders.	✓ (CM-07)


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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
	Navigational charting of infrastructure	WHP, SPM, CEP and GEP locations are charted on Australian Hydrographic Service nautical charts. Vessels are aware of their presence and can navigate accordingly, avoiding collision risks.	✓ (CM-02)
	500m PSZ around the WHP and SPM	PSZ area is marked on nautical charts and alerts other marine users to the presence of the WHP and SPM, thereby reducing the likelihood of interaction with other marine users, avoiding collision risks.	✓ (CM-03)
	Consult with relevant persons (refer to Section 5) including ongoing consultation and notifications	Consultation with relevant persons ensures marine users are aware of the proposed activities, reducing the likelihood of unplanned interactions or collision risks. Provides marine users an opportunity to request practicable interface control measures.	✓ (CM-04)
	Accepted Oil Pollution Emergency Plan	Implements response plans to manage an unplanned hydrocarbon release quickly and efficiently to reduce impacts to the marine environment. An accepted OPEP is a legislative requirement under the OPGGS Act.	✓ (CM-28)
	Vessel spill response plans	Implements response plans (Shipboard OPEP/Marine Pollution Emergency Plan) aboard vessels to deal with unplanned hydrocarbon releases and spills quickly and efficiently to reduce impacts to the marine environment. Administrative costs of preparing documents. Generally undertaken by vessel contractor.	✓ (CM-34)
	Refuelling transfer procedures	Administrative control, such as bunkering and bulk refuelling procedures (applied by the contractors), can reduce potential for bunkering spills with minimal cost involved.	✓ (CM-35)


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8.9.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	<p>Physical presence of Blacktip operations is managed to avoid collisions and associated spill risk in accordance with relevant legislative requirements, including compliance with international maritime conventions and Australian legislation, being:</p> <ul style="list-style-type: none"> • International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978 • International Convention for the Safety of Life at Sea 1974 • International Regulations for Preventing Collisions at Sea 1972 • <i>Navigation Act 2012</i>, including, as appropriate to vessel class: <ul style="list-style-type: none"> - Marine Order 21: Safety and emergency arrangements) - Marine Order 30: Prevention of Collisions) - Marine Order 71: Masters and Deck Officers • OPGGS Act Section 616 (2) Petroleum safety zones, which involve establishing and maintaining a PSZ around offshore structures or equipment. <p>EPBC approval conditions (EPBC 2003/1180) were considered for this risk. Condition number 3 relates to potential spills. The Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17) is considered to meet this condition.</p>
Policy compliance	<p>Management of loss of MDO is aligned with Eni policies and standards. The residual risk is Low, which is acceptable (refer Table 6.5).</p> <p>The EPOs, CMs and EPSs that will be implemented are consistent with Eni internal requirements.</p>
Social acceptability	<p>Stakeholders have been consulted. To date, no stakeholder concerns have been raised regarding loss of MDO.</p> <p>An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.</p>
Area sensitivity/ biodiversity	<p>Habitat modification, degradation, disruption and loss, deteriorating water quality and marine pollution are identified as potential threats to marine fauna species in relevant recovery plans and conservation advice (as listed in Table 2.3). Eni has considered information in relevant recovery plans for marine fauna that identify marine pollution as a threat. Blacktip operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice.</p> <p>Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).</p>
ESD principles	<p>The risk of this unplanned event is consistent with the principles of ESD because:</p> <ul style="list-style-type: none"> • controls that will be implemented reduce the risk • the impacts associated with unplanned condensate spill do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained • conservative assumptions on scale of impact have been applied • the health, diversity and productivity of the environment will be maintained, including for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

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Given controls that will be implemented, the residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts are acceptable and ALARP.

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8.10 Oil Spill Response Operations (Risk ID U9)

8.10.1 Summary of Environmental Risk Assessment

Hazard	Condensate leak from gas export system		
	Frequency	Severity	Risk
Inherent Risk	C	3	M
Residual Risk	B	2	L

8.10.2 Description of Hazard

In the event of a hydrocarbon spill, response strategies will be implemented where possible to reduce environmental impacts to ALARP. Strategies will be selected through the net environmental benefit analysis (NEBA) process, outlined in the Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17). Spill response will be under the direction of the relevant Control Agency. The response strategies and supporting activities deemed appropriate for the oil spill scenarios for the Blacktip operations are detailed in the Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17) and are identified as:

- operational monitoring
- source control
- shoreline protection and deflection
- shoreline clean-up
- oiled wildlife response
- scientific monitoring.

Response strategies are intended to reduce the environmental consequences of a hydrocarbon spill. However, the nature of some of the strategies (such as those requiring vessel use) means environmental risk from their implementation is inevitable. In addition, lack of planned and coordinated response activities or guidance can result in inadequate response implementation, causing further environmental impact.

Table 8.29 summarises all potential risks that may arise through implementing response strategies.


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Table 8.29: Summary of risks associated with implementation of response strategy

	Operational monitoring	Source control	Protect and deflect	Shoreline clean-up	Oiled wildlife	Scientific monitoring
Vessel movements	x	x	x	x	-	x
Light emissions	x	x	x	x	x	x
Noise	x	x	x	-	x	x
Atmospheric emissions	x	x	x	x	-	x
Disturbance to natural habitat	-	-	x	x	x	
Operational discharge of waste	-	x	x	x	-	-

Offshore risks are consistent with vessel operations described within this EP for the planned operations. The greatest potential for impacts additional to those described for planned operations are from oiled wildlife response, nearshore protection and deflection, and shoreline clean-up operations where disturbance to the environment may occur through implementation efforts. Specific risks relating to response operations are described further below.

8.10.2.1 Light Emissions


Spill response activities will involve using vessels which are required at a minimum to display navigational lighting. Vessels may operate in proximity to shoreline areas during spill response activities.

Onshore operations are not expected, however, if required, are confined to isolated areas and beaches. Shoreline response will only occur during daylight. A significant onshore response is not envisaged. Spill response activities may involve onshore operations, including using vehicles and temporary camps, which may require lighting.

8.10.2.2 Noise Emissions

Spill response activities will involve using vessels, which will generate noise both offshore and in proximity to sensitive receptors in coastal areas.

Spill response activities will also involve using equipment on coastal areas during clean-up of shorelines (e.g., pumps and vehicles), for accessing shoreline areas (e.g., vehicles) and for supporting temporary camps (e.g., diesel generators).

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8.10.2.3 Atmospheric Emissions

The use of fuels to power vessel engines, generators and mobile equipment during spill response activities will result in emissions of GHG.

Atmospheric emissions from spill response equipment will be localised and, while there is potential for fauna and flora impacts, the use of mobile equipment, vessels and vehicles is not considered to create emissions on a scale where noticeable impacts would be predicted. Emissions may occur in protected areas; however, the scale of the impact relative to potential oil spill impacts is not considered great.

8.10.2.4 Physical Presence and Disturbance

The movement and operation of response vessels, including anchoring and operating in the nearshore environment, have potential to cause disturbance to the marine environment. Onshore, vehicles, personnel and equipment associated with the response strategy have the potential to disturb the physical marine and coastal habitats and fauna. Vehicle, equipment and personnel associated with the strategy could also introduce or spread non-indigenous flora and fauna.

Oiled wildlife response activities may involve deliberate disturbance (hazing), capture, handling, cleaning, rehabilitation and release of wildlife, which could lead to additional impacts to wildlife.

8.10.2.5 Operational Discharges and Waste


Operational discharges offshore include those routine discharges from vessels used during spill response and will be the same as those described in Section 7.7. Other specific waste streams include materials used for cleaning oily equipment, flushing water used for cleaning the shoreline habitats, and any waste from shoreline clean-up personnel or camps.

8.10.3 Potential Environmental Impact

Offshore impacts are consistent with vessel operations described within this EP for the planned operations. Specific impacts relating to response operations risks identified above are described further below.

8.10.3.1 Light Emissions

Offshore lighting may cause behavioural changes to fish (including sharks), birds and marine turtles and have been described in planned risks (Section 7.6).

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Spill response activities that require lighting may also occur nearshore and on shorelines through implementing response strategies. The receptors considered most sensitive to lighting from vessel and shoreline operations (in the event of shoreline clean-up) are seabirds and marine turtles. There is flatback turtle nesting activity in the area of northern Yelcherr Beach and Injin Beach to the north (10km from the Operational Area) and along the coastline from Cape Hay to Pearce Point (10km to the east of the Operational Area). A significant flatback turtle nesting area occurs on the north side of Cape Domett, WA (70km to the south of the Operational Area). During the nesting period (November to January) and hatching periods (December to March), turtle sensitivity to light will be greater.

However, given the scale of the response, any impacts are expected to be short-term, geographically confined and minor. In addition, shoreline operations will only be conducted in daytime hours and light impacts will be considered when locating any shoreline camps. Light impacts will also be considered in the operational NEBA process.

8.10.3.2 Noise Emissions

Offshore vessel noise may cause behavioural changes to marine mammals, turtles and fish and have been described in planned risks (Section 7.4).

Spill response activity from onshore operations (noise-generating mobile equipment and vehicles) has the potential to disturb nesting, roosting or feeding birds, as well as nesting turtles and other onshore fauna, through noise and vibration. The shoreline response equipment used is not considered to have excessive sound levels and its use will also be considered in the operational NEBA process. The consequence to onshore fauna from noise is expected to be low. Given the scale of the response, any impacts are expected to be short-term, geographically confined and minor.


8.10.3.3 Atmospheric Emissions

Offshore atmospherics may result in a temporary, localised reduction of air quality and have been described in planned risks (Section 7.2).

Atmospheric emissions from spill response equipment will be localised and, while there is potential for fauna and flora impacts, the use of mobile equipment, vessels and vehicles is not considered to create emissions on a scale where noticeable impacts would be predicted. Atmospheric emissions from spill response equipment are expected to be low.

8.10.3.4 Physical Presence and Disturbance

Vessel use may result in anchor or chain deployment, nearshore booms and grounding, and may disturb benthic habitats in coastal waters, including corals, seagrass, macroalgae and mangroves if used in nearshore waters. Vessel use in shallow coastal waters also increases the chance of contact or physical disturbance or marine fauna such as turtles or dolphins, which have been identified along the shorelines of the JBG. The use of booms creates a physical barrier on the surface water and has the potential to entangle passing marine fauna that are either surface-breathing or -feeding.

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Shoreline response activities may require vehicles, clean-up equipment and deployment of clean-up personnel, which have the potential to damage coastal habitats such as dune vegetation, mangroves and habitats important to threatened and migratory fauna, including nests of turtles and birds and bird roosting and feeding areas. Similarly, in the event camps need to be set up, there is the potential that shorebirds and turtles nesting and feeding behaviours could be impacted.

Impacts from offshore IMS released from vessel biofouling include out-competition, predation and interference with other ecosystem processes, as described in Section 8.3. In shallower coastal areas, such as where vessel-based spill response activities may occur, conditions are likely to be more favourable.

Impacts from terrestrial invasive species are similar to offshore, whereby the invasive species can out-compete local species (e.g., weeds) and interfere with ecosystem processes. Non-native species may be transported attached to equipment, vehicles and clothing. Such an introduction would be especially detrimental to the relatively undisturbed flora and fauna communities along the JBG coastline.

The disturbance to marine and coastal natural habitat, as well as the potential for disruption to culturally sensitive areas, may have flow-on impacts to socio-economic values and industry (e.g., tourism, fisheries).

A NEBA will take into account the vehicles and equipment selected and will aim to reduce habitat damage. The establishment of access routes and demarcation zones, and operational restrictions on equipment and vehicle use, will limit sensitive habitat damage and damage to important fauna areas. Camps will only be set up after consulting the relevant regulatory bodies. After these and other control measures, the resultant consequence to the physical environment and habitat is assessed as low.


As with all spill response activities, response strategies that may cause habitat disturbance will be considered in the operational NEBA process. It is not considered that an extensive shoreline clean-up operation, requiring multiple camps and significant vehicle or equipment use, is required, given the MDO and Blacktip condensate will evaporate and weather rapidly. Disturbance will therefore be short-term, geographically confined and minor and only occur if there is a net benefit to accessing and cleaning shoreline areas.

8.10.3.5 Operational Discharges and Waste

Offshore operational discharges from vessels may create a localised and temporary reduction in water quality and have been described in planned risks (Sections 7.7 and 7.8).

In nearshore areas, operational discharges could occur adjacent to marine habitats such as corals, seagrass and macroalgae, which support a more diverse faunal community. However, discharges are expected to be very localised and temporary.

Cleaning of oil-contaminated equipment or vehicles may spread oil from contaminated areas to those areas not impacted by a spill, potentially spreading the impact area if not contained and moving oil into a more sensitive environment.

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Flushing of oil from shoreline habitats is used to remove oil from the receptor that has been oiled and remobilise back into the marine environment, and results in further dispersion and evaporation of the oil. The process of flushing has the potential to physically damage shoreline receptors such as mangroves communities and increase levels of erosion. Flushing and associated risks will be considered in the operational NEBA process and only undertaken if there is a net benefit.

Sewage, putrescible and municipal waste will be generated from onshore activities at temporary camps that may include toilet and washing facilities. These wastes have the potential to attract fauna, impact habitats, flora and fauna, and reduce the aesthetic value of the environment. Sewage, putrescible and municipal waste generated onshore will be stored and disposed of at approved locations.

As with all spill response activities, response strategies that may result in waste streams will be considered in the operational NEBA process and will only occur if there is a net benefit. There will be low volumes of waste expected as the MDO and Blacktip condensate are anticipated to rapidly evaporate and weather. Minimal waste is therefore expected to be generated and impacts from waste are anticipated to be short-term, geographically confined and slight.


8.10.4 Environmental Performance Outcomes and Control Measures

EPOs relating to this risk include:

- activities are managed in accordance with navigational and safety requirements (EPO-02)
- no unplanned interactions with other users (EPO-03)
- Impacts to air quality will be limited to the impacts from the planned activities described in Section 7.2.3 (EPO-04)
- no unplanned objects, emissions or discharges to sea or air (EPO-05)
- no injury or mortality to EPBC Act listed fauna during operational activities (EPO-09)
- no impacts to marine fauna greater than those described in Section 7.6.3 from light emissions required for safe work and navigation (EPO-10)
- no discharges to sea of untreated sewage, greywater, putrescible wastes, bilge and deck drainage (EPO-11)
- no unplanned discharge of oily water or chemicals (EPO-12)
- reduce impacts from oil spill response operations through incident planning (EPO-16).

CMs relating to this risk include:

- navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes) (CM-01)
- air pollution prevention certificate (CM-05)
- vessel fuel quality (CM-07)
- regulations and measures for interacting with marine fauna (CM-13)

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- vessels comply with Marine Order 96 (Marine pollution prevention – sewage) (CM-14)
- vessels comply with Marine Order 95 (Marine pollution prevention – garbage) (CM-15)
- vessels comply with Marine Order 91 (Marine pollution prevention – oil) (CM-16)
- shallow draft vessels will be used to access remote shorelines (CM-36)
- vehicle access (if required) will be limited or restricted on dunes, turtle nesting beaches and in mangroves (CM-37)
- removal of vegetation (if required) will be limited to moderately or heavily oiled vegetation (CM-38).

EPSs and MC relating to the above are presented in Table 9.2.


For EPSs and MC relating to spill response in the event of a spill during this activity, refer to the Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000).

8.10.5 As Low as Reasonably Practicable Demonstration

Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
Eliminate	N/A	N/A	N/A
Substitute	Vessel fuel quality (in compliance with Marine Order 97)	Reduces emissions through use of low-sulphur fuel in accordance with Marine Order 97. Minimal cost as vessels must comply with Marine Orders.	✓ (CM-07)
Engineering	Navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes)	Ensures the vessels are seen by other marine users, thereby reducing the risk of collisions. A requirement under Marine Orders, requires vessels to have navigational equipment to avoid collisions.	✓ (CM-01)
	Equip vessels with oily water prevention system and IMO-approved oil filtering equipment	Reduces potential impacts of planned discharge of oily water to the environment with minor administrative and maintenance cost.	✓ (Through compliance with Marine Order 91)
Isolation	Capture contaminated waters or bilge water on vessels	Fixed equipment, such as engines and generators, are contained and captured in the bilge water tank for treatment via the OIW separator (on vessels) in compliance with Marine Order 91.	✓ (Through compliance with Marine Order 91)
Administrative	Vessel Air Pollution Prevention Certificate (in compliance with Marine Order 97)	Reduces the probability of potential impacts to air quality. Minimal cost as vessels must comply with Marine Orders.	✓ (CM-05)

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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
	Regulations and measures for interacting with marine fauna (e.g., EPBC Regulations 8 (Part 8))	<p>Minor cost in complying. Reduces risk of physical and behavioural impacts to marine fauna.</p> <p>While not directly relating to survey noise, EPBC Regulations include restrictions such as vessel speed and direction when in proximity to marine fauna and are based on legislated requirements.</p>	<p>✓ (CM-13)</p>
	Implement measures in Marine Order 95 (Marine pollution prevention – garbage)	<p>Marine Order 95 reduces potential impacts of inappropriate discharge of sewage. Stipulates putrescible (food) waste disposal conditions and limitations.</p> <p>Environmental benefit outweighs the minor administrative costs in implementing the Marine Order.</p>	<p>✓ (CM-15)</p>
	Implement measures in Marine Order 96 (Marine pollution prevention – sewage)	<p>Marine Order 96 reduces the probability of garbage being discharged to the sea.</p> <p>Environmental benefit outweighs the minor administrative costs in implementing the Marine Order.</p>	<p>✓ (CM-14)</p>
	Vessels comply with Marine Order 91 (Marine pollution prevention – oil)	<p>Marine Order 91 stipulates the oily water prevention system and treatment requirements for OIW discharge from vessels.</p> <p>Environmental benefit outweighs the minor administrative costs in implementing the Marine Order.</p>	<p>✓ (CM-16)</p>
	Shallow draft vessels will be used to access remote shorelines	<p>Aims to minimise the impacts associated with seabed disturbance on approach to the shorelines during a response activity.</p> <p>Incident Action Plan (IAP) process will include further assessment on the vessel use and requirement.</p>	<p>✓ (CM-36)</p>
	Vehicle access (if required) will be limited or restricted on dunes, turtle nesting beaches and in mangroves	<p>Aims to minimise impacts to turtle nesting beaches and in mangroves that may be accessed in a response.</p> <p>IAP process will include further assessment on the vessel use and requirement.</p>	<p>✓ (CM-37)</p>


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Demonstration of ALARP			
Type	Control/management	Evaluation	Adoption?
	Removal of vegetation (if required) will be limited to moderately or heavily oiled vegetation	Aims to reduce the removal of oiled vegetation. Allows for as much habitat to remain as possible. IAP process will include further assessment on the vessel use and requirement.	✓ (CM-38)

8.10.6 Acceptability Demonstration

Demonstration of acceptability	
Compliance with legal requirements, laws and standards	Response vessels will comply with the EPBC Regulations 2000 Part 8 and the Australian National Guidelines for Whale and Dolphin Watching (Commonwealth of Australia, 2017d). Response vessels will comply with relevant MARPOL/Marine Order requirements as detailed throughout Section 7 and 8. Blacktip response operations comply with the EPBC approval conditions (EPBC 2003/1180).
Policy compliance	Management of response operations is aligned with Eni policies and standards. The residual risk is Low, which is acceptable. The EPO and the controls that will be implemented are consistent with Eni internal requirements.
Social acceptability	Stakeholders have been consulted. To date, no stakeholder concerns have been raised regarding response operations. An ongoing consultation program will consider statements and claims made by stakeholders when assessing impacts and risks.
Area sensitivity/biodiversity	Eni has considered information in relevant recovery plans and approved conservation advice for cetaceans and marine turtles that identify chemical discharges and pollution as a threat (as listed in Table 2.3). Blacktip response operations are not inconsistent with the objectives and actions detailed in the recovery plans and approved conservation advice. Eni has considered the values and objectives of the North Marine Park Network Management Plan (DNP, 2018a). The Blacktip operations are not inconsistent with the IUCN principles, the North Marine Parks Network Management Plan objectives, or the values of the Joseph Bonaparte Gulf AMP (refer to Section 4.5.1).
ESD principles	Blacktip response operations are consistent with the principles of ESD because: <ul style="list-style-type: none"> the impacts associated with the response operations do not result in 'threats of serious or irreversible harm', as detailed within the EPBC Act, and biodiversity and ecological integrity will be maintained there are no identified health, diversity or productivity impacts that may affect the biodiversity or ecological function for future generations.
ALARP	The residual risk has been demonstrated to be ALARP.

Given the controls that will be implemented, the residual risk is considered low, which is acceptable in accordance with Eni's acceptability criteria (Table 6.5). Potential impacts are acceptable and ALARP.

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8.10.7 Spill Response Strategies

Oil spill response strategies have been evaluated for implementation in the event of a spill. Strategies were identified based on those that have been implemented in the past or considered to be good industry practice. Table 8.30 presents the evaluation on the implementation of these strategies based on their suitability for the credible spill scenarios identified in this EP.

The key considerations taken into account in the evaluation were:

1. properties and weathering profile of the Blacktip condensate and MDO
2. nature and scale of the credible spill scenario
3. safety and environmental risks and impacts involved with the response.


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Table 8.30: Spill response strategies considered for the mitigation of contact from hydrocarbon spills

Strategy	Description	Applicability and environmental benefit	Hydrocarbon type	Adopted/ reject
Source control	Subsea well intervention.	The Blacktip wellheads are located on the WHP and there are no wellheads on the seabed. Subsea intervention operations are therefore not applicable.	Blacktip condensate	Reject
			MDO	N/A
	Deployment of subsea first response toolkit.	Subsea first response equipment can clean around the well and prepare for relief well drilling and installation of a capping device. The wellheads for the Blacktip production wells are located on the WHP and are therefore surface wellheads. All equipment listed as Subsea First Response Toolkit cannot be used for a loss of well control response. In the event the WHP collapses and there is an uncontrolled subsurface release, the well will have no wellhead. Hydrocarbons will be flowing through the conductor on the seabed. Therefore, the capping tack can attach and seal.	Blacktip condensate	Reject
			MDO	N/A
	Installation of a capping stack.	A capping stack is designed to be installed on a subsea well and provides a temporary means of sealing the well, until a permanent well kill can be performed through either a relief well or well re-entry. The wellheads for the Blacktip production wells are located on the WHP and are therefore surface wellheads. The capping stack is not suitable for use above sea level. In the event the WHP collapses and there is an uncontrolled subsurface release, the well will have no wellhead (this would have been lost during platform collapse) and hydrocarbons will be flowing through the conductor on the seabed. There is an operational need that the stack can attach and seal on a subsea well during for a worst case well release, then shut it in safely. To achieve this, a mandrel or hub profile must be exposed (either at the wellhead or on top of a blowout preventer). This will not be available in the event the WHP collapses, therefore the use of the capping stack is not applicable.	Blacktip condensate	Reject
			MDO	N/A



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Strategy	Description	Applicability and environmental benefit	Hydrocarbon type	Adopted/ reject
	Drilling a relief well.	<p>Applicable to all loss of well control, including:</p> <ul style="list-style-type: none"> during production operations of wells, resulting in a long-term (74 day) uncontrolled surface release of Blacktip condensate during production operations as a result of an explosion or fire scenario, resulting in short-term (three day) surface release and a long-term (71 day) uncontrolled subsurface release of Blacktip condensate. <p>The drilling of relief well is considered the primary control in the event of a loss of well control and will be implemented regardless of any other controls in place. This control when implemented successfully will prevent further loss of hydrocarbon to the environment.</p>	Blacktip condensate	Adopt
			MDO	N/A
	Vessel Shipboard OPEP.	Applicable to MDO spills from vessels only. The Shipboard OPEP is the procedure for responding to a vessel spills.	Blacktip condensate	N/A
			MDO	Adopt
Monitor and evaluate	Monitoring and evaluation are used to predict and monitor the trajectory and fate of the spill, to determine the effectiveness of response strategies and to identify and report any potential or actual contacts to flora that occur.	<p>Applicable to all spill scenarios.</p> <p>There are various specific techniques (vessel and aerial surveillance, oil spill modelling) within this response strategy that may be suitable. Use will be based on the spill fate, loss volumes, and other considerations such as access to locations and environmental or metocean conditions.</p> <p>Monitoring and evaluation are used to inform further response planning and execution and the operational NEBA.</p>	Blacktip condensate	Adopt
			MDO	Adopt
Subsea chemical dispersant	Subsurface chemical dispersant involves dispersant applied directly into the wellhead location at the release point. Subsea chemical dispersant injection is used to disperse the oil to enable safe implementation of the subsequent controls.	Wellheads are located on the WHP and therefore subsea chemical dispersion is not applicable.	Blacktip condensate	Reject
			MDO	N/A



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Strategy	Description	Applicability and environmental benefit	Hydrocarbon type	Adopted/reject
Surface chemical dispersion	Chemical dispersant is applied to break down the hydrocarbons and allow or enhance dispersion into the water column, thereby preventing or reducing potential shoreline contact and increasing biodegradation.	<p>MDO and condensates are not conducive to chemical dispersion due to rapid evaporation and low surface concentrations, as referenced in Sections 8.6 and 8.9.</p> <p>A weathering study on Blacktip condensate by Intertek in 2013 showed the rate of evaporation of Blacktip condensate is rapid, with 67% of the volume of condensate lost within the first two hours and 89% by eight hours. Between eight and 72 hours, only a further 7% is lost, reaching a maximum weathering at 72 hours of 95% lost volume (Intertek, 2013).</p>	Blacktip condensate	Reject
			MDO	Reject
Physical dispersion	Physical dispersion is undertaken by running vessels through the hydrocarbon plume and using the turbulence developed by the propellers or hydro-blasting from vessel hydrants to break up the slick. The process enhances dispersion.	<p>MDO and condensates are not conducive to physical dispersion due to rapid evaporation and low surface concentrations, as referenced in Sections 8.6 and 8.9.</p> <p>Physical dispersion is typically only effective on surface oil concentrations >50g/m². Surface hydrocarbons in the event a worst case well release are only expected to exceed 10g/m² in the immediate vicinity of the well for a very short period.</p> <p>A weathering study on Blacktip condensate by Intertek in 2013 showed the rate of evaporation of Blacktip condensate is rapid, with 67% of the volume of condensate lost within the first two hours and 89% by eight hours. Between eight and 72 hours, only a further 7% is lost, reaching a maximum weathering at 72 hours of 95% lost volume (Intertek, 2013).</p>	Blacktip condensate	Reject
			MDO	Reject



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Strategy	Description	Applicability and environmental benefit	Hydrocarbon type	Adopted/reject
Containment and recovery	Containment and recovery of hydrocarbons can offer a preventive form of protection to sensitive receptors. Skimmers (mechanical) and booms will be used at sea. This strategy is only effective in calm conditions.	MDO and condensates are generally not conducive to containment and recovery strategies due to their rapid evaporation and low surface concentrations, as referenced in Section 8.6 and 8.9. Containment and recovery is effective on oil concentrations >50g/m ² . Surface oil concentrations from a worst case well release of Blacktip condensate is not predicted to exceed 10g/m ² and 25g/m ² surface oil thresholds at probabilities greater than 10% and 1%, respectively. Any exceedance is in the immediate vicinity of the well. Containment and recovery is therefore not effective. Floating oil concentrations from other releases are not predicted to exceed 10g/m ² and 25g/m ² .	Blacktip condensate	Reject
			MDO	Reject
Protection and deflection	Protection and deflection activities involve using booms to deflect spills away from sensitive receptors and deflect spills to an area that provides increased opportunity for recovery activities.	MDO and condensates are generally not conducive to protection and deflection strategies due to their rapid evaporation and low surface concentrations, as referenced in Section 8.6 and 8.9. Protection and deflection is effective on oil concentrations >10g/m ² . Surface oil concentrations from a worst case well release of Blacktip condensate is not predicted to exceed 10g/m ² and 25g/m ² surface oil thresholds at probabilities greater than 10% and 1%, respectively. Any exceedance is in the immediate vicinity of the well. Protection and deflection are therefore not effective. Floating oil concentrations from other releases are not predicted to exceed 10g/m ² and 25g/m ² .	Blacktip condensate	Reject
			MDO	Reject



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Strategy	Description	Applicability and environmental benefit	Hydrocarbon type	Adopted/reject
Shoreline clean-up	During a spill response, clean-up of the oiled shorelines will be implemented using suitable methods, provided it will be beneficial to the environment based on the NEBA performed on the affected areas based on actual site conditions.	<p>MDO and condensates are generally not conducive to shoreline clean-up strategies due to their rapid evaporation, as referenced in Section 8.6 and 8.9.</p> <p>There is not expected to be significant shoreline hydrocarbon from the spill events at concentrations $\geq 100\text{g/m}^2$; however, as a precaution, shoreline assessment and clean-up is included as a response strategy. Shoreline accumulation is not expected for other spill scenarios.</p> <p>Owens and Sergy (1994) define accumulated hydrocarbon $< 100\text{g/m}^2$ to have an appearance of a stain on shorelines. French-McCay (2009) defines accumulated hydrocarbons $\geq 100\text{g/m}^2$ to be the threshold that could impact the survival and reproductive capacity of benthic epifaunal invertebrates living in intertidal habitat. The $\geq 100\text{g/m}^2$ concentration is not anticipated to be reached on the shorelines; however, a shoreline assessment will inform whether a response is required.</p> <p>A shoreline assessment will advise whether there is any clean-up potential for any shoreline accumulation volumes. Natural collection points along the coastline will be the focus of the shoreline clean-up.</p> <p>Contacted shorelines will be assessed for their shoreline clean-up potential based on an operational NEBA (informed by the shoreline assessment). The clean-up has the potential to remediate the shoreline quicker than if being left to natural remediation. Particularly during turtle or seabird nesting seasons, there may be less impact by not undertaking shoreline clean-up.</p>	Blacktip condensate	Adopt
			MDO	Adopt



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Strategy	Description	Applicability and environmental benefit	Hydrocarbon type	Adopted/reject
Oiled wildlife response (OWR)	Oiled wildlife response aims at preventing wildlife from becoming oiled and treating animals that do become oiled.	<p>There is not expected to be significant shoreline hydrocarbon from a worst-spill event; however, as a precaution, OWR is included as a response strategy.</p> <p>Shorelines have been identified as having potential wildlife inhabiting them. Mobilisation of experts, trained workforces, facilities and equipment will then be needed to assess oiled wildlife and respond as required.</p> <p>Options for wildlife management must be considered and a strategy determined, guided by the WA Oiled Wildlife Response Plan and the NT Wildlife Response Plan for Oil Spills.</p> <p>Significant offshore OWR is not applicable due to the low concentrations of surface hydrocarbons expected and hydrocarbon types.</p>	Blacktip condensate	Adopt
			MDO	Adopt
In-situ burning	<p>Technique involves the controlled burning of oil that has spilled (from a vessel or a facility).</p> <p>On conducive hydrocarbons, and when conditions are favourable and conducted properly, in-situ burning will reduce the amount of oil on the water.</p>	<p>For in-situ burning to be undertaken, oil must be thicker than 1 to 2 mm.</p> <p>MDO and condensates are not conducive to in-situ burning due to rapid evaporation and low surface concentrations, as referenced in Sections 8.6 and 8.9.</p>	Blacktip condensate	Reject
			MDO	Reject

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Strategy	Description	Applicability and environmental benefit	Hydrocarbon type	Adopted/reject
Scientific monitoring	This is the main tool for determining the extent, severity and persistence of environmental impacts from an oil spill. It allows operators to determine whether their environmental protection outcomes have been met (via scientific monitoring activities). This strategy also evaluates the recovery from the spill.	Scientific monitoring is especially beneficial for the purpose of monitoring entrained and dissolved oil impacts. Response strategies are generally targeted to manage the surface oil impacts. For information on scientific monitoring, refer to the Blacktip Operational and Scientific Monitoring Plan (000036_DV_PR.HSE.0860.000).	Blacktip condensate	Adopt
			MDO	Adopt

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8.10.8 Spill Response Strategies As Low as Reasonably Practicable Assessment

Table 8.31 presents an ALARP assessment on the level of resourcing for spill response strategies identified for adoption in Table 8.30. The Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17) includes a further ALARP assessment of the source control and Incident Management Team (IMT) arrangements.

Table 8.32 presents an ALARP assessment on the level of resourcing for Operational Monitoring Plan (OMP) strategies and spill response strategies identified in the Blacktip Operational and Scientific Monitoring Plan (000036_DV_PR.HSE.0860.000).


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Table 8.31: As low as reasonably practicable assessment of the level of resourcing available for spill response strategies

Strategy	Resourcing	Justification	Additional resource consideration	Proportionality - cost/benefit	ALARP assessment
Source control					
Relief well (the OPEP includes a further ALARP assessment on relief well capability)	Relief well plan in place for Blacktip wells. AEP MoU provides for access to other operators' rigs.	Source control options have been evaluated for Table 8.30. Of these options, the drilling of a relief well is considered the primary means of controlling the source in the event of an unplanned well release.	Having a MODU on location permanently and under contract to Eni for relief well drilling. This additional control could reduce the length of time taken to source a relief well.	Having a MODU on location (and personnel on standby) for drilling top-hole sections of a relief well would reduce the timeframe to source a relief well. However, given the location of the field within a relative high oil and gas area, it is likely a MODU could be sourced within relative proximity. Since the daily rate of a MODU is ~\$650,000 per day, the cost of having a MODU on standby or contracted for drilling top-holes is disproportionate to the environmental benefit, particularly given the low likelihood of shoreline contact.	Having a MODU and personnel and equipment on standby would double the cost of drilling a well. This is considered grossly disproportionate to the environmental benefit (reduction of two weeks of release volumes), particularly considering the spill is predicted to largely weather and evaporate offshore with minimal shoreline contact.



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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality - cost/benefit	ALARP assessment
Monitor and evaluate					
Aerial surveillance	<p>Helicopter services available through Eni primary contracted supplier based out of Darwin.</p> <p>Aircraft are also available through Australia Marine Oil Spill Centre (AMOSC) and AMSA.</p> <p>Initial aerial observation using helicopter will occur within three hours of notification of the spill.</p> <p>Trained observers will be sourced from AMOSC, AMSA and Oil Spill Response Limited (OSRL) to undertake the required aerial surveillance in the event of a spill.</p>	<p>Given the location of the spill site, mobilising helicopters from Darwin is considered adequate for surveillance.</p> <p>If aerial surveillance is required, an over-flight schedule is developed by the IMT. The frequency of flights will be sufficient to ensure the information collected during each flight (i.e., observer log and spill mapping) meets the information needed to validate dispersion of the spill.</p>	<p>Resource not considered limiting. Primary supplier on contract, with additional providers available to provide desired overpass frequency. Trained observers can be provided on rotation from Day 2.</p>	<p>No additional cost to maintain capability as helicopters are currently contracted for operations to and from Eni facilities.</p> <p>In the event additional overpasses are required due to data gaps, the cost of the additional flights will be added to the cost of the response.</p>	<p>There is no value in increasing dedicated overpasses; therefore, the arrangements are considered ALARP. However, opportunistic aerial surveillance can be provided through the shared use of aircraft deployed for other purposes.</p>



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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality - cost/benefit	ALARP assessment
Vessel surveillance	<p>Support vessels contracted to Eni for the activity duration.</p> <p>Vessel of opportunity from other operators.</p> <p>Additional vessels contracted through Eni vessel providers out of Darwin.</p> <p>In event of a spill when a vessel is not on site (e.g., during ongoing production), a vessel will be sourced within 24 hours.</p>	<p>Some Blacktip operations activities involve multiple vessels. Should a spill incident occur, those not involved in the incident can provide surveillance.</p> <p>Additional mobilisation from Darwin can be made through Eni's contracted vessel providers within 24 hours.</p> <p>This strategy is not designed to perform 'whole of spill' coverage, which is provided by aerial surveillance (i.e., it is a secondary strategy).</p>	<p>Based on the likelihood of vessels available on site during activities (IMR and survey), additional vessels for the purpose of oil spill surveillance are not considered required, given the need is met through vessel sharing.</p> <p>In the event of a spill when a vessel is not available (WHP spill during ongoing operations), aerial surveillance is considered adequate to monitor the spill.</p> <p>Surveillance will also be conducted through complementary strategies (aerial surveillance, oil spill trajectory modelling).</p>	<p>The current vessel arrangements and contracts are considered to provide the required function.</p> <p>Dedicated vessels on standby for vessel surveillance would cost tens of thousands of dollars per day and are not considered required.</p>	<p>There is no benefit in having additional dedicated surveillance vessels, given surveillance can be performed from any vessel and these duties will be shared among spill response vessels.</p>

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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality - cost/benefit	ALARP assessment
Satellite monitoring	Eni has access to emergency satellite monitoring for its operations through the AMOSC services. 24/7 emergency image delivery service and standby support.	Provides near real-time services for oil spill and support vessel detection targeting delivery in 15minutes from data availability (in the case of a spill being detected or suspected). The satellites will provide two images per day and a report shall be provided daily to Eni.	Resource is not considered limiting, with no environmental benefit from dedicating additional monitoring capability.	Provides satellite monitoring covered under the AMOSC services.	There is no environmental benefit in having additional satellite monitoring capabilities.
Oil spill trajectory modelling	The oil spill trajectory modelling will be sourced, via AMOSC or Eni headquarters, within 24 hours using its 24/7 emergency capability. Oil spill trajectory modelling is also available through panel consultants.	The modelling supplier can provide updates to the IMT of trajectory model outputs to inform response planning.	Predictive oil spill modelling will be used to forecast (using real-time data) the trajectory and fate of the spill. Resource is not considered limiting with no environmental benefit from dedicating additional modelling capability.	Supplied through AMOSC or Eni headquarters. As a member company of AMOSC, Eni has access to AMOSC's oil spill recovery and response equipment, training, technical capabilities along with those resources held by member companies as outlined in the Australian Marine Oil Spill Plan. Eni headquarters in Milan maintains oil spill trajectory modelling capability and has 24/7 emergency capability.	There is no environmental benefit in having additional modelling capabilities.

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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality - cost/benefit	ALARP assessment
Protection and deflection					
Protection and deflection booms	Shoreline and nearshore boom is available through AMOSC, OSRL or AMSA, including various lengths of land and sea boom, shoreline protection booms, sorbent booms from stockpiles in Darwin and other Australian cities. Spill response teams (AMOSC, AMSA and OSRL responders).	Shoreline and nearshore boom provided through AMOSC or AMSA is available from Mutual Aid arrangements. AMOSC also provides access to additional booms from other operators. Offshore protection and deflection aims to prevent oil from reaching a sensitive location. If successfully implemented, offshore protection and deflection can eliminate the requirement to access shorelines, if all oil is deflected.	Boom equipment is not considered limiting as stocks through AMOSC, OSRL or AMSA are considered adequate. Prepositioning or having personnel and equipment at an enhanced standby footing would reduce deployment time. However, pre-deploying boom at sensitive locations creates potential for impacts which, weighed against the uncertainty of an oil spill reaching the location, are deemed to be disproportional.	The cost of boom, vessels and personnel on an enhanced standby is disproportionate to the environmental benefit, based on the timeframes needed to undertake oil spill modelling and surveillance activities and a NEBA to establish the areas to be protected by boom.	The environmental benefits in having additional or pre-positioned resources cannot be confirmed. MDO and Blacktip condensate weather and evaporate at quick rates and therefore are unlikely to be on the surface for a significant period, which would require extensive boom use. The current arrangements are considered ALARP.



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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality - cost/benefit	ALARP assessment
Shoreline clean-up					
Shoreline clean-up	<p>Manual clean-up and flushing equipment (AMOSC, AMSA). Clean-up team leaders (through AMOSC and AMSA). Labour personnel (labour hire as required). Eni has arrangements in place with Toll Group, which includes vessel hire such as barges, vessels and landing craft from Darwin.</p>	<p>While no shoreline accumulation at >100g/m² is predicted to occur, and an extensive shoreline response is not anticipated, the strategy is available to Eni and is adopted as a precautionary measure in the event monitoring predicts impacts to key shoreline sensitivities.</p>	<p>The main limitation of undertaking a shoreline clean-up response is based around access for plant and personnel to remote offshore island locations, particularly given the remote nature of the north Kimberley Coastline and the JBG East and West coast. Additional resources may include permanent pre-positioning of clean-up equipment on the shoreline before a spill event occurring.</p>	<p>During a spill event, the cost of additional resources is not considered; the limiting factor is considered to be numbers of personnel available to undertake shoreline clean-up. Mobilising additional personnel to undertake shoreline clean-up via vessel to remote offshore locations presents increased associated health and safety risks. Personnel mobilised via helicopter is limited to ten passengers per trip. Once at the locations, there is a need to provide adequate facilities.</p>	<p>The level of resources available is considered appropriate, given shoreline accumulation volumes are not expected. The outcome of oil spill modelling and surveillance and a NEBA would be used to identify priorities for protection at specific locations, given the time of year, such as during turtle nesting season, where shoreline clean-up efforts would be directed at nesting beaches. Therefore, the response is considered ALARP. Decision to implement shoreline clean-up will be by the IMT when the findings of the NEBA demonstrate shoreline clean-up techniques used will deliver environmental benefits.</p>

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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality - cost/benefit	ALARP assessment
Waste management					
Waste management	<p>Assorted waste receptacles and trucks.</p> <p>Waste personnel – project manager, local responsible personnel and operations personnel.</p> <p>Eni has arrangements in place with a logistics provider, which has barges, vessels and landing craft available in Darwin.</p> <p>A standing contract exists between Veolia in Darwin and Eni for the disposal of waste.</p>	Eni's waste service provider, Veolia, is contracted to ongoing waste storage, transport and disposal requirements.	Veolia has sufficient resources for the worst case waste clean-up requirements; there is no benefit to acquiring additional resources.	Veolia contract provides resources to meet waste management requirements.	<p>Resources are considered adequate and ALARP.</p> <p>MDO and condensate waste volumes recovered from clean-up are considered low, given the MDO and condensate quick evaporation and weathering potentials.</p>

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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality - cost/benefit	ALARP assessment
Oiled wildlife response					
Oiled wildlife response	OWR kits and containers. OWR personnel.	<p>All OWR efforts would be undertaken in consultation with Department of Biodiversity, conservation, and Attractions (DBCA) and Parks and Wildlife (NT), and Eni would undertake the response after the outcome of an operational NEBA that would direct efforts for maximum effectiveness.</p> <p>While an extensive OWR is not anticipated, the strategy is available to Eni and is adopted as a precautionary measure in the event monitoring predicts impacts to key shoreline sensitivities and species.</p>	<p>Pre-positioning of staging areas and responders has been considered for this spill scenario. However, given significant shoreline accumulation volumes, a significant response is not expected. The costs of pre-positioning equipment outweigh the benefits.</p> <p>As Eni has access to OWR kits through third-party agreements that can be mobilised in a timely manner, it is not considered necessary to increase resources.</p> <p>Purchasing of an OWR kit by Eni has been discounted as any OWR would be in consultation with DBCA and Parks and Wildlife (NT) upon completion of a NEBA.</p>	The cost of personnel (Level 1 responders) on standby is \$1,500 per person per day. Given personnel on this level can be arranged within relatively short timeframes through other bodies, there is considered insufficient environmental value in having dedicated OWR responders on standby.	Significant shoreline accumulation volumes are not expected from any Blacktip operations hydrocarbon release. If needed, resourcing required for OWR is considered to be within the capacity of existing response arrangements and are considered ALARP.


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Table 8.32: As low as reasonably practicable assessment of the level of resourcing available for Operational Monitoring Plan strategies

Strategy	Resourcing	Justification	Additional resource consideration	Proportionality – cost/benefit	ALARP assessment
OMP1: Monitoring of surface hydrocarbon distribution at sea and marine megafauna observations					
Aerial surveillance		Refer to Monitor and Evaluate in Table 8.31.			
Vessel surveillance		Refer to Monitor and Evaluate in Table 8.31.			
Satellite monitoring		Refer to Monitor and Evaluate in Table 8.31.			
Oil spill trajectory modelling		Refer to Monitor and Evaluate in Table 8.31.			



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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality – cost/benefit	ALARP assessment
Unmanned aerial vehicle (UAV)	Access to various UAV providers via OSRL on a best endeavours basis.	UAVs provide an additional monitoring capacity to cover specific areas of interest identified during the response via aerial or vessel surveillance. UAVs are accessed through OSRL as they require trained operators and specific maintenance.	Purchasing UAVs and training Eni personnel as operators, so UAV access can be guaranteed immediately in the event of a spill.	Cost of purchasing UAVs and training personnel outweighs benefit. Given the main strategy for monitoring the spill is from aerial (helicopter) and vessel surveillance, purchasing UAVs specifically and training Eni personnel as operators does not result in better coverage of the spill initially and is a costly process. The access to UAVs through an existing OSRL contract is aimed to monitor specific areas identified by the vessel and aerial surveillance and its use is not required immediately during the spill event. In addition, sensitive shoreline receptors that may be monitored using a UAV are not anticipated to be contacted in the event of a hydrocarbon release.	There is no environmental benefit in purchasing UAVs and training Eni personnel as UAV operators given coverage of the spill can initially be made using vessels and aerial observation.

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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality – cost/benefit	ALARP assessment
Aerial surveillance trained observer	Trained observers will be sourced from AMOSC, AMSA and OSRL to undertake the required aerial surveillance in the event of a spill. Can make visual observations within 24 hours of mobilisation.	The spill will move with the currents and sensitive receptors are not anticipated to be contacted by surface oil. Given the spill size, a large-scale response is not required. Mobilising aerial surveillance trained observers within 24 hours is considered adequate.	Access to personnel in less than 24 hours to monitor the spill.	Does not provide any additional environmental benefit or quicker coverage of the spill. Visual observation from aircraft or helicopter can be made within 24 hours of mobilisation. Access to vessels and aerial surveillance would be a limiting factor and has been discussed in Table 8.31.	Costs of having personnel ready to mobilise in less than 24 hours to monitor the spill grossly outweigh the environmental benefit. Access to personnel is not a limiting factor. Does not provide any additional environmental benefit or quicker coverage of the spill.
OMP2: Monitoring of hydrocarbons: weathering and behaviour in marine waters					
Water sampling equipment to detect hydrocarbon presence and estimate oil concentrations	Access to: <ul style="list-style-type: none"> one Turner C3 fluorometer (submersible) one OSRL fluorometry unit operator within 24 hours via OSRL.	Fluorimeters and backscatter sensors to detect hydrocarbon presence and estimate oil concentrations in the marine environment. Access timing aligns with access to the vessel (24 hours).	Access to additional fluorimeters.	Provides no additional benefit. Additional fluorimeters can be mobilised, but not within 24 hours. Given the size of the spill, one fluorometer has been determined to be required initially.	No additional environmental benefit gained.

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Strategy	Resourcing	Justification	Additional resource consideration	Proportionality – cost/benefit	ALARP assessment
Autonomous underwater vehicle (AUV) to understand entrained hydrocarbons	Access to: <ul style="list-style-type: none"> one AUV with fluorometry sensor one AUV engineer on a best endeavours basis via OSRL. 	AUV to provide understanding of entrained hydrocarbons.	Contracted access within a defined timeframe (e.g., 34 hours).	High cost with little environmental benefit. Submersible fluorimeters can provide an assessment of hydrocarbon presence in the first instance.	No additional environmental benefit gained.
OMP3: Shoreline assessment surveys					
Shoreline assessment team and surveyors	Shoreline assessment team. Shoreline surveyors. Onsite within five days, or 24 hours before shoreline contact (if prolonged time to shoreline contact). Access through AMOSC, National Plan resources through AMSA and OSRL.	Shoreline contact is not anticipated at a threshold at which a response can be effectively undertaken. The spill will move with the currents and sensitive receptors are not anticipated to be contacted by surface oil. Access to personnel through AMOSC, National Plan resources through AMSA and OSRL is determined adequate.	Additional access of shoreline assessment personnel within five days.	Does not provide any additional benefit, given no shoreline contact is expected.	No additional environmental benefit gained.
UAV	Refer to OMP1: Monitoring of Surface Hydrocarbon Distribution at Sea and Marine Megafauna Observations, above.				
Aerial surveillance	Refer to Monitor and Evaluate in Table 8.31, above.				
Vessel surveillance	Refer to Monitor and Evaluate in Table 8.31, above.				

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9 ENVIRONMENT OUTCOMES, STANDARDS AND MEASUREMENT CRITERIA

OPGGS(E) Regulation 21(7) requires an EP to include EPOs, EPSs and MC that:

- address legislative and other controls that manage environmental features of the activity
- define objectives and set standards for measuring Eni's performance in protecting the environment during its operations
- include measurement criteria for assessing whether performance outcomes and standards have been met.

The terms used for measuring the environmental performance are:

- EPO – a statement of the goal that Eni aims to achieve with regard to the managing a given hazard.
- EPS – a statement of performance required of a system, an item of equipment, a person or a procedure that is used as a basis for managing environmental risk. Generally, multiple standards may relate to a single objective.
- MC – define how the application of the performance standard will be verified. Several measurement criteria may relate to a single performance standard. Measurement criteria are defined in a manner that enables efficient inspection and audit against the performance outcomes and allows for an audit trail.

To ensure environmental risks and impacts will be of an acceptable level, EPOs have been defined and are listed in Table 9.1. These outcomes will be achieved by implementing the identified MCs to the defined EPSs.


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Table 9.1: Environmental performance outcomes

Reference	Environmental Performance Outcomes
EPO-01	Information is provided to relevant persons to manage impacts on their functions, interests and activities
EPO-02	Activities are managed in accordance with navigational and safety requirements
EPO-03	No unplanned interactions with other users
EPO-04	Impacts to air quality will be limited to the impacts from the planned activities described in Section 7.2.3
EPO-05	No unplanned objects, emissions or discharges to sea or air
EPO-06	Scope 1 GHG emissions associated with the Blacktip WHP operations will be managed to remain below 1,000 t CO ₂ -e/year
EPO-07	Natural gas produced by the Blacktip operations will only be sold to customers who are signatories of the Paris Agreement
EPO-08	Actively support the global transition to a lower carbon future by implementing Eni corporate and Eni Australia emissions reduction initiatives and emissions forecasting and tracking requirements, to support the objectives of the Paris Agreement
EPO-09	No injury or mortality to EPBC Act listed fauna during operational activities
EPO-10	No impacts to marine fauna greater than those described in Section 7.6.3 from light emissions required for safe work and navigation
EPO-11	No discharges to the sea of untreated sewage, greywater, putrescible wastes, bilge and deck drainage
EPO-12	No unplanned discharge of oily water or chemicals
EPO-13	Seabed disturbance is limited to planned activities and defined locations within the Operational Area
EPO-14	No introduction of IMS from Blacktip operations
EPO-15	No loss of containment of hydrocarbons to the marine environment
EPO-16	Reduce impacts from oil spill response operations through incident planning

9.1 Control Measures and Performance Standards

The CMs that will be used to manage identified environmental impacts and risks, and the associated statements of performance required of the control measure (as in, EPS), are listed in Table 9.2.

A separate set of performance standards based on the oil spill response operational control measures are included in the Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17).

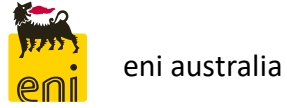
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Table 9.2: Control measures and environmental performance standards

Control measure	Environmental performance standards	Measurement criteria
CM-01 Navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes)	EPS-1.1. Navigation equipment and procedures on MODU, SPM and vessels compliant with Marine Order 30 (Prevention of collisions), including (where applicable): <ul style="list-style-type: none"> Adhere to steering and sailing rules, including maintaining look-outs (e.g., visual, hearing, radar, etc), proceeding at safe speeds, assessing risk of collision and taking action to avoid collision (monitoring radar). Adhere to navigation light display requirements, including visibility, light position and shape appropriate to activity. Adhere to navigation noise signals as required. 	MC-1.1. Inspection records demonstrate compliance with Marine Order 30.
	EPS-1.2. Navigation equipment and procedures on MODU, SPM and vessels compliant (where applicable) with standard maritime safety and navigation procedures, including AMSA Marine Order 21 (Safety and Emergency Arrangements) 2023, including: <ul style="list-style-type: none"> adherence to minimum safe personnel levels maintenance of navigation equipment in efficient working order (compass/radar) navigational systems and equipment required are those specified in Safety of Life at Sea Chapter V (Regulation 19) automatic Identification System (AIS) installed as required by vessel class in accordance with Safety of Life at Sea Chapter V (Regulation 19). 	MC-1.2. Inspection records demonstrate compliance with Marine Order 21.
	EPS-1.3. A radar beacon unit is installed on the WHP, which would appear on the display of the triggering radars, providing range, bearing and identification information.	MC-1.3. Records show a radar beacon unit is installed on the WHP.
CM-02 Navigational charting of infrastructure	EPS-2.1. Subsea infrastructure and FPSO are charted on AHS nautical charts.	EPS-2.1. AHS nautical charts show subsea infrastructure
CM-03 500m PSZ around the WHP and SPM	EPS-3.1. A 500m PSZ is present around the WHP and SPM and communicated to marine users.	MC-3.1. Notice to Mariners published and PSZ is gazetted.
CM-04 Consultation with relevant persons, including ongoing consultation and notification	EPS-4.1. Stakeholder notification letters and information distributed to relevant persons as requested, including: <ul style="list-style-type: none"> notification to DNP approximately 10 days before IMR in the AMP and at the end of IMR activities. 	MC-4.1. Stakeholder consultation records.
	EPS-4.2. Progress consultation with Traditional Owner groups and Land Councils where relevant about Sea Country identification and protection.	MC-4.2. Progress consultation with Traditional Owner groups and Land Councils to assist in identifying Sea Country.
	EPS-4.3. All consultation with Relevant Persons is recorded.	MC-4.3. Saved Relevant Persons records.
	EPS-4.4. Ongoing engagement process in the Thamarrurr region through Eni's attendance at community service meetings.	MC-4.4. Attendance records at community service meetings.
	EPS-4.5. The Australian Hydrographic Office (AHO) is notified four weeks prior to commencing activities so they can then issue a Notice to Mariners.	MC-4.5. Notice to AHO completed.
	EPS-4.6. The AMSA RCC (as part of marine safety division) will be notified of the activities four weeks prior to mobilisation to ensure navigation AUSCOAST warnings can be issued and kept up to date.	MC-4.6. Notice to AMSA RCC completed.

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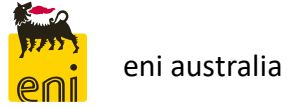
Control measure	Environmental performance standards	Measurement criteria
CM-05 Air pollution prevention certificate	EPS-5.1. Vessels comply with MARPOL 73/78 Annex VI, as applied in Australia under the Commonwealth <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i> (Part IIID Prevention of air pollution), and Marine Order 97 (Marine pollution prevention – air pollution), as required by vessel class: <ul style="list-style-type: none"> Vessels have valid International Air Pollution Prevention Certificate where required. 	MC-5.1. Vessels have a valid International Air Pollution Prevention Certificate where required.
CM-06 WHP power generation fuel	EPS-6.1. Fuel gas is used to routinely power the WHP.	MC-6.1. Records show fuel gas routinely powers the WHP.
CM-07 Vessel fuel quality	EPS-7.1. Low-sulphur fuel is used on vessels, in accordance with Marine Order 97.	MC-7.1. Marine order inspection records of fuel type for vessels show use of low-sulphur fuel (in accordance with Marine Order 97).
CM-08 WHP gas leak detection	EPS-8.1. The WHP has ultrasonic and line-of-sight gas leak detectors to enable the detection and mitigation of gas leaks.	MC-8.1. Design records show the WHP has ultrasonic and line-of-sight gas leak detectors enabled.
CM-09 Asset integrity systems	EPS-9.1. Asset integrity management systems and pipeline integrity management systems (PIMS) provide processes and requirements for maintenance, inspection and corrosion management. The asset integrity management systems and PIMS include: <ul style="list-style-type: none"> maintenance required for Blacktip asset integrity ROV survey requirements to detect external features, damage or signs of damage on the CEP and GEP, and deterioration that could present a risk side scan sonar requirements of the CEP and GEP and subsea infrastructure after extreme cyclonic events, which will detect movement of the CEP and GEP and the potential damage or leak issues. 	MC-9.1. Compliance status within asset integrity management systems and PIMS for CEP, GEP and subsea infrastructure maintenance, inspection and corrosion management.
	EPS-9.2. The WHP Computerised Maintenance and Materials Management System provides processes and requirements for maintenance, inspection and corrosion management of the WHP, to maintain asset integrity.	MC-9.2. Compliance status within the WHP Computerised Maintenance and Materials Management System.
CM-10 GHG management practices	EPS-10.1. GHG emissions management practices aim to reduce GHG emissions to ALARP over the life of production operations, including: <ul style="list-style-type: none"> Ongoing GHG emissions measurement and monitoring, which includes annual fugitive emissions monitoring at the WHP and YGP, and GHG emissions forecasting and performance monitoring, as detailed in Table 10.2 Annual review of WHP and YGP GHG emissions reduction opportunities and management. Including the adoption of reduction opportunities when feasible (CM-12) Bi-annual meetings of the CO₂ management steering committee (as outlined in Section 10.11.2) 	MC-10.1. Records demonstrate GHG management practices: <ul style="list-style-type: none"> Ongoing emissions measurement and monitoring, which includes annual fugitive emissions monitoring at the WHP and YGP, as detailed in Table 10.2 Annual review of WHP and YGP Scope 1 emissions reduction opportunities and management. Including the adoption of reduction opportunities when feasible Bi-annual meetings of the CO₂ management steering committee (as outlined in Section 10.11.2)
CM-11 Natural gas produced by the Blacktip operations will only be sold to customers who are signatories of the Paris Agreement	EPS-11.1. Natural gas produced by the Blacktip operations will only be sold to customers who are signatories of the Paris Agreement	MC-11.1. Sales records show that the Blacktip gas is sold to customers who are signatories of the Paris Agreement
CM-12 Annual review and assessment of emissions reductions opportunities at both the Blacktip WHP and YGP	EPS 12-1 Eni undertakes an annual review of energy efficiency opportunities for the Blacktip WHP and YGP, as part of the Eni-wide annual Energy Assessment that: <ul style="list-style-type: none"> Identifies and assesses emissions efficiency opportunities Compares emissions efficiency opportunities in terms of capital expenditure, technical feasibility and t CO₂-e reduction Demonstrates decision making regarding adoption or rejection of opportunities. 	MC 12-1 Annual Energy Efficiency assessment reports

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Control measure	Environmental performance standards	Measurement criteria
CM-13 Regulations and measures for interacting with marine fauna	EPS-13.1. EPBC Regulations 2000 – Part 8 for interacting with marine fauna are enforced during the activities, including Part 8 Division 8.1 (Regulation 8.05): <ul style="list-style-type: none"> • A vessel will not travel greater than 6 knots within 300m of a whale (caution zone) and not approach closer than 100m from a whale. • A vessel will not approach closer than 50m of a dolphin and 100m for a whale (except animals bow riding). 	MC-13.1. Conformance to EPBC Regulations 2000 – Part 8 is checked on receipt of marine fauna sighting datasheets.
	EPS-13.2. EPBC Regulations 2000 – Part 8 for interacting with marine fauna are enforced during the activities, including Part 8 Division 8.1 (Regulation 8.06) – Interacting with calves, which requires: <ul style="list-style-type: none"> • Vessel will not approach closer than 300m to a calf (whale or dolphin) (the caution zone). • If a vessel comes close to the caution zone, the vessel must be immediately stopped and: <ul style="list-style-type: none"> - turn off the vessel's engines, or - disengage the gears, or - withdraw the vessel from the caution zone at a constant speed of less than six knots. 	
	EPS-13.3. EPBC Regulations 2000 – Part 8 for interacting with marine fauna are enforced during the activities, including Part 8 Division 8.3 (Regulation 8.07), which includes the following measure: <ul style="list-style-type: none"> • Helicopters shall not operate lower than 1650 feet or within a horizontal radius of 500m of a cetacean known to be in the area, except for take-off and landing. 	
CM-14 Vessels comply with Marine Order 96 (Marine pollution prevention – sewage)	EPS-14.1. MODU and vessels comply with Marine Order 96: Marine pollution prevention – sewage (as appropriate to vessel class) which includes the requirement for: <ul style="list-style-type: none"> • a valid International Sewage Pollution Prevention Certificate, as required by vessel class • an AMSA-approved sewage treatment plant • a sewage comminuting and disinfecting system • a sewage holding tank sized appropriately to contain all generated waste (black and grey water) • discharge of sewage that is not comminuted or disinfected to only occur more than 12 nm from the nearest land • discharge of sewage which is comminuted or disinfected using a certified approved sewage treatment plant to only occur more than 3 nm from the nearest land • discharge of sewage to occur at a moderate rate while support vessel is proceeding (>4 knots), to avoid discharges in environmentally sensitive areas. 	MC-14.1. Records demonstrate vessels have a valid International Sewage Pollution Prevention Certificate.
CM-15 Vessels comply with Marine Order 95 (Marine pollution prevention – garbage)	EPS-15.1. MODU and vessels comply with Marine Order 95 (Marine pollution prevention – garbage) which includes the following requirements: <ul style="list-style-type: none"> • Putrescible waste will only be discharged to sea if comminuted to 25mm or less and discharged en-route when greater than 3 nm from the 'territorial sea baseline'. • If putrescible waste is not comminuted to 25mm or less, it will be discharged greater than 12 nm from the territorial sea baseline while en-route. 	MC-15.1. Records demonstrate vessels and MODU comply with Marine Order 95: Marine pollution prevention – garbage (as appropriate to vessel class).

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Control measure	Environmental performance standards	Measurement criteria
CM-16 Vessels comply with Marine Order 91 (Marine pollution prevention – oil)	EPS-16.1. MODU and vessels comply with Marine Order 91 (Marine pollution prevention – oil) requirements, which includes mandatory measures for processing oily water before discharge, including: <ul style="list-style-type: none"> • Machinery space for bilge/oily water shall have International Maritime Organization (IMO)-approved oil filtering equipment (oil/water separator) with an on-line monitoring device to measure oil in water (OIW) content to be less than 15ppm before discharge. • IMO-approved oil filtering equipment shall also have an alarm and an automatic stopping device or be capable of recirculating in the event OIW concentration exceeds 15ppm. • A deck drainage system shall be capable of controlling the content of discharges for areas of high risk of fuel, oil, grease or hazardous chemical contamination. • There shall be a waste oil storage tank available, to restrict oil discharges. • In the event machinery space for bilge and deck drainage discharges cannot meet the oil content standard of <15ppm without dilution or be treated by an IMO-approved oil/water separator, they will be contained on-board and disposed of onshore. 	MC-16.1. Records demonstrate vessels and MODU comply with Marine Order 91: Marine pollution prevention – oil (as appropriate to vessel class).
CM-17 Hazardous and non-hazardous waste management processes	EPS-17.1. Vessels comply with measures outlined in Marine Order 95 (Marine pollution prevention – garbage) as required by vessel class: <ul style="list-style-type: none"> • Vessel(s) will have a Garbage Management Plan in place which outlines procedures for handling, storing, processing and disposing of garbage. 	MC-17.1. Compliant Garbage Management Plan in place for vessels.
	EPS-17.2. A vessel garbage record book shall be maintained with details of non-hazardous and hazardous waste volumes generated and transferred for onshore recycling or disposal.	MC-17.2. Garbage record book is maintained and available for the vessels.
	EPS-17.3. All hazardous and non-hazardous wastes generated at sea are retained on vessel or MODU and disposed of onshore by a licenced Waste Management Contractor (excluding putrescible waste and sewage).	MC-17.3. Hazardous and non-hazardous wastes records maintained and available for the vessels.
	EPS-17.4. All personnel will be notified of the correct waste management procedures through the induction process.	MC-17.4. Waste management procedures included in induction material.
CM-18 Lifting operations standard (ENI-HSE-ST-007)	EPS-18.1. The Lifting Operations Standard (ENI-HSE-ST-007) details processes to reduce the risk of dropped objects, including: <ul style="list-style-type: none"> • competency of persons undertaking lifts • planning and preparation process for undertaking lifts. 	MC-18.1. Records show compliance with Lifting Operations Standard (ENI-HSE-ST-007).
CM-19 Seabird management training	EPS-19.1 For WHP campaigns, the campaign Person In Charge (PIC) shall ensure a member of the work party has received seabird management training from a suitably qualified ornithologist (as determined by years' of experience in applied ornithology research), wildlife carers association or veterinarian that includes: <ul style="list-style-type: none"> • methods for counting seabirds • species identification, with particular focus on EPBC listed species known to roost on the Blacktip WHP • seabird capture, handling, triage and release and/or euthanasia, including PPE requirements • internal notification process for injured seabird management (including advice sought from a suitably qualified ornithologist, wildlife carers association or veterinarian) • external reporting requirements as per Section 10.8 	MC-19.1 Eni Australia training records
		MC-19.2 Records demonstrate reporting seabird injury or mortality as per the requirements of Section 10.8
CM-20 Implementation of IMS management tools	EPS-20.1. Vessels to be risk-assessed before contracting (e.g., the DPIRD vessel check tool or similar), which demonstrates vessels are at 'low risk' of introducing invasive marine species. IMS management measures will be applied to reduce IMS risk to 'low risk'.	MC-20.1. Completed vessel check report demonstrating MODU and vessels are 'low risk' of IMS.

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Control measure	Environmental performance standards	Measurement criteria
	EPS-20.2. Vessel check assessment has been reviewed or completed by member of the Eni HSE Team.	MC-20.2. Records show vessel check assessment has been completed and reviewed by a member of the Eni HSE Team.
CM-21 Ballast water management	EPS-21.1. Compliance with Australian Ballast Water Management Requirements as defined under the <i>Biosecurity Act 2015</i> , aligned with the International Convention for the Control and Management of Ships' Ballast Water and Sediments. This includes operators of all vessels answering biofouling questions on a pre-arrival report before entering Australia in accordance with the Biosecurity Amendment (Biofouling Management) Regulations 2021.	MC-21.1. Administrator-approved ballast water management plan on vessels. Completed ballast water record book or log.
CM-22 Biofouling management	EPS-22.1. Vessels have a Biofouling Management Plan and record book consistent with the Biosecurity Amendment (Biofouling Management) Regulations 2021 (Biofouling Regulations).	MC-22.1. Records show vessel Biofouling Management Plan and record book in place on vessels.
CM-23 Vessel chemical management procedures	EPS-23.1. Chemical management procedures to reduce the risk of an accidental release to sea, typically including: <ul style="list-style-type: none"> • storage containers closed when the product is not being used • storage containers managed in a manner that provides for secondary containment in the event of a spill or leak • storage containers labelled with the technical product name as per the Material Safety Datasheet • spills and leaks to deck, excluding storage bunds and drip trays, immediately cleaned up • storage bunds and drip trays do not contain free-flowing volumes of liquid. 	MC-23.1. Vessel inspection checklist.
CM-24 On-board spill response kits	EPS-24.1. Spill response kits located in proximity to hydrocarbon storage and bunkering areas and appropriately stocked and replenished as required.	MC-24.1. Inspection report completed shows spill kits located in proximity to hydrocarbon storage and bunkering areas.
CM-25 Chemical transfer from vessels to the WHP procedure	EPS-25.1. Chemical transfers to the WHP will be undertaken in accordance with the Marine Operations Manual and Chemical Storage Tank Filling Procedure (000036_DV_EX.OPS.0541.000), which includes: <ul style="list-style-type: none"> • high-level alarm • communications with central control room. 	MC-25.1. Records show compliance to Marine Operations Manual and Chemical Storage Tank Filling Procedure (000036_DV_EX.OPS.0541.000).
CM-26 Chemical risk assessment process	EPS-26.1. Chemicals used on the WHP are approved before use in accordance with the chemical risk assessment process detailed in Section 3.6	MC-26.1. Assessment documentation shows chemicals requiring further assessment are ALARP and selected in accordance with the chemical assessment process detailed in Section 3.6
CM-27 NOPSEMA-accepted WOMP	EPS-27.1. The WOMP demonstrates at least two isolation barriers are in place between the reservoir and the environment.	MC-27.1. WOMP demonstrates well barriers in place for Blacktip wells.
CM-28 NOPSEMA-accepted OPEP	EPS-28.1. In the event of an oil spill to sea, the Blacktip Operations OPEP requirements are implemented to mitigate environmental impacts.	MC-28.1. Completed incident documentation shows OPEP implemented as applicable.
CM-29 Eni Source Control Response Plan (ENI-WOP-PL-001)	EPS-29.1. Eni Source Control Response Plan (ENI-WOP-PL-001) and addendum detail: <ul style="list-style-type: none"> • relief well design • simulation of the dynamic kill • high level requirement for the rig and the equipment, volumes and the pumping pressures. 	MC-29.1. Source Control Response Plan and addendum detail: <ul style="list-style-type: none"> • relief well design • simulation of the dynamic kill • high-level requirement for the rig and the equipment, volumes and the pumping pressures.
CM-30 Relevant well site personnel hold International Well Control Forum certificates	EPS-30.1. Relevant well site personnel to hold valid International Well Control Forum certificates	MC-30.1 Records demonstrate that relevant well site personnel hold valid International Well Control Forum certificates
CM-31 Mutual Aid MoU for relief well drilling is in place	EPS-31.1 Mutual Aid MoU for relief well drilling is in place which allows for expedited use of drilling rig for relief well drilling.	MC-31.1 Records show Mutual Aid MoU for relief well drilling is in place.

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Control measure	Environmental performance standards	Measurement criteria
CM-32 Terminal Handbook (000036_DV_PR.DPM.0486.000)	EPS-32.1. Offtake operations must comply with the Terminal Handbook (000036_DV_PR.DPM.0486.000), which includes the following requirements to prevent loss of hydrocarbons: <ul style="list-style-type: none"> The PLEM emergency shutdown is tested before arrival of the tanker. The emergency shutdown can remotely close the valve and stop offtake flow. A pre-loading meeting will be held, attended by the Berthing Master and Berthing Master's Assistant and personnel from the export tanker that will be involved in the cargo operations, to ensure personnel are aware of their responsibilities during offtake. The Berthing Master's Assistant will confirm the sea valves are closed and sealed before offtake. The cargo surveyor will conduct the sealing of these valves. One person stationed at the tanker manifold during the time the offtake is made to monitor for any leaks between the flange of the offtake hose and the tanker's manifold flange. Communications will be established between the export tanker bridge and the onshore gas plant control room. 	MC-32.1. Testing documentation shows the PLEM emergency shutdown is tested before the arrival of the tanker. MC-32.2. Pre-loading meeting documents have been completed and show meeting attended by the relevant persons. MC-32.3. Records show Berthing Master's Assistant confirmed the sea valves were closed and sealed before offtake. The cargo surveyor will conduct the sealing of these valves. MC-32.4. Operational documents show one person is stationed at the tanker manifold during the time the offtake is made. MC-32.5. Communications records show communications are established between the export tanker bridge and the onshore gas plant control room.
CM-33 SPM Floating Hose Testing Guidelines (000036_DV_PR.DPM.1072.000)	EPS-33.1. The SPM floating hose is inspected and tested before offtake in accordance with the testing guidelines (000036_DV_PR.DPM.1072.000). This includes: <ul style="list-style-type: none"> an integrity test completed no more than one month before an offtake or after a major weather event such as a cyclone to ensure the hose is not leaking raising the internal pressure in the hose during testing to its rated pressure, or operating pressure plus 50%, whichever is lower, then holding it for a period of three hours visual check of the floating hose, including any signs of damage, deterioration, scuffing or tears of: <ul style="list-style-type: none"> the outer carcass every hose connection the (partially submerged) break-away coupling and tanker valve. 	MC-33.1. Testing records show the SPM floating hose has an integrity test no more than one month before offtake. Testing records show the SPM hose was visually checked for any signs of damage, deterioration, scuffing or tears. MC-33.2. Testing records show the SPM hose was visually checked for any signs of damage, deterioration, scuffing or tears.
CM-34 Vessel spill response plans	EPS-34.1. Vessel spill response plan (Shipboard OPEP) in place for vessels and contains plans in case of an oil spill to prevent spills reaching the marine environment, as appropriate to vessel class.	MC-34.1. Approved Shipboard OPEP available onboard vessels, as appropriate to vessel class.
CM-35 Refuelling transfer procedures	EPS-35.1. Bunkering operation procedures include key requirements to prevent spills to the environment, such as: <ul style="list-style-type: none"> when bunkering activities can occur roles and responsibilities for bunkering operations dry break coupling and breakaway coupling used bunkering activity communication requirements hose integrity inspections. 	MC-35.1. Completed bunkering checklist.
CM-36 Shallow draft vessels will be used to access remote shorelines	EPS-36.1. Incident Accident Plan (IAP) process during a spill response refers to using a shallow draft vessel to access remote shorelines where grounding is a risk.	MC-36.1. IAP documentation.
CM-37 Vehicle access will be limited or restricted on dunes, turtle nesting beaches and in mangroves	EPS-37.1. IAP process during a spill response refers to limiting or restricting vehicle access on dunes, turtle nesting beaches and in mangroves.	MC-37.1. IAP documentation.
CM-38 Removal of vegetation will be limited to moderately or heavily oiled vegetation	EPS-38.1. IAP process during a spill response refers only to removing vegetation with moderate or heavy oiling.	MC-38.1. IAP documentation.

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Control measure	Environmental performance standards	Measurement criteria
CM-39 Decommissioning framework	EPS-39.1. Eni will have a detailed decommissioning framework no later than five years prior to the end of field life, this will include how Eni will meet the obligations under Section 572 of the OPGGS Act. The framework will include: <ul style="list-style-type: none"> • Design life and status of all property on Blacktip title areas. • Ongoing property monitoring and maintenance commitments. • Schedule for regulatory approval documents and other milestones. • Strategy for regulatory approvals. • Identification of environmental monitoring requirements to inform decision making. • Identification of technical studies to support options assessment. • Identification and schedule for vessels and long lead equipment. • Overall decommissioning objective(s). 	MC-39.1. Completed detailed decommissioning framework no later than five years prior to the end of field life.
	EPS-39.2. EP development will begin at least two years prior to targeted acceptance dates, to meet the targeted decommissioning dates within in the NOPSEMA Decommissioning Compliance Strategy (2024-2029) (referenced in Section 3.7.2).	MC-39.2. Records show EP development has started at least 2 years prior to targeted EP acceptance dates.
		MC-39.3. Decommissioning schedules show EP development starting at least 2 years prior to targeted EP acceptance dates.

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10 IMPLEMENTATION STRATEGY

The purpose of the implementation strategy section is to manage the activities and their associated environmental risks to ALARP and ensure environmental performance is monitored. OPGGS(E) Regulation 22(1) requires that the EP contains an implementation strategy. To meet this Regulation, this section:

- describes the environmental management system for the activity, including specific measures to be used to ensure that, for the duration of the activity:
 - the environmental impacts and risks of the activity continue to be identified and reduced to a level that is ALARP
 - control measures detailed in the environment plan are effective in reducing the environmental impacts and risks of the activity to as low as reasonably practicable and an acceptable level
 - environmental performance outcomes and standards set out in the environment plan are being met (Regulation 22[2])
- establishes a clear chain of command, setting out the roles and responsibilities of employees and contractors in relation to implementing, managing and reviewing the EP, including during emergencies or potential emergencies (Regulation 22[3])
- includes measures to ensure each employee or contractor working on, or in connection with, the activity is aware of the employee's or contractor's responsibilities in relation to the EP, including during emergencies or potential emergencies, and has the appropriate competencies and training (Regulation 22[4])
- provides for sufficient monitoring, recording, audit, management of non-conformance and review of the titleholder's environmental performance and the implementation strategy to ensure the EPOs and EPSs in the EP are being met (Regulation 22[5])
- provides for sufficient monitoring of, and maintaining a quantitative record of, emissions and discharges, whether occurring during normal operations or otherwise, such that the record can be used to assess whether the EPOs and EPSs in the EP are being met (Regulation 22[6])
- states when the titleholder will report to NOPSEMA in relation to the titleholder's environmental performance for the activity; the interval between reports must not be more than 12 months (Regulation 22[7])
- includes a process for maintaining an OPEP (Regulation 22[8]).

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10.1 Systems, Practices and Procedures

10.1.1 Health, Safety and Environment Management System Overview

Eni's management of HSE matters is arranged hierarchically in distinct levels, being:

- corporate-level management system (Section 10.1.2)
- regional (Eni Australia)-level HSE Integrated Management System (HSE IMS) (Section 10.1.3).


Within Eni Australia, HSE management is delivered at the regional and asset level through the Eni HSE IMS, which is the means by which all HSE hazards and risks are controlled. The HSE IMS refers to the totality of Eni Australia's management systems in terms of:

- the concepts, policies, strategies, HSE goals, processes, procedures and work instructions that comprise the formal content of the HSE IMS
- the organisational structures, communication systems, safety-related data, roles and responsibilities, competencies and training needed by the personnel to implement the HSE IMS for the WHP
- the physical elements of the WHP and associated facilities that are critical to safety (equipment, structures and engineered systems), including the codes and standards used to design and construct them.

10.1.2 Eni Corporate Management System

Eni Australia adopts the guidelines provided by its corporate parent, Eni Upstream, which issued a Divisional Directive for Development of a Management System Guideline – HSE (MSG-HSE-ENI-SPA-ENG). Five main Management System elements and 18 sub-elements are shown in Figure 10.1 and incorporated into the Eni Australia HSE IMS.

The elements are largely based on the structure of the ISO 14001, ISO 45001 and AS/NZS 4801 series of standards and provide a consistent and recognisable platform for managing HSE, while also ensuring the intent of the principle of continuous improvement is followed.

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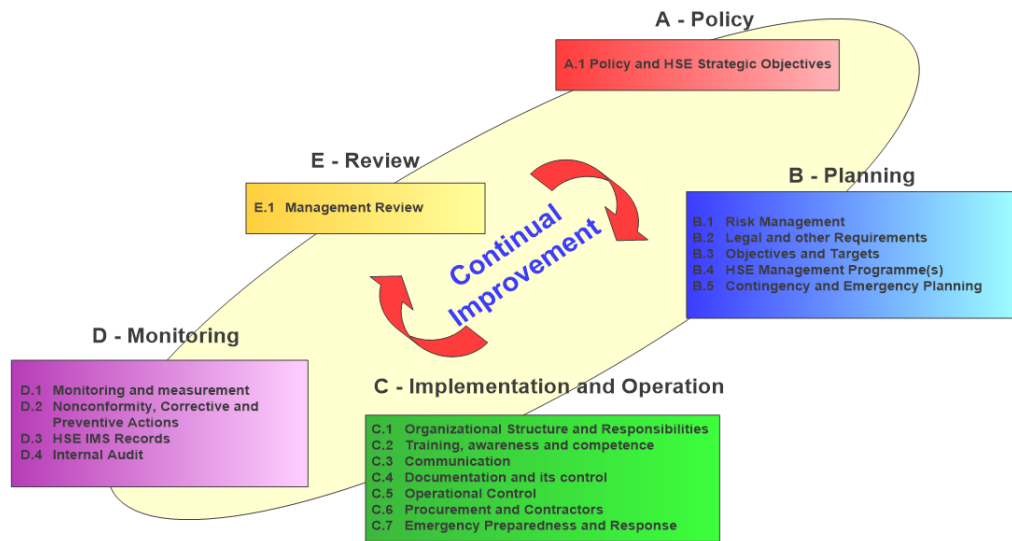


Figure 10.1: Eni Management System elements

10.1.3 Regional Eni Australia Health, Safety and Environment Integrated Management System

The Eni Australia HSE IMS, which covers Blacktip operations, has been certified against:

- ISO 14001: Environmental Management System
- OHSAS 18001: Occupational Health and Safety Management System.


In addition, the system uses the guidelines of ISO 17776 in its overall risk assessment approach.

Audits are performed to verify conformance with these standards and the Eni Upstream Corporate Directive.

The HSE IMS Framework Document (ENI-HSE-IN-002) serves as the key reference for Eni Australia's HSE IMS and is an information source for Eni employees and contractors.

The HSE IMS Framework Document (ENI-HSE-IN-002) provides an overview of the strategies used to manage HSE aspects of Eni Australia's operations, including emergency response, risk and security, and ensure their continual improvement in line with established objectives and targets. This document also describes the core elements of the HSE IMS and their interaction with related documentation.

The HSE IMS Document (ENI-HSE-IN-002) sets out functional requirements for HSE management. Eni Australia has developed supporting documents that provide standards, processes, guidelines, criteria and information by which the functional requirements can be met. The documents are generally classified as information, standards, procedures or specification documents.

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The HSE standards cover a broad range of high-risk activities and outline Eni Australia’s minimum requirements and expectations across its operations. The HSE standards complement the Eni Australia HSE Golden Rules and are based on worldwide International Oil and Gas Producers and company best practices.

The HSE standards apply to all personnel working on Eni sites, whether they are an employee, contractor or visitor. The standards apply to activities where Eni has direct operational control but also apply to activities where Eni has a prevailing influence over the performance of its contractors and suppliers.

At the apex of the HSE IMS is Eni’s HSE Statement (refer Appendix D), which is approved by the Managing Director and provides a public statement of Eni’s commitment to the environment and improving environmental performance.

10.2 Roles and Responsibilities

10.2.1 Blacktip Operations

Figure 10.2 presents the organisational structure in place for Blacktip operations. There are typically six Eni Operations personnel in the field (based on the YGP) working on rotation; these personnel also support offshore operations. The operations team is supported by site-based HSE Supervisors.

Table 10.1 summarises key roles and responsibilities of personnel and contractors for implementing Blacktip operations. There is considerable interaction between team members at all levels.

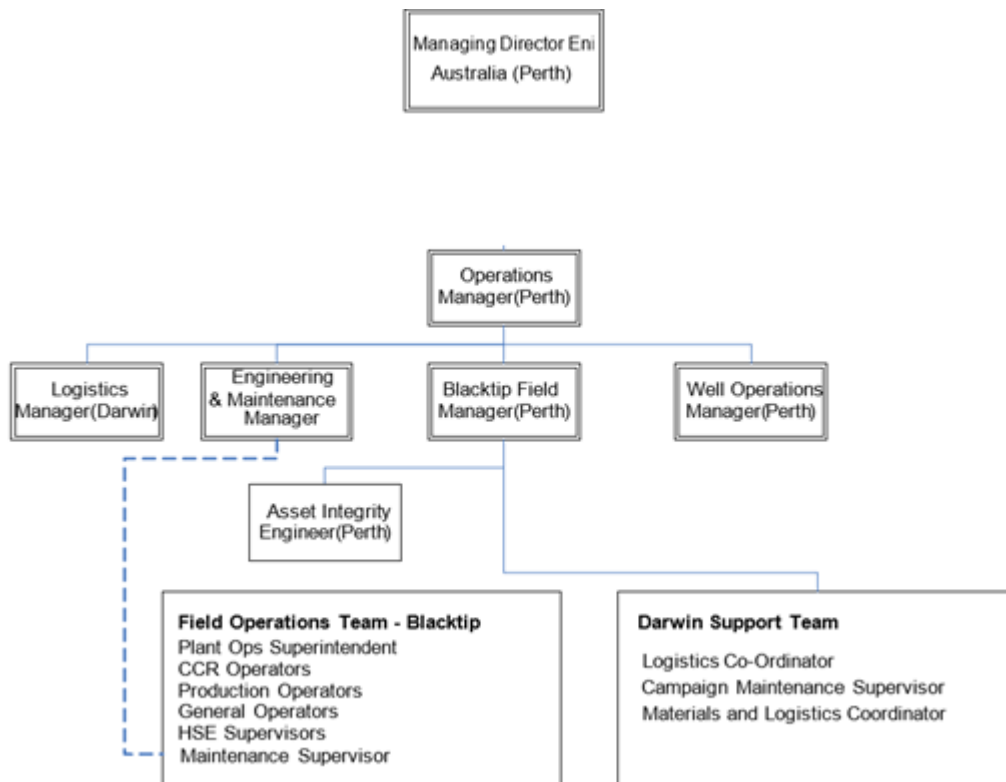


Figure 10.2: Blacktip operations organisation summary




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Table 10.1: Key roles and responsibilities for health, safety and environment management for Blacktip operations

Role	Responsibilities
Onshore personnel	
Managing Director	Having overall responsibility for HSE and ensuring resources are available to effectively implement this EP.
Eni Operations Manager/ Production Operations Manager (office-based)	<p>Implementing the HSE IMS and Blacktip Operations Management System within the Operational Area, by applying the EP.</p> <p>Reviewing this EP and confirming all significant environmental risks have been identified and mitigation strategies are effective.</p> <p>Allocating personnel with the relevant competencies to specific roles in accordance with the Eni organisation chart and position descriptions.</p> <p>Assisting the IMT/Crisis Management Team (CMT) in the event of an emergency.</p> <p>Supervising the Eni Plant Operations Superintendent.</p> <p>Ensuring Notice to Mariners is issued and maintained.</p> <p>Notifying NOPSEMA of the details of reportable incidents and providing updates on the status of the incident (refer to Section 10.8).</p> <p>Approving this EP and confirming all significant environmental risks have been identified and mitigation strategies will be implemented.</p>
Eni Blacktip Field Manager (Perth)	<p>Being responsible for all activity on the Blacktip site, including production and maintenance activities.</p> <p>Being responsible for all HSE matters impacting the Blacktip site.</p> <p>Reviewing all HSE matters reported to them and making appropriate decisions to manage such issues; typically rectifying the problems directly, or for larger issues, communicating with Senior Management.</p>
HSE and Quality Manager (office-based)	<p>Reviewing this EP and confirming all environmental risks have been identified, mitigation strategies are effective and will be undertaken during activities, including emergencies or potential emergencies.</p> <p>Providing and maintaining effective emergency response arrangements for project activities where there is potential environmental risk.</p> <p>Performing incident investigations.</p> <p>Submitting an annual environmental compliance report to NOPSEMA.</p>

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Role	Responsibilities
Eni Plant Operations Superintendent (POS)	<p>Reviewing this EP and confirming all environmental risks have been identified and mitigation strategies are effective and will be undertaken during activities, including emergencies or potential emergencies.</p> <p>Being responsible for the safe and efficient operation of all field production facilities.</p> <p>Ensuring all operations are performed in a manner consistent with the performance outcomes detailed in this EP.</p> <p>Reporting incidents to the Eni Production Manager.</p> <p>Immediately notifying NOPSEMA of any spill of hydrocarbons of greater than 80 L.</p> <p>Overseeing matters relating to condensate offloading operations.</p> <p>Taking charge in the event of an emergency.</p> <p>Ensuring all required plans, audits and reviews are undertaken in accordance with the regulatory requirements and as required by this EP.</p> <p>Implementing and closing out actions in the Action Register.</p> <p>Ensuring all personnel working on Blacktip facilities (WHP or SPM) receive the Eni environmental induction before commencing activities.</p>
Environmental Advisor	<p>Reviewing the Eni HSE Management Plans for acceptability and ensuring compliance with this EP.</p> <p>Reporting all incidents to NOPSEMA in accordance with Section 10.8.</p> <p>Coordinating and reviewing environmental audits to ensure compliance with the agreed EPOs.</p> <p>Advising in the event of an oil spill or other environmental incident.</p>
Eni IMT Leader	<p>Directing the Eni response in the event of an incident.</p> <p>Notifying NOPSEMA of the details of reportable incidents and providing updates on the status of the incident</p> <p>Notifying AMSA in the case of vessel incidents.</p> <p>Communicating with the IMT/CMT, government, stakeholders and media in the event of an incident.</p>
Eni IMT Duty Officer	<p>Acting as the first point of contact in an incident.</p> <p>Notifying the Eni IMT Leader of the incident.</p>
Offshore personnel (during IMR activities)	
Vessel Master (Contractor)	<p>Ensuring the safe operation of their vessel.</p> <p>Ensuring the operations on the vessel(s) comply with Contractor's and Eni's HSE systems, regulations and this EP.</p> <p>Ensuring compliance with the Vessel Safety Case.</p> <p>Ensuring all incidents are reported to Eni.</p> <p>Supporting Eni's IMT as required.</p> <p>Ensuring all personnel are adequately trained, competent and can perform duties as required in this EP.</p> <p>Notifying the Eni POS of any incidents arising from operations that do not comply with the EPOs and EPSs identified in this EP.</p> <p>Reporting hydrocarbon or chemical spills to the Eni POS.</p> <p>Establishing communications with other vessels in the area.</p>


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Role	Responsibilities
Vessel crew/offshore support personnel	<p>Undertaking Eni HSE and EP induction before performing any offshore activities.</p> <p>Ensuring all operations aboard the WHP and vessel(s) are performed in a manner consistent with this EP.</p> <p>Undertaking operations in accordance with Eni and Contractor HSE systems, including reporting all hazards and incidents to the Vessel Master and Eni Offshore Representative.</p> <p>Reporting any HSE hazards or incidents to the Vessel Master and the Eni Offshore Representative.</p> <p>Following housekeeping procedures and work practices.</p> <p>Ensuring all operations aboard the WHP and vessel(s) are performed in a manner consistent with this EP (e.g., reporting cetacean sightings).</p>
Eni Offshore Person in Charge (PIC)	<p>Notifying the POS, Eni Production/Deputy Operations Manager, HSE and Community Social Responsibility Manager should additional environmental risks arise during the activities that have not been identified in this EP.</p> <p>Ensuring all offshore personnel comply with the health, safety and environmental requirements.</p> <p>Providing a daily log of activities and reporting reportable and recordable incidents to the Operations Manager.</p> <p>In the event of an emergency, communicating between the support vessel(s) and the Eni IMT in Perth.</p> <p>Implementing and complying with all operational plans, including this EP.</p> <p>Ensuring adherence to management and mitigation measures outlined to minimise interaction with cetaceans and other marine fauna.</p> <p>Ensuring all whale interaction reports are submitted to Eni's Environment Advisor.</p> <p>Ensure seabird monitoring and management is undertaken consistent with CM-19 and Section 10.3.1.</p> <p>Investigating hydrocarbon spills, should they occur.</p>

Eni maintains a list of designated PICs for the WHP. When a work team visits the WHP, they are accompanied by a designated PIC. The PIC is responsible for conducting the on-facility induction and overseeing any emergency response on the facility. As the work teams are usually small, all team members know who the PIC is for a WHP visit.

Before arrival at the WHP, the PIC communicates with the POS at the YGP. This communication involves the Central Control Room Operator completing a pre-arrival checklist, before allowing the work party to approach the WHP.

The checklist is completed by the Central Control Room Operator and checked and signed by the POS. The PIC also undertakes visual checks on approach to the WHP. This is communicated to the POS at the YGP who gives permission to land and board the WHP. At this point, command on the WHP is handed to the PIC.

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10.3 Training and Inductions

All new employees and contractors to the Blacktip facilities must undertake an induction. These induction programs include:


- company induction:
 - Eni Golden Rules
 - Eni HSE IMS
 - substance abuse
- Blacktip inductions:
 - Eni EP awareness/legislation:
 - environmental regulatory requirements
 - marine mammal interaction – requirement to record and report sightings of whales and dolphins
 - seabird interaction management – requirement to monitor, record and report seabird interactions
 - requirements for waste segregation, labelling, handling and storage
 - housekeeping and spill prevention
 - spill preparedness and response
 - environmental incident reporting
 - requirements for recording waste movements and transfers
 - HSE standards
 - job hazard analysis
 - Blacktip operations emergency response
- cultural awareness induction.

Training is provided to Eni employees and contractors as appropriate to ensure individuals have the skills, knowledge and competencies to fulfil their roles.

The Eni approach to training and development is managed under the Training and Development Procedure (ENI-HRO-PR-020), which describes the mechanisms by which training and competency are managed and outlines the process by which operations staff are trained.

Eni uses training matrices for the Blacktip facilities that define the competency requirements for the roles at the Blacktip facilities, specifically:

- Blacktip YGP Emergency Response Training Matrix (ENI-HRO-ST-001)
- Blacktip YGP Induction & HSE Training Matrix (ENI-HRO-ST-002)
- Blacktip YGP Technical Training Matrix (ENI-HRO-ST-003).

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For each Blacktip operations position, the training matrices indicate the minimum training requirements. An employee's training needs are based upon the matrix and any other training identified by the Line Manager. They are recorded within the individual's Personal Development Plan, which outlines training needs on an annual basis.

The training process has been established to ensure training activities are interactive, effective, competency-based and auditable, in terms of frequency of sessions and attendance of individuals.

HSE training, based on roles and responsibilities, includes:

- dangerous goods awareness
- management of change
- Safety Case awareness and legislation
- hazard identification and risk management
- manual handling
- HSE IMS and auditing
- Root cause analysis
- HSE for supervisors.


OPEP training requirements are outlined in the Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17).

10.3.1 Seabird management training

Seabird monitoring occurs prior to helicopter operations at the Blacktip WHP as per the Blacktip Wellhead Platform Bird Management Plan (007102.00.P.W.PP.06152). A suitably qualified ornithologist (as determined by years' experience in applied ornithology research), wildlife carers association or veterinarian will provide training to relevant Eni personnel required to undertake seabird monitoring (Table 10.1). The training will include:

- methods for counting seabirds
- species identification, with particular focus on EPBC Act listed species known to roost on the Blacktip WHP
- seabird capture, handling, triage and release and/or euthanasia, including PPE requirements
- internal notification process for injured seabird management (including advice sought from a suitably qualified ornithologist, wildlife carers association or veterinarian)
- external reporting requirements as per Section 10.8

No licence is required to handle or relocate EPBC listed seabirds under Regulation 47 and 50 of the Biodiversity Conservation Regulations WA. No seabird species will be held for more than 72 hours on the Blacktip WHP.

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10.4 Competency

10.4.1 Contractor Selection and Management

All Eni contractors must have satisfied the general HSE prerequisites in the contractor selection process in accordance with the Contractor HSE Management Procedure (ENI-HSE-PR-008) and Contractor HSE Specification and Requirements (ENI-HSE-SP-002).

In addition to this, Eni Australia ensures contractor personnel receive appropriate training on their HSE responsibilities. This may be achieved in many ways; in particular, all workforce, including contractors, attend HSE Forums that contain a range of HSE awareness presentations and training.

Eni will agree and approve the competencies of the contractor's technicians before they start work. All subcontractors and specialist services providers engaged under the maintenance services contract will similarly be approved by Eni.

The Eni contracting process for the contractor vessel selection and management, and the appropriate operators for selected operations associated with the Blacktip operations, requires developing a project-specific vessel scope of work that is consistent with Logistic Technical Requirements for Supporting Project Activities (LOGIS-ST-3933-1-2019) and a corresponding Appendix C: Vessel Technical Specifications Requirements. These are developed in accordance with Eni Performance Standard P43 Marine Vessels (00710200PGRT06143) and Eni Marine Transportation Manual [84], out of which come the requirements informing the vessel on-hire inspection process.


The Blacktip Marine Procedure (000036_DV_PR.DPM.1045.000_02) includes project-specific criteria that shall be considered and assessed when contracting vessels:

- Vessels must have a current (within 12 months of issue) Offshore Vessel Inspection Database (Oil Companies International Marine Forum), Common Marine Inspection Document (International Marine Contractors Association), or Eni marine inspection. If the vessel holds neither of these documents, an inspection request will be generated.
- All information and advice will then be on-forwarded to Eni Headquarters (LOGIS) for final technical approval. Vessels require technical approval from Headquarters if the vessel is going to carry passengers who are Eni employees or direct contractors.

Existing vessels, which Eni has listed as recently engaged, are required to hold a current audit from within the last 12 months and renewed annually.

10.4.2 Verification of Competence

Personnel qualification and training records may be sampled during Blacktip operations. Such checks will be performed during the procurement process, inductions and operational inspections and audits (refer to Section 10.6).

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In accordance with Eni's Verification of Competence Procedure (ENI-HSE-PR-024), it is mandatory for competency to be verified for all personnel who operate equipment or perform work that requires a High-Risk Work Licence. The procedure requires checks and verifies that the competency already held by personnel is authentic and current and they can safely perform the high-risk activity to the required standard.

10.5 Monitoring

10.5.1 Blacktip Production Operations

The systems that may be used to monitor environmental performance during ongoing Blacktip production operations are:


- daily production reports, which include production, gas consumption, venting and chemical consumption
- records of consultation feedback
- reports from the monitoring detailed in Table 10.2
- audits against the management system, EP requirements or other requirements (refer to Section 10.6).
- fuel use on vessels
- fugitive emissions monitoring

Such records will be maintained for five years.

Air emissions are reported annually as part of statutory NGER Act 2007 reporting and National Pollution Inventory (NPI) reporting.

Table 10.2: Environmental monitoring and parameters during Blacktip operations

Monitoring criteria	Monitoring frequency	Threshold limit	Monitoring method
Volume of gas consumed on the WHP	Continuous process metering	No prescriptive limit but principle of ALARP is applied. Review of consumption data to determine emissions and efficiency to report as required by the NGER Act 2007.	Ultrasonic gas flow meters recording gas consumption and venting, with volumes recorded onshore at YGP
Volume of chemical consumed	Volumes checked on visits to the WHP	No prescriptive limit but principle of ALARP is applied. <i>Note: no chemicals are discharged from the WHP</i>	Chemical (corrosion inhibitor) consumption is also monitored remotely from YGP
MDO volumes used in the WHP cranes	During transfer operations	No prescriptive limit but principle of ALARP is applied. Review of consumption data to determine emissions and efficiency to report as required by the NGER Act 2007.	Volumes of MDO transferred from vessel to crane diesel tank

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Monitoring criteria	Monitoring frequency	Threshold limit	Monitoring method
Fugitive emissions monitoring at the WHP	Annual	Zero fugitive emissions set as benchmark.	Lidar camera
Diesel consumption on vessels	Post vessel charter	Review of consumption data to determine emissions and efficiency to report as required by the NGER Act 2007.	Fuel use / records
Production	Continuous	N/A <i>Used to determine scope 3 emissions.</i>	Daily reports
GHG forecasting and performance	Monthly	N/A	Comparison of actual vs forecast Scope 1 GHG emissions. Refer to Section 7.3.3.3.
Seabird monitoring on Blacktip WHP	Prior to (using CCTV) and during visits to the WHP	NA <i>May be used to monitor changes in seabird interactions with the WHP and inform seabird management strategies.</i>	Seabird counts and species identification CCTV Observations provided to Eni Environmental Advisors

10.5.2 Blacktip Vessel-Based Monitoring

Vessel-based monitoring occurs from the mobilisation of each IMR vessel activity and continues until completion of the activity.

Discharges to the marine environment associated with vessel activities will be recorded and controlled in accordance with requirements under relevant Marine Orders and MARPOL requirements. Vessel contractors will maintain records so emissions and discharges can be determined or estimated. Such records will be maintained for five years. Contractors are required to make these records available upon request.

The systems that may be used by Eni and contractors to monitor environmental performance during vessel-based activities are:

- daily vessel reports during relevant offshore activities; planned and unpanned discharges are also documented in the daily report
- reports from monitoring detailed in Table 10.3
- contractor inspections and audits
- review of waste management and recycling records
- audits against the management system, EP requirements or other requirements (Section 10.6).


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Table 10.3: Environmental monitoring during vessel-based activities

Monitoring criteria	Threshold limit	Monitoring method
Marine fauna sightings	N/A	Opportunistic visual observations
Volume of solid waste	No prescriptive limit but principle of ALARP to be applied	Calculated based on capacity of storage containers transferred for onshore disposal
Volume of sewage, greywater and mass of food scraps discharged overboard	Discharged in accordance with Marine Order requirements	Estimated based on POB, storage capacity and dimensions of discharge point
OIW concentration of treated wastewater	Discharged in accordance with Marine Order requirements ($\leq 15\text{mg/L}$)	In compliance with vessel Marine Order requirements
Diesel consumption on vessels	Review of consumption data to determine emissions and efficiency to report as required by the NGER Act 2007.	Fuel use / records


10.5.3 Waste Monitoring

Waste management records shall include:

- waste type and volumes disposed of to landfill
- waste type and volumes recycled
- estimate of macerated food and sewage waste discharged offshore.

All waste transported from offshore will be properly manifested. Waste manifests will include information about:

- manifest identification number
- quantity (m^3/Kg)
- waste description
- waste container(s) number and description
- date of shipment
- description of final destination (such as incineration, landfill)
- generator data
- transporter(s) data and waste acceptance declaration
- receiver data and waste acceptance declaration
- dangerous goods class and United Nations number (for environmentally hazardous waste)
- special handling instructions
- any other information required by the waste contractor.

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10.5.4 Bird Monitoring

Monitoring will be undertaken on the WHP prior to the commencement of campaigns, using CCTV cameras. Given the resolution of the CCTV cameras on the facility, it is not possible to provide a count or species identification. However, the CCTV will be used to assist in providing surveillance and to inform the requirement for pre-campaign cleaning activities (the CCTV can identify excessive guano on and flocks of birds on the helideck but not to the resolution required to identify exact numbers or species of birds).

CCTV monitoring will be supported by trained personnel present during campaigns on the WHP. The training requirements necessary for these personnel to competently undertake seabird monitoring are outlined in Section 10.3.1. Outcomes of seabird monitoring will be used to identify any potential change in seabird interaction with the WHP, as described in Section 8.2.3.3 and to inform ongoing seabird management strategies for the WHP (Section 10.6.3).

10.6 Auditing and Inspection

Compliance verification and auditing processes for managing HSE are performed on a number of levels.

At the Eni Australia HSE IMS level, there is a management system element dedicated to the audit and review process and an HSE Auditing Procedure (ENI-HSE-PR-005). This requires that the HSE IMS is formally reviewed to ensure ongoing effectiveness and continual HSE improvement. It also ensures critical HSE processes are in place; for example, the HSE auditing of contractors and subcontractors, and annual audit of the permit to work system.


At a contractor management level, the HSE performance of the contractors is assessed as part of the contractual performance review process. Eni also reserves the right to undertake HSE audits on contractors and their subcontractors.

At an activity level, HSE monitoring is performed as part of executing discrete work scopes, such as pipeline inspection, maintenance and repair. For these activities, a project-specific plan is prepared that identifies HSE audits, such as pre-mobilisation and during activity execution.

Environmental audits and inspections aim to:

- identify potential new, or changes to existing, environmental impacts and risk, and methods for reducing those to ALARP
- confirm mitigation measures detailed in this EP are effectively reducing environmental impacts and risk, that the measures are practicable and provide appropriate information to verify compliance
- confirm compliance with the EPOs and EPSs detailed in this EP.

Further details regarding specific audits are outlined in Sections 10.6.1 and 10.6.2.

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10.6.1 Blacktip Operations Audit

Eni will complete an annual compliance audit against this EP. Audits of the routine Blacktip operations will be conducted against the EP EPOs and EPSs to ensure effective legislative compliance and management of the identified risks. Where the audit highlights areas of non-compliance, practices will be reviewed and will be incorporated into future revisions of this EP as appropriate, and other standard operating systems and procedures as required.

10.6.2 Vessel Audits

Before chartering or subcontracting new vessels, technical evaluation will be undertaken to verify compliance with applicable international rules, regulations and conventions, State and Commonwealth requirements and Eni standards and best practice. New vessels (not previously used by Eni Australia) will be subject to an audit of the complete set of vessel documents and an Offshore Vehicle Inspection Database or International Marine Contractors Association inspection will be requested. Vessels used regularly must have a vessel audit completed every 12 months.

Internal auditing is also undertaken for vessels to collect evidence for and assure compliance with EP commitments. Compliance documentation and evidence is collected continuously.

In addition to general auditing processes, Eni will undertake a quality assurance and control inspection of the vessel and equipment before they mobilise to the Blacktip facilities. Contractor vessel operator marine inspection and audit schedules are managed by Eni Logistics and include:


- technical qualification audits
- kick-off and pre-hire audits
- periodical audits
- follow-up audits.

The contractor vessel operators are required to provide Eni with a project-specific quality plan. In relation to Eni's quality assurance and control oversight over the campaign, the contractor vessel operators:

- have appropriately tested, inspected and maintained equipment, with the contractor vessel operators submitting an inspection and testing plan that will be agreed with Eni
- provide the most recent inspection, utilisation and maintenance records for all rental equipment
- provide all equipment Material Traceability Reports and Certificates of Conformance to Eni. No equipment will be accepted by Eni without adequate documentation. This includes the contractor vessel operators' and third-party contractors' equipment.

10.6.3 Routine Management Team Meetings

Routine management team meetings will be held on a weekly basis to follow-up on any item normally dealt with at the Management Review meeting. This includes in particular:

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- non-conformance items due or not closed out
- performance of the organisation or departments in relation to objectives, targets or outstanding actions
- major issues or activity changes arising either internally or externally
- environmental aspects, impacts and compliance, including but not limited to:
 - Environment Plan Implementation
 - Greenhouse Gas Management
 - Sea Bird Management.

10.7 Non-Conformance, Corrective and Preventative Actions

Non-conformances may be identified from the audits (refer to Section 10.6). Close-outs of non-conformances are recorded and tracked in an action tracking database in accordance with Eni Australia's Corrective Action Tracking and Non-conformance Reporting Procedure (ENI-HSE-PR-015). The root cause of incidents is analysed to determine the cause and to aid identification of corrective actions, in accordance with Eni Australia's Incident Investigation Procedure (ENI-HSE-PR-025).

Corrective and preventative actions are raised for all identified hazards and incidents according to Eni Australia's Hazard and Incident Reporting Procedure (ENI-HSE-PR-003) and are registered and maintained within the Eni SharePoint system.

The Eni HSE and Quality Manager ensures all corrective and preventative actions are tracked and appropriate reminders are communicated to relevant Department Managers.

Breaches of this EP by Eni's vendors can be managed through issuing a formal Non-conformance Report, in accordance with Procedure Vendor Management (ENI-PRC-PR-001), which links with legal management of the contract. The procedure provides for vendor qualification, evaluation, due diligence, feedback and serious non-performance management. This would apply to any serious or repeated breaches of Eni procedures that could cause environmental harm.

10.8 External Reporting

10.8.1 Routine Blacktip Operations Reporting

Routine regulatory reporting requirements for the Blacktip operations are summarised in Table 10.4. The requirements include that Eni develops and submits an annual Environmental Performance Report to NOPSEMA, with the first report submitted within 12 months of commencing activities covered by this EP (as per the requirements of Regulation 22(7)).




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Table 10.4: Routine Blacktip operations external reporting requirements


Requirements	Recipient	Frequency	Content
Before Vessel Activities			
Australian Hydrographic Office (AHO) notification	AHO	Email AHO four weeks before the confirmed activity start date.	Written. Notify AHO of the activity commencement date and duration to enable a Notice to Mariners to be issued.
AMSA (Joint Rescue Coordination Centre) notification	AMSA	24 to 48 hours before activities commence.	Written. Through rccaus@amsa.gov.au (Phone: 1800 641 792 or +61 2 6230 6811) for promulgation of radio-navigation warnings.
Notification to Director of National Parks	DNP	Approximately 10 days before entering the Joseph Bonaparte Gulf AMP and at the conclusion of activities within the Joseph Bonaparte Gulf AMP.	Notifications can be made to marineparks@environment.gov.au.
Vessel biosecurity risk assessment	DCCEEW Biosecurity	At least one month before activity begins. Maritime Arrivals Reporting System reporting at least 12 hours before arrival.	For vessels, Eni will: <ul style="list-style-type: none"> pursuant to the <i>Biosecurity Act 2015</i>, assess vessel biosecurity risk and be assessed as 'low' by the Commonwealth Department of Agriculture before interacting with domestic vessels and aircraft undertake pre-arrival approval for the vessels (where applicable) using the Maritime Arrivals Reporting System to meet the DCCEEW biosecurity reporting obligations.

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Requirements	Recipient	Frequency	Content
During Blacktip routine production and vessel activities			
Notify AMSA of any oil pollution incidents in Commonwealth waters	AMSA	Within two hours of any oil pollution incidents in Commonwealth waters.	<p>In accordance with the <i>Navigation Act 2012</i>, any oil pollution incidents in Commonwealth waters will be reported by the Vessel Master to AMSA within two hours via the national emergency notification contacts and a written report within 24 hours of the request by AMSA.</p> <p>The national 24-hour emergency notification contact details are:</p> <ul style="list-style-type: none"> • Freecall: 1800 641 792 • Fax: (02) 6230 6868 • Email: mdo@amsa.gov.au.
AMSA: advise about any oil pollution incidents in Commonwealth waters	AMSA	Within two hours of any oil pollution incidents in Commonwealth waters.	<p>In accordance with the <i>Navigation Act 2012</i>, any oil pollution incidents in Commonwealth waters will be reported by the Vessel Master to AMSA within two hours via the national emergency notification contacts and a written report within 24 hours of the request by AMSA.</p> <p>The national 24-hour emergency notification contact details are:</p> <ul style="list-style-type: none"> • Freecall: 1800 641 792 • Fax: (02) 6230 6868 • Email: mdo@amsa.gov.au.

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Requirements	Recipient	Frequency	Content
Department of Transport (WA) reporting <i>All actual or impending marine oil pollution incidents that are in, or may impact, State waters resulting from an offshore petroleum activity</i>	Oil Spill Response Coordination	Within two hours.	Oral. Notification of actual or impending spillage, release or escape of oil or an oily mixture that can cause loss of life, injury to a person or damage to the health of a person, property or the environment. All oil pollution incidents in WA State waters will be reported by the Vessel Master to the Oil Spill Response Coordination Unit within WA Department of Transport as soon as practicable (within two hours of spill occurring) via the 24-hour reporting number (08) 9480 9924. The Duty Officer will then advise whether the following forms are required to be submitted: <ul style="list-style-type: none"> Marine Pollution Form (POLREP); http://www.transport.wa.gov.au/mediaFiles/marine/MAC-F-PollutionReport.pdf Marine Pollution Situation Report: http://www.transport.wa.gov.au/mediaFiles/marine/MAC-F-SituationReport.pdf.

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Requirements	Recipient	Frequency	Content
<p>Director of National Parks reporting</p> <p><i>Notification of the event of oil pollution within a marine park or where an oil spill response action must be taken within a marine park; or if there are any changes to intended operations (requested through consultation)</i></p>	DNP	So far as reasonably practicable before writing response action.	<p>Oral and written.</p> <p>DNP should be made aware of oil and gas pollution incidences that occur within a marine park, or are likely to impact on a marine park, as soon as possible. Notification should be provided to the 24-hour Marine Compliance Duty Officer on 0419 293 465. The notification should include:</p> <ul style="list-style-type: none"> • titleholder details • time and location of the incident, including name of marine park likely to be affected • proposed response arrangements as per the OPEP, such as dispersant and containment • confirmation of providing access to relevant monitoring and evaluation reports when available • contact details for the response coordinator. <p>Note DNP may request daily or weekly Situation Reports, depending on the scale and severity of the pollution incident.</p>
<p>DPIRD reporting</p> <p><i>If marine pests or disease are suspected, this must be reported to DPIRD</i></p>	DPIRD	Within 24 hours.	Notification (written) of any suspected marine pests or diseases, including any organism listed in the Western Australian Prevention List for Introduced Marine Pests and any other non-endemic organism that demonstrates invasive characteristics.
<p>DCCEEW reporting</p> <p><i>Any harm or mortality to EPBC Act listed 'threatened' marine fauna</i></p>	DCCEEW	Within seven days to EPBC.permits@environment.gov.au.	Notification (written) of any harm or mortality to an EPBC-listed species of marine fauna, whether attributable to the activity or not.



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Requirements	Recipient	Frequency	Content
<p>DBCA reporting</p> <p><i>Any harm or mortality to fauna listed as 'threatened' under the WA Biodiversity Conservation Act 2016</i></p>	DBCA	Fauna report submitted within seven days to fauna@dbca.wa.gov.au.	Notification of any harm or mortality to fauna species listed as 'threatened' under the <i>WA Biodiversity Conservation Act 2016</i> as a result of activities.
<p>DBCA reporting</p> <p><i>In the event of a hydrocarbon spill that may result in imminent or actual impacts on DBCA interests – i.e. wildlife (see above) or State reserves</i></p>	DBCA	As soon as practicable.	<p>In the event of a hydrocarbon spill, that may result in imminent or actual impacts on DBCA interests, notification should be provided to DBCA's Kimberley Regional office in the first instance, as soon as practicable.</p> <p>The region may also be contacted via email, at broome@dbca.wa.gov.au.</p>
<p>Australian Marine Mammal Centre reporting</p> <p><i>Any ship strike incident with cetaceans will also be reported to the National Ship Strike Database</i></p>	DCCEEW	As soon as practicable.	<p>Ship strike report provided to the Australian Marine Mammal Centre:</p> <p>https://data.marinemammals.gov.au/report/shipstrike.</p>
<p>Annual EP Performance Report in accordance with OPGGS(E) Regulation 51 – Environmental Performance</p>	NOPSEMA	Annually from the date of acceptance of this EP.	<p>The report will assess compliance with the EPOs and EPSs outlined in this EP.</p> <p>The reporting period is 1 January to 31 December each year.</p>
NPI Report	National Pollution Inventory	Annual, by 30 September each year.	Summary of the emissions to land, air and water, including those from the facility. Reporting period 1 July to 30 June each year.

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Requirements	Recipient	Frequency	Content
National Greenhouse and Energy Reporting	Clean Energy Regulator	Annual, by 31 October each year.	Summary of energy use and GHG emissions, including those from the facility. Reporting period is 1 July to 30 June each year. NGER (Safeguard Mechanism) Rule 2015 is used to measure, report and manage the relevant production operations emissions in compliance with the requirements set by the Clean Energy Regulator.
EPBC Compliance Certificate	DCCEEW	Annual, by 1 July each year.	Summary of compliance against conditions of Approval 2003/1180. Reporting period is 1 July to 30 June each year.
NOPSEMA reportable incident	Refer to Section 10.8.2.		
NOPSEMA recordable incident	Refer to Section 10.8.2.		
After vessel activities			
Marine fauna observation data	DCCEEW	Within three months of activity completion.	Provide marine fauna observation data to DCCEEW through its online Cetacean Sightings Application.
AMSA (Joint Rescue Coordination Centre) notification	AMSA	Within ten days of completion.	Notification that applicable vessel activity is completed.
AHO notification	AHO	Within ten days of completion.	Notification that applicable vessel activity is completed.
End of activities covered by this EP			
NOPSEMA: end-of-activity notification	NOPSEMA	Within ten days after finishing the activities covered by this EP.	Written. NOPSEMA must be notified that the activity is completed. Complete NOPSEMA's Regulation 29 Start or End of Activity Notification Form.

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Requirements	Recipient	Frequency	Content
NOPSEMA: end-of-activity EP Performance Report	NOPSEMA	Within six months of the final Regulation 29 notification.	Written. Notification advising NOPSEMA of end of all activities to which the EP relates and that all obligations have been completed. EP ends when titleholder notifies completion and the regulator accepts the notification.

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10.8.2 Incident Reporting (Reportable and Recordable)

Reportable Incidents

Environmental recordable and reportable incidents will be reported to NOPSEMA as required, in accordance with Table 10.5. Under OPGGS(E) Regulation 48, NOPSEMA must be notified of any reportable incidents. A reportable incident is defined as an incident relating to the activity that has caused, or has the potential to cause, moderate to significant environmental damage.

For the purposes of this activity, in accordance with OPGGS(E) Regulations:

- a recordable incident for an activity means a breach of an EPO or EPS, in the EP that applies to the activity, that is not a reportable incident
- a reportable incident for an activity means an incident relating to the activity that has caused, or has the potential to cause, moderate to significant environmental damage.

For Blacktip operations, a reportable incident is one that is assessed to have an environmental consequence of moderate or higher in accordance with the Eni risk assessment process (refer to Section 6). For this EP, that includes:

- introduction of IMS (Section 8.3)
- loss of containment from a worst case well release (Section 8.6).

In addition:

- any injury or death to EPBC listed species of seabird, whales, dolphins or turtles related to the activity (such as vessel strike) must be reported immediately to DCCEEW
- an incident relating to the activity that has caused death or injury to EPBC listed threatened, migratory or local fauna will be treated as a reportable incident
- Defence will be made aware of any high-velocity exhaust gas plumes or burn-offs that could impact the safety of flights.

Table 10.5 details the reportable incident requirements.



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Table 10.5: Reportable incident reporting requirements

Requirement/required information	Timing	Type	Recipient
<p>The oral notification must contain:</p> <ul style="list-style-type: none"> all material facts and circumstances concerning the reportable incident known or by reasonable search or enquiry could be found out any action taken to avoid or mitigate any adverse environmental impacts of the reportable incident the corrective action that has been taken, or is proposed to be taken, to stop, control or remedy the reportable incident. 	As soon as practicable, and in any case not later than two hours after the first occurrence of a reportable incident, <u>or</u> if the incident was not detected at the time of the first occurrence, at the time of becoming aware of the reportable incident.	Oral	NOPSEMA
A written record of the oral notification must be submitted. The written record is not required to include anything that was not included in the oral notification.	As soon as practicable after the oral notification.	Written	NOPSEMA NOPTA
<p>A written report must contain:</p> <ul style="list-style-type: none"> all material facts and circumstances concerning the reportable incident known or by reasonable search or enquiry could be found out any action taken to avoid or mitigate any adverse environmental impacts of the reportable incident the corrective action that has been taken, or is proposed to be taken, to stop, control or remedy the reportable incident the action that has been taken, or is proposed to be taken, to prevent a similar incident occurring in the future. <p>Consider reporting using NOPSEMA's Report of an Accident, Dangerous Occurrence or Environmental Incident form.</p>	<p>Must be submitted as soon as practicable, and in any case not later than three days after the first occurrence of the reportable incident unless NOPSEMA specifies otherwise.</p> <p>Same report to be submitted to National Offshore Petroleum Titles Administrator (NOPTA) and DEMIRS within seven days after giving the written report to NOPSEMA.</p>	Written	NOPSEMA NOPTA

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Recordable Incidents

In accordance with OPGGS(E) Regulation 5, a 'recordable incident' is 'breaches of an environmental performance outcome or environmental performance standard, in the EP that applies to the activity, that is not a reportable incident'.

Recordable incidents will be reported to the Regulatory Authority as per the OPGGS(E) Regulation 50(4) (as in, monthly report of recordable incidents sent by the 15th of the following month), detailing:

- all recordable incidents that occurred during the calendar month
- all material facts and circumstances concerning the recordable incidents that the operator knows or is able, by reasonable search or enquiry, to find out
- any action taken to avoid or mitigate any adverse environmental impacts of the recordable incidents
- the corrective action that has been taken, or is proposed to be taken, to prevent similar recordable incidents
- the action that has been taken, or is proposed to be taken, to prevent a similar incident occurring in the future.

10.9 Internal Reporting


All environmental incidents, deviations from this EP, or events that do not meet the EPOs of the EP will be recorded and reported to Eni, using Eni's Hazard and Incident Reporting and Investigation (ENI-HSE-PR-003) procedure. This includes entering the incident into the incident tracking database, accessible by contractor supervisors and Eni personnel.

Some examples of environmental incidents that need to be reported to Eni include:

- the uncontrollable escape or ignition of petroleum or any other flammable or combustible material causing a potentially hazardous situation
- spills of hydrocarbons, hydraulic fluids or any other chemicals, of any volume
- unplanned releases of gas
- overboard disposal of solid waste (accidental or intentional)
- loss of equipment to the ocean (dropped objects)
- incorrect disposal of wastes onshore by waste contractors.

10.10 Knowledge Sharing and Health, Safety and Environment Communication

HSE communications include both internal communication to employees and external communication to stakeholders and is managed in accordance with Eni's HSE Communications, Consultation and Participation (ENI-HSE-PR-016) procedure. Emergency communications are described in the Emergency Response Plan (000036_DV_PR.HSE.0675.000).

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HSE commitments and obligations are established, recorded, maintained, communicated and managed within Eni in accordance with the Maintaining Knowledge of HSE Commitments and Obligations (ENI-HSE-PR-006) procedure.

10.10.1 Internal Communications with Eni Exploration and Production Division

Regular communications from the Eni Natural Resources Division regarding HSE matters include:

- guidelines for establishing annual HSE objectives
- requests of monthly, quarterly and annual reports
- documentation relevant to establishing budgetary provisions for HSE activities
- highlighting of actions to improve certain objectives
- reports about HSE audits that have occurred
- incident reporting and investigation and lessons learned
- publication of HSE articles in the company's publications
- distribution of the policy, procedures and other documents of the HSE IMS
- publication of Eni's annual Sustainability Report
- any other communication specific to a particular HSE event.


Eni Australia regularly communicates HSE performance information to Eni's Natural Resources Division through:

- monthly, quarterly and annual reports
- accident and incident reports and investigation
- audit and corrective action close out status
- HSE Qualitative Report (Four-Year Plan) (ENI-HSE-RP-011) and HSE Annual Plan (ENI-HSE-PL-031).

10.10.2 Internal Eni Australia Communications

Typical examples of key internal Eni communications relevant to Blacktip operations are:

- weekly management meetings
- morning call
- back-to-back roster handovers
- Blacktip HSE meetings
- pre-start meetings
- safety initiatives and communications
- management safety visits.

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10.10.3 Non-verbal Communication

In addition to the meetings described above, there are non-verbal means of communicating HSE issues within Eni, including:

- Eni intranet
- emails
- HSE noticeboards.

The Eni intranet has an HSE page that contains links to:

- the HSE IMS
- reporting forms
- incident and crisis management documentation
- Blacktip Safety Case documentation
- Blacktip Operations EP
- Blacktip emergency response documentation
- Blacktip Health Risk Assessment.

Emails are regularly used to communicate HSE issues within Eni. Typically, these would be:

- HSE Alerts – HSE Alerts are specific alert notices that arise from Hazard and Incident Reports and are typically only considered for high-potential incidents. The HSE Manager will decide whether to issue an HSE Alert to inform the wider workforce.
- HSE Bulletins – Notices on HSE topics that need to be raised in the workforce can be done so using HSE Bulletins. They can focus on an HSE theme or just raise a specific item of interest. The HSE Manager coordinates the development of new HSE Bulletins.

HSE noticeboards are in all Eni offices and plants. They function to inform the workforce about HSE issues. The content of the noticeboard is managed by the POS. Regular items placed on the HSE noticeboards include:

- HSE Commitment Statement
- incident statistics
- incident descriptions
- audit reports
- hazard cards (for reporting hazards).

10.10.4 External Communications

External communication about HSE matters is typically made to a range of recipients, including government agencies and regulators, community groups, non-government organisations, customers, industry bodies and the media (refer Table 10.6).



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Table 10.6: External communication summary

External communication	Details about communication level
Government	<p>Eni Australia's HSE communications with government authorities is undertaken according to legislative requirements and guidelines or, where none exist, best practice. Generally, HSE communications between Eni Australia and relevant government departments are performed through the Eni Operations and HSE departments. Records of key communications are maintained by the relevant Eni department.</p> <p>The Managing Director may address communications with government bodies in certain circumstances (such as major accident investigation), in which case Eni Natural Resources may also become involved.</p>
Non-government organisations and community groups	<p>HSE communication and consultation with non-government organisations and community groups will generally be coordinated by the HSE Department. Technical HSE communications to non-government organisations and community groups may be handled via an HSE specialist assigned to the particular project.</p> <p>Technical HSE communications may be undertaken by an HSE specialist.</p>
Customers	<p>Eni Australia actively engages with its customers, to ensure there is a common understanding of HSE issues as they relate to the supply of products. HSE communication with customers will generally be coordinated by the relevant department(s) with advice from the HSE Department.</p>
Business and industry organisations	<p>Eni is a member of the AEP and the WA and NT Chambers of Commerce. Interaction with the business community also occurs in Eni's day-to day business. Industry forums, such as the AEP conferences and Southeast Asian & Australian Offshore Conference, allow Eni to further communicate HSE aspects.</p> <p>HSE communication with unions is coordinated by the Human Resources Department with advice from the HSE Department.</p>
Media	<p>Media liaison occurs in relation to crisis and emergency situations and is managed in accordance with the relevant Eni Crisis Management Plan.</p>
Public HSE reporting	<p>Eni Australia, through its corporate head company Eni Natural Resources, communicates externally to the public about Eni's significant HSE aspects through a public Sustainability Report. This report contains information about the HSE performance of Eni divisions and business units, including Eni Australia. The Sustainability Report enables Eni to share its vision and commitment to sustainable development with its staff, all relevant stakeholders and the public. It is available on the Eni internet.</p>

10.10.5 Field Communications

Work parties on the WHP have access to communications equipment, including telephone extensions, radio and public address and CCTV systems.

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Any WHP work party is in regular contact with the YGP control room operator via radios (via satellite). On arrival at the WHP, the work party contacts the YGP control room to check the communications system and confirm the personnel are safely on-board the WHP. The emergency alarms are tested, and muster drills performed on the WHP in collaboration with the YGP. The YGP Central Control Room Operator records the communication associated with personnel transfers by helicopter and vessel on a checklist included in the WHP Transfer Procedure (000036_DV_PR.HSE.0782.000).

10.11 Management Review and Improvement

The HSE IMS is reviewed at least every five years in association with risk assessment outcome and incident reviews for required changes. This includes the review of any triggers requiring update to the HSE IMS (as detailed below), as well as general business planning outcomes and assessments of the effectiveness of performance standards. The review also documents actions and requirements for items, including the review and update of procedures and systems as identified in the HSE IMS review.


The HSE IMS review also incorporates feedback from the stakeholders with respect to performance and expectations.

Outside of the five-yearly review, the changes that may initiate reviews of the HSE IMS include:

- legislative changes, including changes to regulatory regime (e.g., modification to Pipeline Licence conditions)
- advancement in technology
- significant changes arising from hazard and event investigations to prevent recurrence
- significant changes due to complaints and changing community expectations
- significant changes and improvements identified from various HSE risk assessments and other hazard identification processes
- significant changes in activities (methodology in work processes)
- significant changes in organisation structure and business policies and objectives
- significant changes resulting from monitoring of HSE key performance indicators
- remedial or corrective actions from audits.

10.11.1 Health, Safety and Environment Management Review

A formal HSE management review is conducted yearly to assess overall implementation of the HSE IMS as per the HSE Management Review (ENI-HSE-PR-014) procedure. Areas in need of reinforcement are identified and, as a result, the elements of the system that need to be reinforced are highlighted. Action plans and responsibilities are agreed to improve risk management and the overall HSE performance of Eni Australia.

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This typically includes reviews of the:


- changes in:
 - external and internal issues that are relevant to the environmental management system
 - the needs and expectations of interested parties, including compliance obligations
 - significant environmental aspects
 - risks and opportunities
 - corporate or national targets
- information about environmental performance, including:
 - non-conformities and corrective actions
 - monitoring and measurement results including trends in data
 - fulfilment of compliance obligations
 - audit results
- adequacy of resources
- relevant communication(s) from interested parties, including complaints
- opportunities for continual improvement
- changes in legislation or guidance. For example:
 - current requirements for AMPs
- advances in relevant environmental technology and new scientific information. For example:
 - new scientific/industry publications
 - new technology related environment management

Oil spill arrangements and testing are reviewed in accordance with the Blacktip Operations OPEP (000036_DV_PR.HSE.0388.000_Rev17).

10.11.2 CO₂ Management Steering Committee Meetings

CO₂ Management Steering Committee Meetings occur within Eni approximately every 6 months, with a specific focus on GHG management within Eni Australia. The meetings are typically attended by the Eni Australia Managing Director and Technical Directors, including:

- Eni Australia Managing Director
- Health Safety Environment and Quality Manager
- Reservoir Manager
- HSE & CSR Assurance Advisor
- Environmental Advisor(s)
- CCUS & Forestry Manager, CO₂ Emissions Evaluator.

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The meeting agenda typically covers:

- GHG emissions performance (including the Blacktip emissions and variance from forecasts)
- GHG reduction initiatives (e.g., technology options or projects for reduction of GHG emissions)
- Emissions tracking and improvement initiatives
- Australia regulatory and policy framework changes
- New scientific/industry publications and guidance
- Corporate or national GHG targets emissions targets
- Any other items relating to GHG management.

Actions may be taken during the meeting in relation to GHG management and emissions reduction.

10.11.3 Continuous Improvement

Continuous environmental improvement of performance is driven at the Blacktip facilities by multiple mechanisms. These include:

- corporate initiatives
- auditing (Section 10.6)
- hazard and incident reporting (Section 10.8.2)
- incident investigation (Section 10.7)
- HSE data monitoring and reporting (Section 10.5)
- HSE Management reviews (Section 10.11.1)
- Outcomes of the CO₂ committee meetings (Section 10.11.2).


Reporting of incidents and the monitoring of this data draws Management's attention to trends resulting from potential weaknesses. Thorough investigation of incidents can be used to alert Management to system failures.

HSE auditing can uncover system failures before incidents occur. Auditing, reporting and monitoring can notify Management of a deficiency in the HSE IMS or of a problem with implementation of the HSE IMS.

Eni is responsible for implementing an ongoing process to identify and assess suitable measures for improving plant reliability and availability, plant safety levels and for reducing maintenance activities' workload and material costs.

10.12 Management of Change and Reviews of this Environment Plan

Change is managed in accordance with the Australia's Management of Change (ENI-DRL-PR-007) procedure. For this EP, the MoC process considers OPGGS(E) Regulation 19 and determines if a proposed change can proceed and the manner in which it can proceed.

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The MoC procedure applies to changes in operational assets, systems, processes, operations, products, organisation and staffing that have the potential to alter hazard or risk levels, affect environmental outcomes, including compliance with applicable laws or standards, or to significantly affect a stakeholder involved with the above items. Standard modification or changes that occur within existing work processes (such as Permit to Work system) or are of a routine nature are not included in this procedure.

Potential changes in risk originating from internal and external factors may lead to EP reviews. Changes that may lead to an EP review include:

- those concerning the scope of the activity descriptions
- advances in technology
- new scientific information
- changes in understanding of the environment; for example, advice on species protected under EPBC Act and current requirements for AMPs
- potential new advice from relevant persons, which will be reviewed in regard to OPGGS(E) Regulation 19.

Factors that may lead to an EP review are identified through various means, including:


- internal knowledge-sharing and HSE communication (Section 10.10.1)
- internal communications (Section 10.10.2)
- HSE management review (Section 10.11.1)
- non-verbal communications (Section 10.10.3)
- external communications (Section 10.10.4).

If a review of the activity and the environmental risks and impacts does not trigger a requirement for a revision, the change is considered minor. Minor change will be considered a 'minor revision'. Minor administrative changes to this EP, where an assessment of the environmental risks and impacts is not required (such as document references, phone numbers), will also be considered a 'minor revision'. Minor revisions will be tracked by Eni through its document change register on SharePoint and incorporated during internal reviews.

Management review (Section 10.11) or further understanding of environment risks through knowledge sharing (Section 10.10) may trigger a review of the EP. Internal reviews will address matters such as the overall design and effectiveness of the EP, progress in environmental performance, changes in environmental risks, changes in business conditions, and any relevant emerging environmental issues or change in understanding of the environment (such as 'protected matters' requirements). Reviews may also trigger adoption or reconsideration of once-rejected controls within the EP.

This EP will be revised:

- if and when an environmental inspection or audit (see Section 10.6) of the Blacktip operations finds significant breaches of the EP requirements

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- if any significant new environmental risk or effect, or significant increase in an existing environmental risk or effect, occurs that is not provided for in the existing EP as required by OPGGS(E) Regulation 19.

In accordance with the requirements of OPGGS(E) Regulation 41, Eni will submit a proposed revision to this EP to NOPSEMA at least 14 days before the end of each period of five years, commencing on the day on which the original and subsequent revisions of the EP is accepted under OPGGS(E) Regulation 35.

10.13 Incident and Crisis Management

10.13.1 Overview

The basic principle of Incident and Crisis Management (ICM) within Eni is to use the entire organisation in the most optimal way, to ensure the incident is brought under control and the organisation is then returned to a normal state. All responses to an emergency or a crisis are based on the priorities of:

- P** protection of **people**
- E** protection of the **environment**
- A** protection and minimisation of damage to financial and material **assets**
- R** protection of Eni's **reputation**.

The response should be proactive and sufficiently robust to manage all foreseeable events, be prepared for any reasonable variation, and be able to flexibly meet an escalation of events and make the best use of the entire organisation.

10.13.2 Incident and Crisis Management Organisational Structure

The Eni ICM organisational structure consists of three core levels, being:

1. Crisis Management
2. Incident Management
3. Field Response.

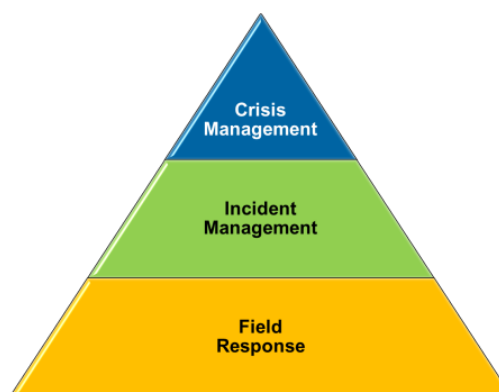



Figure 10.3: Incident and crisis management core levels

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Principal duties of each level and the timescale in which they shall endeavour to operate are illustrated in Figure 10.4.

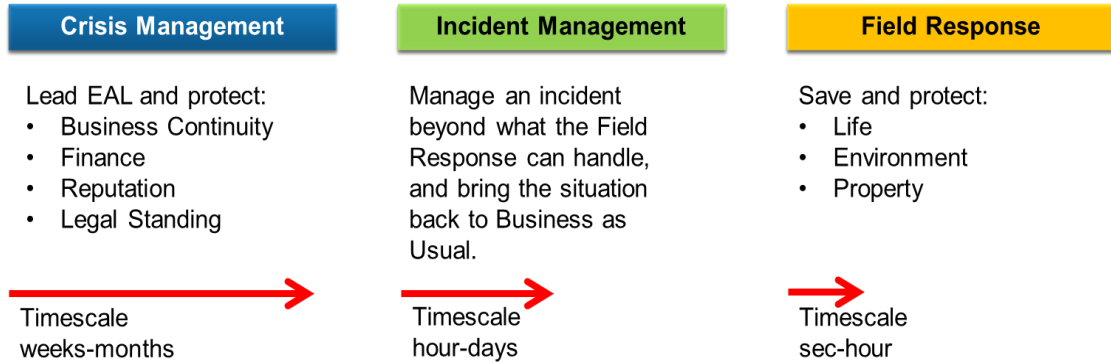


Figure 10.4: Incident and crisis management organisation’s principal duties and timescales

10.13.3 Chain of Command

Eni Australia’s ICM Chain of Command is a three-level structure. This is represented in Figure 10.5.

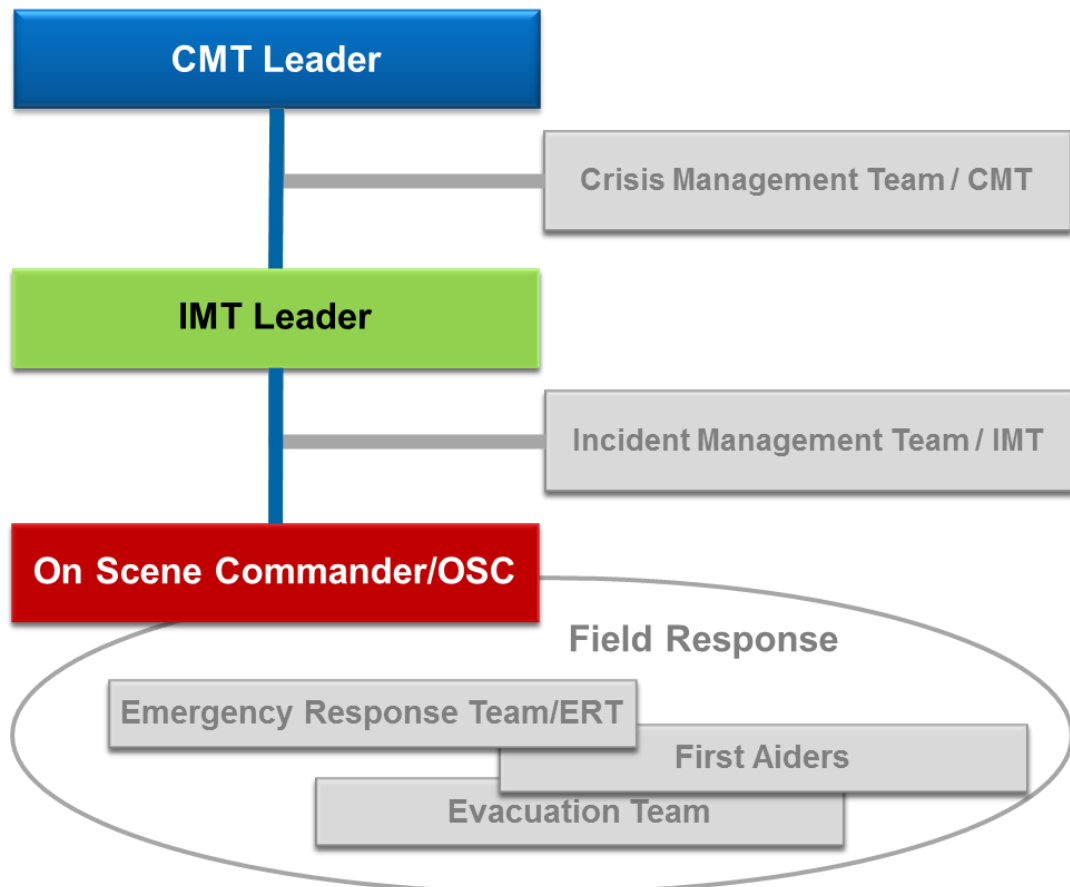



Figure 10.5: Incident and crisis management organisation chain of command


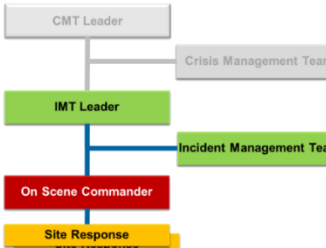
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The role holders in the ICM organisation can vary over time as the responsibility for the response to the incident moves from one organisation to another, a role holder is replaced with a more suitable or more competent individual from the same organisation, or the incident is of such duration that shift change-over is required due to fatigue risk.


10.13.4 Activation

Activation of the ICM organisation is to be executed in the steps shown in Table 10.7.

Table 10.7: Activation of levels in the incident and crisis management organisation

Severity level	Activation	Illustration (activated parts of the organisation in colour)
Pre-alarm		
Any event, strictly defined as a process safety event or event generated on the equipment or plant by natural risks, which does not lead to an emergency but is visible, audible or in any case noticeable by the population, institutions, administrations and bodies responsible for health, safety and the environment and which may have a significant media impact at local or national level.	Operational response only IMT informed	
Level 1		
An event that can be managed at site level with the personnel and means available there, under the responsibility of the employer; divided into noticeable from the outside or not.	Planned tactical response only IMT informed	
Level 2		
An event that can be managed locally under the responsibility of the employer, with assistance from the Business Unit and Administration at a peripheral level.	Planned tactical response IMT mobilised Eni Australia Managing Director informed CMT mobilised (Managing Director discretion)	

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Severity level	Activation	Illustration (activated parts of the organisation in colour)
Level 3		
<p>An event that determines a seriously dangerous situation for the site or the surrounding territory, managed under the responsibility of the employer, with assistance from the Business Unit and the pertinent HSE unit and with the support of the EMRIL unit. For sites at risk of a major or serious incident, covered by the appropriate national and international regulations, it may be necessary to implement the external or national emergency plan in coordination with the local or national public authorities.</p> <p>In the event of third-level emergencies with significant impacts, prolonged over time and capable of having serious repercussions on corporate integrity at an international level, Eni supports management of the emergency through the Crisis Unit in close contact with the Top Management Committee.</p>	<p>Planned tactical response</p> <p>IMT mobilised</p> <p>CMT mobilised</p> <p>Eni Headquarters mobilised</p>	

10.13.5 Blacktip Field Response

The field response team conducts the mitigation work. A field response can involve emergency response teams, first aiders, evacuation team, oil spill response teams or others.

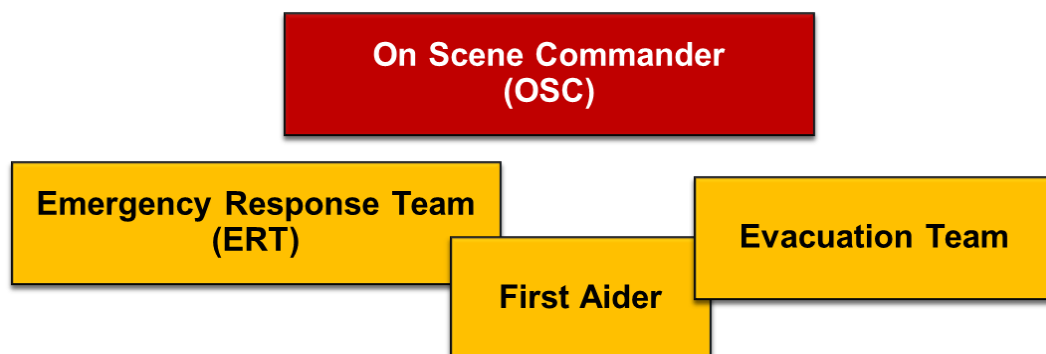



Figure 10.6: On-scene command

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For each field response, irrespective of its extent or complexity, there shall always be an On-Scene Commander in direct command of the operation (Figure 10.6). For WHP events, the person in charge at the WHP adopts the role of the On-Scene Commander.

The Blacktip Operations Emergency Response Manual (000036.DV.PR.HSE.0772.000) establishes an understanding of the roles and responsibilities for managing, controlling and responding to an emergency associated with Eni's Blacktip facilities. The manual outlines the:

- emergency management structure within Eni Limited
- emergency management structure for Blacktip operations
- procedures for response, control and coordination
- critical internal and external support links and relationships with external response agencies
- facilities and response equipment and inventories for facilities
- training and exercises.

The Emergency Response Manual refers to the Blacktip Emergency Response Plan (000036_DV_PR.HSE.0675.000), which outlines responses for scenarios at the Blacktip facilities. In addition, it is supported by or supports the:


- Eni Crisis and Incident Management Plans
- Offshore and YGP Security Plans
- Contractors' Emergency Response Plans.

The Blacktip Emergency Response Plan (000036_DV_PR.HSE.0675.000) addresses a wide range of emergencies at or near the Blacktip facilities, including the WHP, GEP and SPM. The emergencies associated with the WHP that are addressed include:

- topsides loss of containment or blowout
- pipeline loss of containment
- ship collision
- helicopter emergency
- person overboard
- medevac.

The Emergency Response Plan details the course of action to be followed for each event to ensure personnel safety is maintained as far as possible during emergency events.

Emergency response documentation is reviewed annually; a review is also undertaken after any incidents. Eni evaluates the effectiveness of the emergency management system via audits and monitoring of exercises.

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10.13.6 Coordination with Other Organisations

During an incident, Eni will manage all contacts and coordination with Australian local public authorities and agencies from the IMT and CMT.

In some cases, Eni's ICM organisation will operate in parallel or integrated with other organisations; for example, a contractor company, joint venture partner or a company operating in the vicinity of an Eni facility. In these cases, it is important liaison is established on 'equivalent levels' and in accordance with common principles for incident management.

10.13.7 Emergency Response Training

The emergency response training required for each functional role on the Blacktip facilities are detailed in the Blacktip Emergency Response Training Matrix (ENI-HRO-ST-001). Eni engages external consultants to provide nationally recognised training for emergency roles.

Members of the ICM organisation have the necessary competence and formal authorisation to perform their tasks efficiently and effectively. Comprehensive training is provided to all personnel in the ICM organisation, comprising theoretical training, exercises and drills. A competency assessment system is integral in the ICM system to verify the competency of post holders.

It is a requirement for all personnel working offshore to undergo the formal Offshore Petroleum Industry Training Organization accredited Tropical Basic Offshore Safety Induction and Emergency Training course. This requirement applies to contractors and visitors.


10.13.8 Dangerous Weather Response

Tropical cyclones and other storm conditions have the potential to cause damage to personnel, the environment and equipment. Standard Adverse Weather (ENI-HSE-ST-031) and Cyclone Preparation Plan (000036_DV_EX.OPS.0758.000) include detailed procedures for preparing for and responding to cyclone events. The response goal during a cyclone event is to protect personnel, the environment, equipment and the integrity of subsea equipment.


Eni uses experienced weather service providers such as the Bureau of Meteorology and Weatherzone to provide up-to-date location-specific forecasts. Eni uses specifically tailored services for its real-time forecasting and severe weather forecasting capabilities. They advise key Eni personnel of any severe weather or potential severe weather to support its operations and strategic planning. The POS must ensure he/she receives email notification of cyclones from the provider. This includes:

- tropical cyclone seven day outlook
- tropical cyclone forecast.

The Cyclone Preparation Plan (000036_DV_EX.OPS.0758.000) outlines the responsibilities for implementing the plan and a checklist for decision-making.

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Any vessels will receive daily forecasts from the Bureau of Meteorology. In the event a cyclone (or severe weather) is forecast and it has the potential to affect the Blacktip operations activities, the cyclone management plan will be actioned. If required, vessels can transit from the proposed track of the cyclone (or severe weather).

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APPENDICES

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APPENDIX A:

BLACKTIP ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION APPROVAL



**Notification of
VARIATION TO APPROVAL DECISION**

Blacktip Gas Field Development, WA and NT (EPBC 2003/1180)

This decision to vary a condition of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Proposed action

Person to whom the approval is granted ENI Australia

Proposed action To develop the Blacktip Gas Field, Joseph Bonaparte Gulf and associated marine and terrestrial facilities and activities as described in the referral under the Act received on 9 September 2003 (EPBC 2003/1180).

Approval decision

Relevant controlling provisions The approval has effect for:

- Listed threatened species and communities (sections 18 & 18A)
- Listed migratory species (sections 20 and 20A)
- Commonwealth Marine Area (sections 23 and 24A)

Variation of conditions of approval Delete Conditions 1 to 9 of the approval dated 29 November 2005, and substitute the conditions specified below.

Expiry date of approval This approval has effect until November 2040.

Person authorised to make decision

Name and position Michelle Wicks
A/g Assistant Secretary
Environment Assessment Branch

Signature *MWicks*

Date of decision *7 August 2008*

Varied conditions attached to the approval

1. The person taking the action must submit, for the Minister's approval, a plan for managing the offshore impacts of construction. The plan must address the following:
 - a) design and construction of facilities to allow for the complete removal of all structures and components (except flowlines) above the sea floor;
 - b) sea floor surveys around proposed flowline paths and well sites to identify sensitive marine ecosystems such as reefs, sponge beds and sea grasses and historic shipwrecks;
 - c) selection of flowline paths and well sites to avoid impacts on sensitive marine ecosystems referred to in 1. b), and historic shipwrecks;
 - d) a schedule of works;
 - e) managing the impacts on cetaceans, including interaction procedures for aircraft and supply and construction vessels that are consistent with *Part 8 of the Environment Protection and Biodiversity Conservation Regulations 2000*;
 - f) ballast water management for international construction or tanker vessels arriving in Australia in accordance with Australian Quarantine and Inspection Service *Australian Ballast Water Management Requirements*;

Offshore construction may not commence until the plan is approved. The approved plan must be implemented.

2. The person taking the action must submit, for the Minister's approval, a plan for managing the offshore impacts of operation. The plan must address the following:
 - a. the monitoring and disposal of produced water (PW) including the following:
 - i. Analysis of expected PW chemistry;
 - ii. Baseline biological and physical information at the PW outfall site;
 - iii. Toxic impacts of PW on marine flora and fauna based on ecotoxicological, bioaccumulation and biodegradation studies;
 - iv. Industry best practice disposal of PW;
 - v. Monitoring and reporting of biological and physical indicators; and
 - vi. Contingency measures if adverse impacts occur
 - b. managing the collection, handling and disposal of naturally occurring radioactive materials that may occur;
 - c. the use and disposal of hydrotest water additives, based on modelling of the hydrotest water discharge plume;
 - d. the use and disposal of drilling muds, including monitoring of water quality, in the event that low toxicity, water based drilling fluid additives cannot be used.

Operations may not commence until the plan is approved. The approved plan must be implemented.

3. The person taking the action must submit for the Minister's approval an oil spill contingency plan to mitigate the environmental effects of any hydrocarbon spills. The plan must identify oil sensitive marine environments and biota, and address spill response and cleanup strategies, the equipment to be used and the identification of capacity to maintain and implement rapid response equipment, the rehabilitation of impacted ecosystems, the training of staff in oil spill response measures and the reporting of oil spill incidents to the Minister. The plan must include details of insurance arrangements that have been made in respect of the costs associated with repairing any environmental damage arising from potential oil spills.

Offshore construction may not commence until the plan is approved. The approved plan must be implemented.

4. The person taking the action must submit, for the Minister's approval, a plan or plans to address measures for minimising the potential for listed threatened turtles to be impacted during pipeline construction and for monitoring of the impacts on turtles. The plan or plans must address the impacts of onshore and near shore lighting, the construction, any seabed or onshore blasting required, and the rehabilitation of potential turtle habitat after construction.

Onshore construction may not commence until the plan or plans are approved. The approved plan or plans must be implemented.

5. At least twelve months before the expiry of this approval, the person taking the action must submit a decommissioning plan to the Minister for approval, addressing the removal of all structures and components above the sea floor.

Decommissioning may not commence until the plan is approved. The approved plan must be implemented.

6. On 1 July of each year, the person taking the action must provide a certificate stating that the person taking the action has complied with the conditions of this Approval.

7. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans referred to in conditions 1, 2, 3, 4 and 5 the person taking the action may submit for the Minister's approval a revised version of any such plan. If the Minister approves a revised plan so submitted, the person taking the action must implement that plan instead of the plan as originally approved.

8. If the Minister believes that it is necessary or desirable for the better protection of the environment to do so, the Minister may request the person taking the action to make specified revisions to a plan approved pursuant to conditions 1, 2, 3, 4 and 5 and to submit the revised plan for the Minister's approval. The person taking the action must comply with any such request. If the Minister approves a revised plan pursuant to this condition, the person taking the action must implement that plan instead of the plan as originally approved.


9. The person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister within 12 months of commencement of construction and within 2 years of commencement of operations. The independent auditor must be approved by the Minister prior to commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.

Definitions

Structures and components: above sea floor infrastructure associated with the development of the Blacktip gas field includes sub sea wellheads, offshore wellhead platform, sub sea gas export pipeline, and condensate and produced water pipelines from the onshore gas processing facility.


Onshore construction: the commencement of any works above the low water mark that may impact on flora and fauna due to disturbance of habitat, including disturbance resulting from plant removal, disturbance of soil, increased noise and/or lighting.

Offshore construction: all activities occurring below the low water mark that relate to the construction and installation of facilities associated with the commissioning of the Blacktip Gas Field and the transport of resources.

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APPENDIX B:

VALUES AND SENSITIVITIES

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Attachments

B1: OPERATIONAL AREA PMST RESULTS

B2: EMBA PMST RESULTS

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1 DESCRIPTION OF THE ENVIRONMENT

This Appendix supplements Section 4 of the Blacktip Offshore Operations EP (000036_DV_PR.HSE.0677.000) and describes the environment within the Operational Area and EMBA. It includes details of the relevant environmental values and sensitivities of the environment as required by Regulations 21(2) and 21(3) of the Commonwealth Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (OPGGS(E) Regulations).

Searches for protected species listed under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) were undertaken for the Operational Area, EMBA and moderate exposure area (refer Attachment B1-B3), using the DCCEEW Protected Matters Search Tool (PMST) for the purpose of identifying matters of national environmental significance listed under the EPBC Act. This document is informed by these searches.

For a description of the Operational Area, EMBA and moderate exposure area refer to the EP.

For figures of Biological Important Areas (BIAs), Habitat Critical for the Survival of species, Australian and State Marine Parks refer to Section 4.4 of the EP.

Socio-economic and cultural values of the Operational Area and EMBA, have been presented in Section 4.6 of the EP.


1.1 Physical Environment

1.1.1 Climate

The climate in the Joseph Bonaparte Gulf (JBG) region is monsoonal with a wet summer and a dry winter. The wet season commences between September and November as the south-east trade winds weaken over northern Australia and land temperatures rise. This results in two or more semi-permanent heat lows forming over central Australia, one over the Kimberley and Great Sandy Desert, and often another just south of the Gulf of Carpentaria.

The early part of the wet season is marked by frequent thunderstorms. As the season progresses, moist ocean air from the north and north-west streams into the lows and several days of heavy rain may occur.

Mean daily maximum temperatures for Port Keats range from about 30°C to 34°C, and minima from 14.5°C to 25°C (BOM, 2008). Annual rainfall is 1,521 mm. Almost all rainfall occurs between November and April (wet season), with the greatest falls being in January and February. The frequency and severity of the thunderstorms produce a large variation in the monthly rainfall. Rainfall during the dry months is sporadic and light.

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1.1.2 Wind Pattern

Figure 1.1 shows the seasonal wind roses for the Climate Forecast System Reanalysis (CFSR) data point closest to the Blacktip P3 Development Well (13° 53' 24" S, 128° 19' 48" E). This point is around 16.7km west of the spill location. The data shows that the wind speeds and directions vary between seasons. During summer (December to February), the winds blow predominantly from the west, and in winter (April to August) the winds blow predominantly from the south-east. During transitional conditions, wind directionality is more variable and wind speeds are generally lower than in the other season. The greatest average wind speeds are observed during winter (6.0 m/s), and peak wind speeds exceeding 20 m/s are most commonly observed in summer and winter.

Winds are predominantly from the north-west between September and February and from the south-east between April and July. Winds are more variable during the transition periods between the two seasons in March and August. Tropical cyclones can develop between November and April resulting in short lived, severe storm events often with strong but variable winds.

During the wet season cyclones are a feature of the region. On average there are 7.7 days per season when cyclones exist in the region which typically occur between December and April bringing gale force winds and severe storms. Cyclones in the region typically form south of the equator in the Timor or Arafura seas when sea temperatures are above 26.5°C and head east.

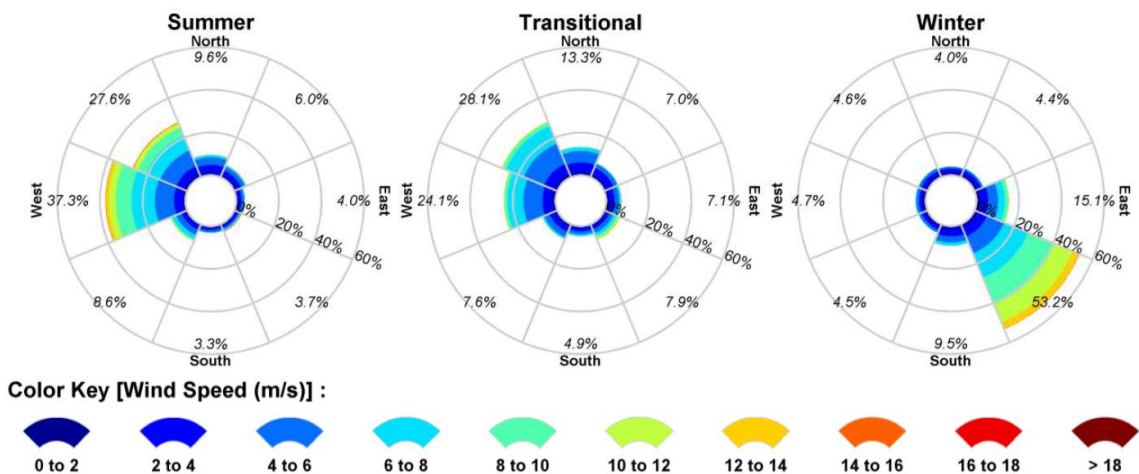



Figure 1.1: Seasonal wind distribution (1997-2006, inclusive) derived from the CFSR database near to the WHP

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1.1.3 Oceanography

Circulation in the JBG is dominated by the large tidal currents. Maximum current speeds at the Blacktip WHP range from 0.2 m/s on neap tides to 0.9 m/s on springs (Metocean Engineers, 2004). The currents rotate in a clockwise direction with the major flood and ebb directions towards the south-east and northwest, respectively. Further towards the shoreline, current speeds increase with tidal range and become directed more longshore. These large currents are responsible for the generation of dune forms on the seabed as noted in Admiralty Charts for the region. Very nearshore currents are influenced by the coastal topography with an anticlockwise gyre forming on the flood tide and a clockwise gyre on the ebb.

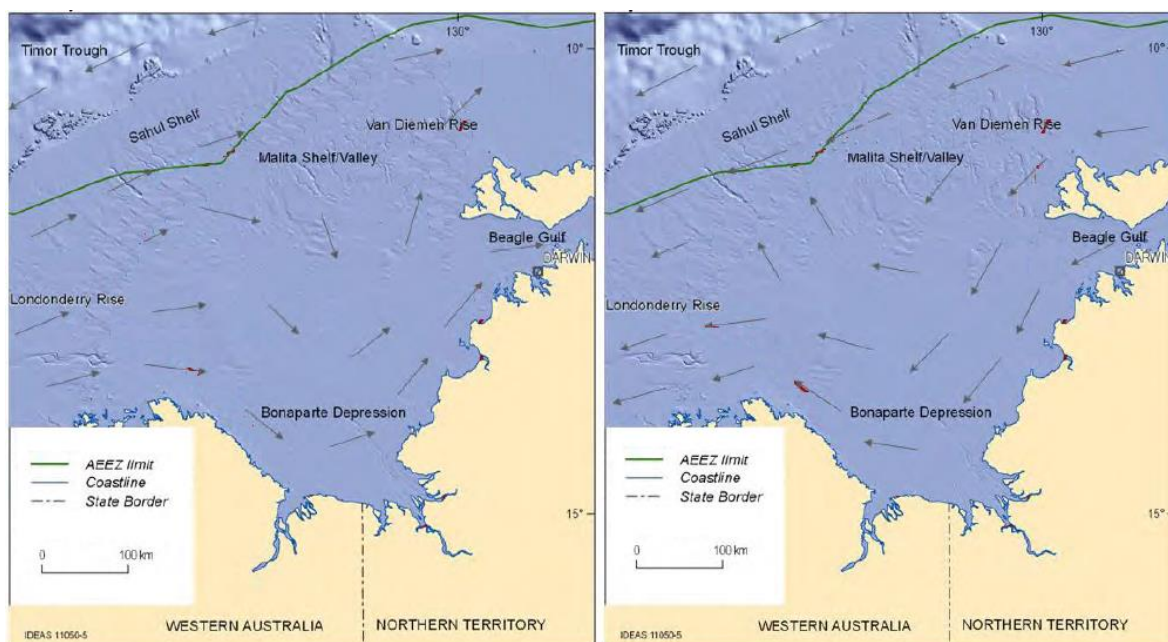



Figure 1.2: Joseph Bonaparte Gulf wind driven currents for monsoon (January, left) and trade wind (July, right) conditions (DoEE, 2013)

Large scale ocean circulations are forced by synoptic scale winds. The south-east trade winds drive a mean westerly current of up to 0.2 m/s in the Timor Sea. In the wet season, currents reverse to flow towards the east. The influence of these large-scale circulations in the JBG is unknown.

The JBG experiences a mixed semidiurnal tide with a very large range in tidal elevations and correspondingly strong tidal currents (Przeslawski *et al.*, 2011). The region is also affected by cyclones at an average annual rate of 0.6 cyclones per year (Woodside, 2004). Cyclone events generate the strongest currents in the Gulf, with current speeds in some areas expected to reach 1.4 m/s; however, the ambient, non-cyclonic wind-driven currents are generally less than 0.1 m/s (Woodside, 2004; Przeslawski *et al.*, 2011). Ambient wind-driven currents are generally directed from west to east during the monsoon season (December to March) and east to west during the trade wind season (April to November), while an offshore westward current persists throughout the year.

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The tides in the JBG propagate in from the Timor Sea and circulate around an Amphidromic Point located offshore from Cape Londonderry in the north-west. The JBG is subject to a tidal range of greater than four meters which is the highest tidal range in Northern Australia. The tides in the JBG are semi diurnal and the tidal wave propagates in from the Timor Sea and circulates around an amphidromic point located offshore from Cape Londonderry in the north-west. Tidal ranges increase shorewards with maximum tidal ranges exceeding 8m along the shoreline between Wyndham and Darwin.

The Holloway Current (Figure 1.3), a relatively narrow boundary current that flows along the north-west shelf of Australia between 100 and 200m depth, also influences the seas in the EMBA.

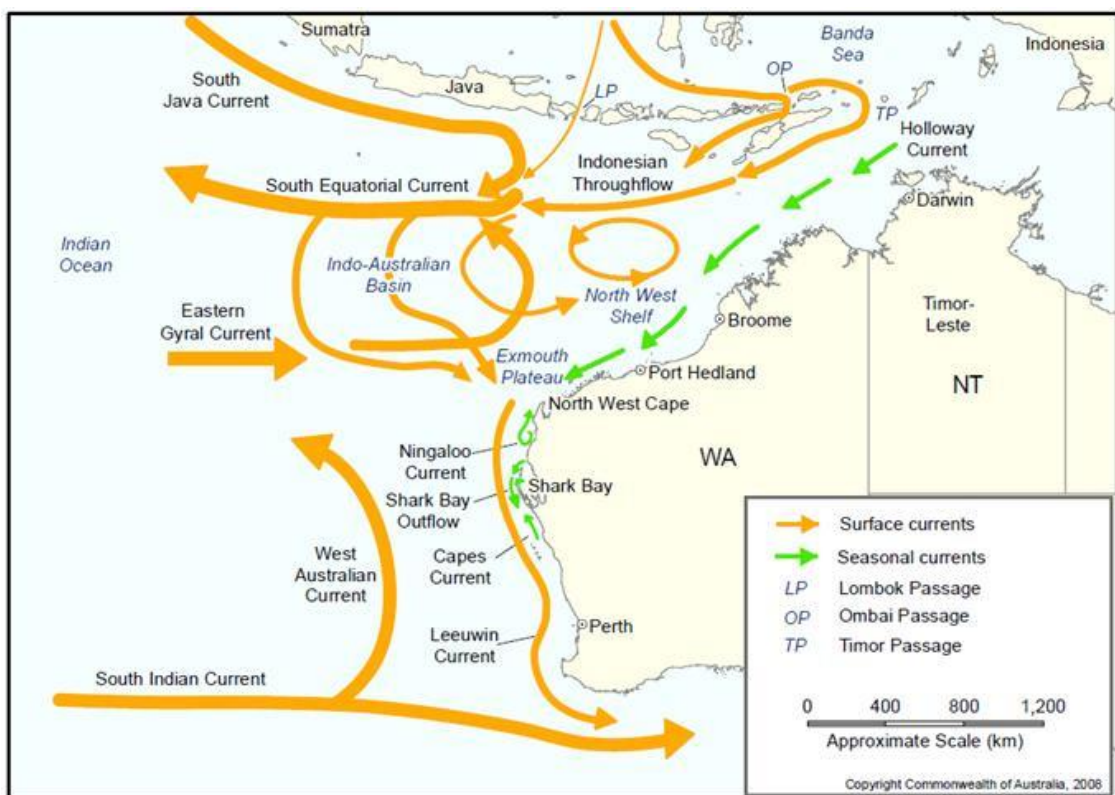



Figure 1.3: Surface currents Northern Territory and Western Australia

The closest tidal station to the Operational Area is Port Keats, which is a secondary port located between the two standard ports of Darwin and Cape Domett. The tides are semidiurnal (two highs and lows each day) with a slight diurnal inequality (difference in heights between successive highs and low). There is a well-defined spring-neap lunar cycle, with spring tides occurring two days after the new and full moon. Table 1.1 provides the standard levels for Port Keats. Highest astronomical tide exceeds 8m and the mean ranges for spring and neap tides are 5.6m and 1.9 m, respectively. Tidal ranges reduce offshore towards the Operational Area.

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High energy tidal currents along much of the region’s coastline stimulate mixing and sediment movement throughout the year, contributing to the highly turbid and relatively productive inshore environment. Terrestrial inputs of freshwater, sediments and detritus are generally compartmentalised within a fairly distinct coastal boundary layer, which is particularly well-developed within the JBG.

Superimposed on the astronomical tide are ‘meteorological’ tides resulting from changes in atmospheric pressure and strong onshore or offshore winds. Storm surges during cyclones, in particular, can appreciably raise sea levels above the predicted astronomical tidal height and inundate low lying areas.


Table 1.1: Standard tide levels for Port Keats (AHS, 2003)

Port Keats	Level (m)
Highest Astronomic Tide	8.2
Mean High Water Springs	7.2
Mean High Water Neaps	5.3
Mean Sea Level	4.4
Mean Low Water Neaps	3.4
Mean Low Water Springs	1.6

During the winter season, the ambient wave climate at the Operational Area will be composed of waves generated from the prevailing south and south-easterly trade winds. Wave generation will be fetch limited and mean monthly significant wave heights are predicted to be fairly constant, ranging between 0.8m and 1.0m with mean period of between 8 to 9 seconds.

During the summer season, the Operational Area is exposed to both sea and swell generated from the prevailing north-westerly monsoon winds blowing across the Timor Sea. As such, the predominant swell direction is from the northwest with mean monthly periods of between 7 to 10 seconds. Monthly mean significant wave heights range from a minimum of 0.45m in September to a maximum of 1.6m during February. Shorter period swells (6 to 10 seconds) may result from tropical cyclones, winter easterlies over the Arafura Sea and the eastern portions of the Timor Sea, and summer westerlies over the western portions of the Timor Sea. Extreme waves are generated by cyclones during the summer season.

Mean monthly surface temperatures in the vicinity of the Operational Area are expected to be approximately 25°C in August and 30°C. Due to the large tidal range and high currents, the water column is expected to be well mixed all year round with no temperature stratification during the winter months. During heavy rainfall, there may be some salinity stratification in the south of the JBG. Water temperatures within the EMBA are expected to be broadly within the ranges of those observed in the Operational Area.

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1.1.4 Geomorphology and Geology

The Operational Area is located in the Petrel Sub-Basin, in the Southern Bonaparte Basin, which contains a thick sequence of Palaeozoic sediments with a thin cover of Mesozoic rocks.

Five significant discoveries have been made in the Southern Bonaparte Basin offshore. The Blacktip, Tern and Petrel Fields comprise gas-bearing Permian—Late Carboniferous sandstones; and the Turtle and Barnett Fields consist of stacked oil-bearing sandstones of Permian-Carboniferous age (Figure 1.4). The fields are charged from mature early Carboniferous and Permian source kitchens. Basin modelling indicated that hydrocarbons expulsion took place from late Triassic to late Cretaceous.

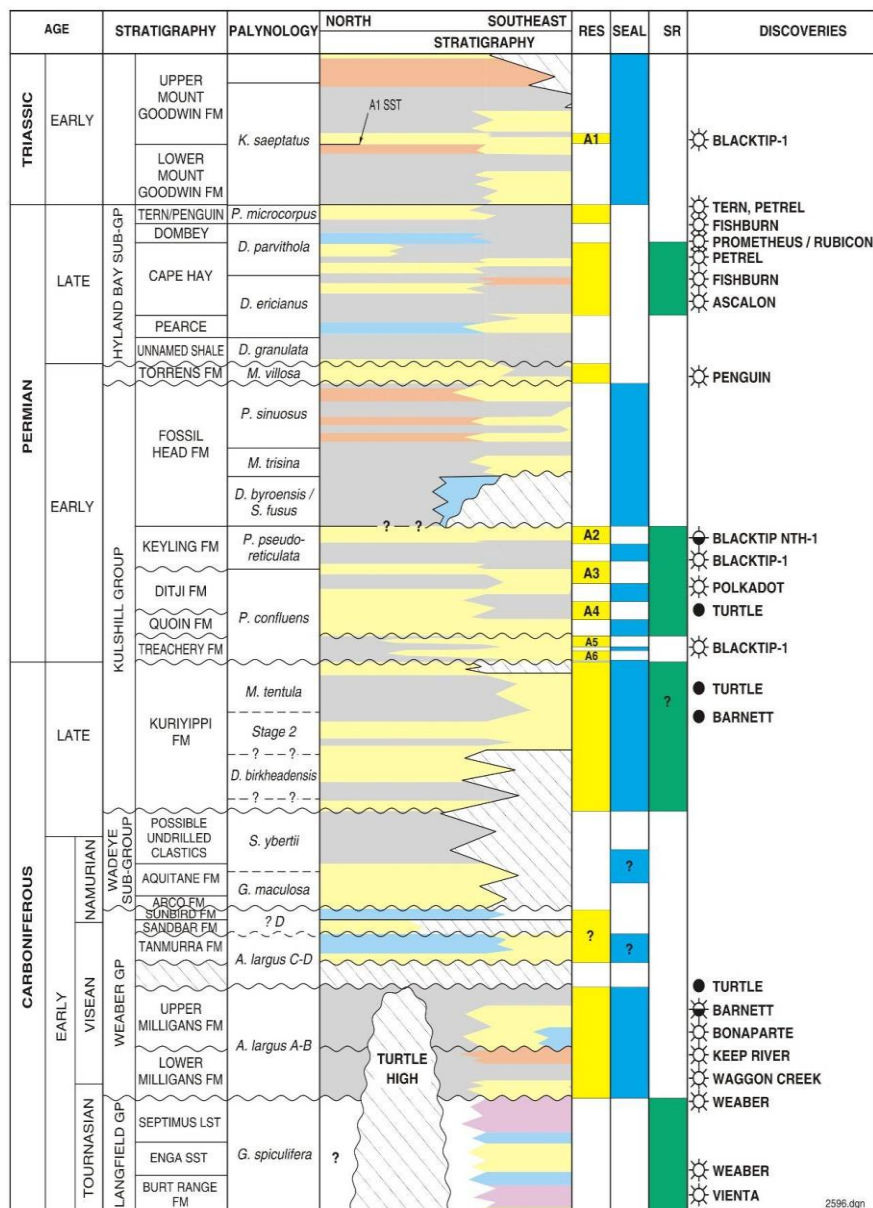



Figure 1.4: Southern Bonaparte Basin stratigraphy

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1.2 Key Marine Habitats

1.2.1 Seabed and Sedimentation

The top layer of sediment in the JBG from approximately 3 to 35km offshore are expected to be greater than 1m in depth and consists of sands and gravels with variable proportions of clay. This material is primarily alluvium, derived from sedimentary sandstones and basal conglomerate. Sonar images indicate some minor palaeochannels in this area containing mega ripple or sand waves. The sediments are generally unconsolidated coarse sand, fine gravel interspersed with areas of flat and featureless seabed containing very soft to firm gravelly clays (Woodside, 2004).

The Operational Area is located in the upper (outer) reaches of the JBG, in an area of relatively flat featureless seabed. Sediments are predominately very soft, grey-green, gravelly sand clays (Woodside, 2004).

The EMBA overlaps with the carbonate bank and terrace system of the Sahul Shelf KEF (refer to Section 4 of the EP). The nearest feature of the carbonate bank and terrace system of the Sahul Shelf KEF is 20km to the south east of the Operational Area. The Sahul banks are a chain of complex submerged algal banks on the middle and outer continental shelf (Heap & Harris, 2008). The system is of regional significance due to enhanced biodiversity and productivity compared with surrounding areas. The Sahul banks feature hard substrate suitable for sessile species in an otherwise soft sediment environment. Banks within the KEF rise steeply from 80m to 30m water depth in some areas, with the elevated hard substrates providing suitable surfaces for organisms to adhere to, and ideal sites for exposure to passing nutrients and light (in areas <45m water depth).


Sessile benthic invertebrate communities including hard and soft corals, sponges, fans, whips and bryozoans are found within the KEF (Nichol *et al.*, 2013, NERP MBH, 2014). The banks are considered a biodiversity hotspot for sponges with more species and different communities than the surrounding seafloor (NERP MBH, 2014).

Further information on the Sahul Shelf KEF and other relevant KEFs within the EMBA are presented in Section 1.4.3.

1.2.2 Open Water Benthic Habitats

The dominant offshore features in the lower JBG are the elongated parallel sand shoals extending out from the Victoria River and the extensive sand shoals on either side of the entrances to the Cambridge Gulf, known as the King Shoals and Medusa Banks. Depth increases gradually out to the continental margin; however, the continental shelf is dissected by numerous paleo-channels. Shallow shoals, small seamounts and occasionally a few islands and tidally exposed reefs occur along the edge of the continental shelf.

The Operational Area is within areas of infaunal plains identified by flat, soft substrate with occasional rocky outcrops, scattered epifauna, biota dominated by infauna (Figure 1.5). Previous surveys at the Blacktip WHP have not identified any sensitive seabed habitats (Woodside, 2004).

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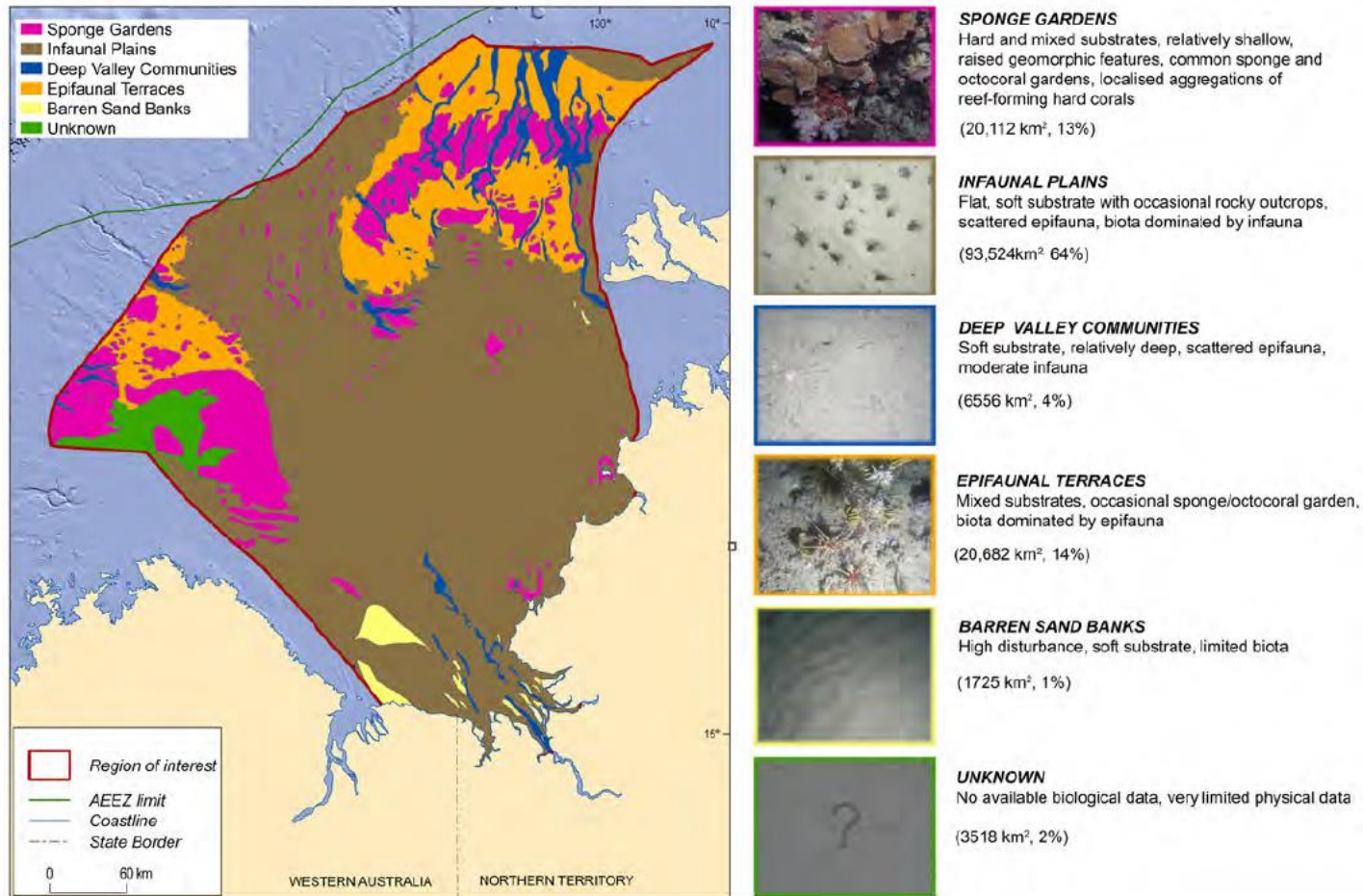



Figure 1.5: Distribution of habitats and biological communities in the JBG (Przeslawski & Nichol, 2012)

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1.2.3 Intertidal Shorelines

1.2.3.1 Joseph Bonaparte Gulf

The lower part of JBG, to the south and east of the Operational Area is relatively shallow with a coastline dominated by sand banks, extensive mudflats, mangrove systems, tidal creeks and the estuaries of the Victoria River system and Cambridge Gulf (Figure 1.6).

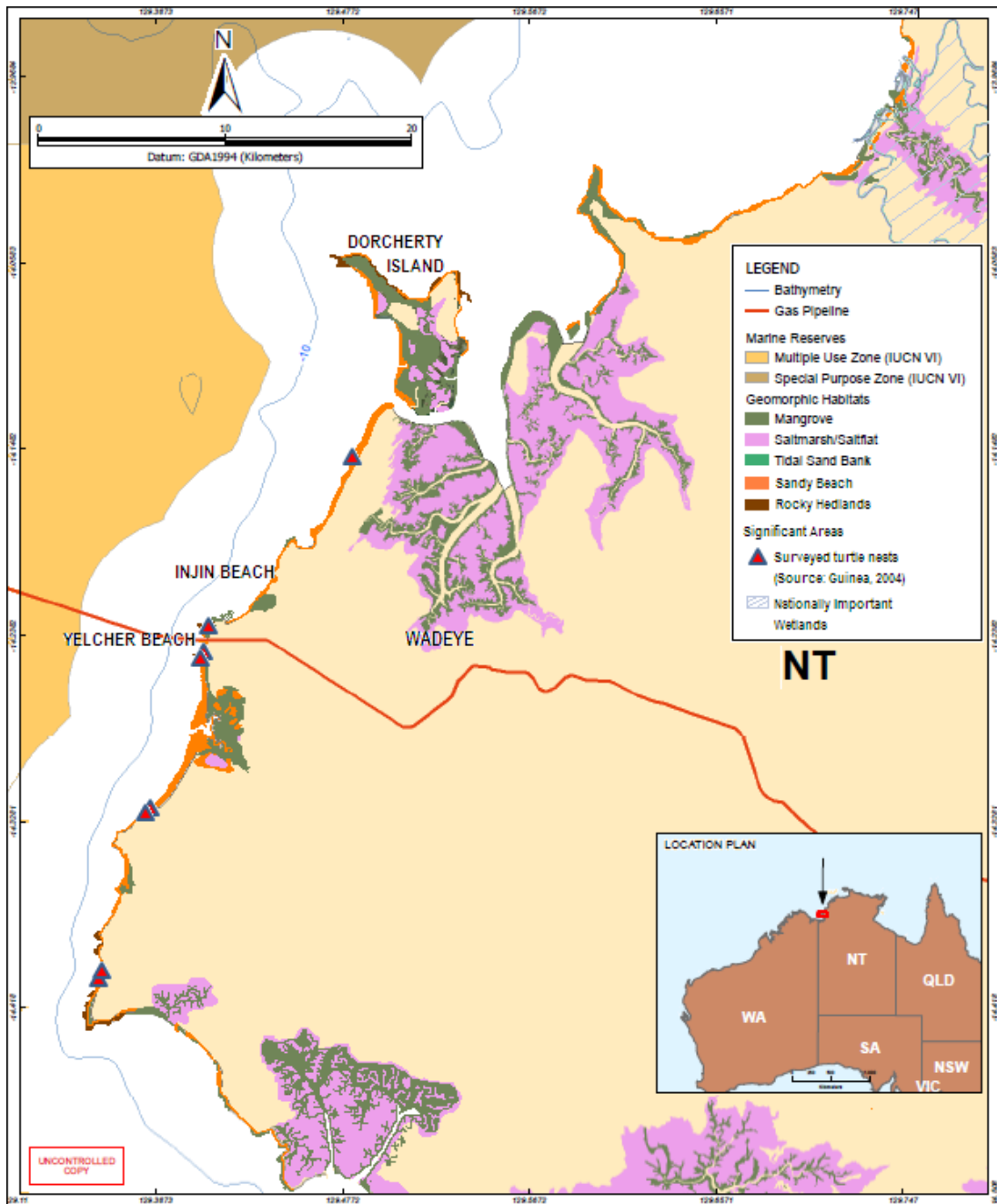



Figure 1.6: Shoreline to the south and east of the Operational Area (Woodside, 2004)

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1.2.3.2 Kimberly Coastline

Around 5,102km of the Kimberly coastline was surveyed, analysed and mapped after the Montara spill to provide spatial and quantitative characterisation of vulnerable coastal ecological features. Mangroves, the most vulnerable coastal habitat present, grow along 63% of the surveyed shoreline, covering over 3,200km (Table 1.2). Saltmarsh occurs on more than 1,200km of coastline or 23.8% survey region and the coastline is rocky for 2,763km of shoreline (DPAW, 2014).

Marine megafauna sightings were also common along almost the entire shoreline during the aerial survey. The greatest concentrations of megafauna (~60% observed) were recorded in the area from Cape Londonderry to Admiralty Gulf. The majority (67%) of megafauna sightings were of marine turtles (DPAW, 2014).

Table 1.2: Summary of coastal characteristics from Darwin (NT) to Broome (WA). Category percentages do not add to 100 as categories overlap in some locations (DPAW, 2014)

	Feature	km	% of shoreline
Physical characteristics	Rocky	2,762.8	54.2
	Beach	1,663.7	32.6
	Flat	2,185.5	42.8
	Dune	1,536.9	30.1
	Other wetland	15.9	0.3
Vegetated habitat type	Mangrove	3,214.1	63.0
	Saltmarsh	1,215.4	23.8
	Fringing coral	350.9	6.9
	Seagrass verge	11.5	0.2
	Coastal woodland	3,886.6	76.2
State of erosion and deposition	Deposition	548.8	10.8
	Erosion	544.7	10.7
	Stable	3,576.7	70.1
Tidal wetland	Mangrove	3,214.1	63.0
	Saltmarsh	1,215.4	23.8
	Sand and mudflats	1,379.2	27.0
	Salt flat	1,396.8	27.4
Other	Human modified	169.8	3.3
	Water reach	514.2	10.1

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1.2.4 Plankton

Plankton is divided into two categories: phytoplankton (microscopic plants) and zooplankton (animal larvae). Phytoplanktonic algae support the entire primary production of the oceans and range in size from 0.2 to 200 µm. Zooplankton are small, mostly microscopic animals that drift with the ocean currents, and it has been estimated that 80% of the zooplankton in waters off the Australian continental shelf and shelf margin are the larval stages of fauna that normally live on the seabed. A common feature of plankton populations is the high degree of temporal and spatial variability. Phytoplankton, in tropical regions, had marked seasonal cycles, with higher concentrations occurring during the winter months (June-August) and low in summer months (December-March) (Schroeder *et al.*, 2009). Zooplankton that rely on them for food are subject to similar seasonality. Spatial distribution of plankton is patchy and uneven, both vertically and horizontally.

Phytoplankton species rapidly multiply in response to bursts of nutrient availability and are subsequently consumed by zooplankton that in turn are consumed by small pelagic fish and some whales. The spawn of commercial fish species (that comprise part of the zooplankton community) may be present in and around the Operational Area.

1.3 Threatened and Migratory Species and ecological communities

1.3.1 Marine Mammals

Threatened and migratory marine mammal species within the Operational Area and EMBA are listed and presented in Section 4.4 of the EP, along with identified BIAs.

Details on the species identified by the EPBC Act PMSTs for the Operational Area and EMBA are included in the sections below.


1.3.1.1 Sei Whale

Sei whales (*Balaenoptera borealis*) have been infrequently recorded in Australian waters (DCCEEW, 2022a). Sei whales are considered a cosmopolitan species, ranging from polar to tropical waters, but tend to be found more offshore than other species of large whales. The proportion of the global population in Australian waters is unknown as there are no estimates for sei whales in Australia (DCCEEW, 2022a). It is likely that threats affecting the global population of sei whales would also affect Australian populations (Horwood, 1987).

The National Conservation Values Atlas records no BIAs for this species (DCCEEW, 2020b). It is possible that individual sei whales may be present in low numbers within the northern part of the EMBA. Individuals are unlikely to be present in the Operational Area given the depths (20 to 50 m) and distance from known aggregation areas.

1.3.1.2 Blue Whale

Blue whale (*Balaenoptera musculus*) sightings in Australian waters are widespread, and it is likely that the whales occur around the continent at various times of the year. However, much of the Australian continental shelf and coastal waters have no particular significance to the whales and are used only for migration and opportunistic feeding.

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In Australia there are two recognised subspecies of blue whale; the Antarctic (*Balaenoptera musculus intermedia*) and the pygmy blue whale (*B.m. breviceauda*). Blue whales have a worldwide distribution and move between low altitudes for breeding and high altitudes for feeding. Pygmy blue whales are thought to migrate from Australian feeding grounds to breed in grounds over Indonesia, whilst the Antarctic blue whale winter migration is south to lower latitudes of the Pacific and Indian ocean (DCCEEW, 2022b). Therefore, the Pygmy blue whale is more likely to be encountered in the JBG.

Tracking of pygmy blue whales suggest that they migrate north from the Perth Canyon (feeding area) in March / April, reaching Indonesia by June where they remain until at least September. Southern migration occurs December as the animals migrate back to the Perth Canyon arriving in March / April. Migration is likely to follow the deep oceanic routes and a tagging study by Double *et al* (2014) identified that the shallowest waters occupied was approximately 1,300m.

Given a BIA has been identified within the EMBA it is likely that pygmy blue whales transit through the EMBA. Individuals are unlikely to be present in the Operational Area given the depths (20 to 50 m) and distance from known aggregation areas.

1.3.1.3 Fin Whale


Fin whale (*Balaenoptera physalus*) distribution in Australian waters is known primarily from stranding events and whaling records. Fin whales have been observed in South Australian waters between November and May but the presence in NT water is unknown (DCCEEW, 2022c).

Reliable estimates of fin whale population size in Australia are not currently possible. The proportion of time that this species spends at the surface varies considerably depending on their behaviour and local ecology (e.g. whether they are traveling or foraging; depth at which prey occurs): thus, extrapolation of accurate population estimates are difficult. There are no known mating or calving areas in Australian waters (DCCEEW, 2022c).

There are no known mating or calving areas in Australian waters and no BIAs for the fin whale are currently identified. However, given their known distribution and movements, it is possible that individual fin whales may pass through the EMBA in low numbers. Individuals are unlikely to be present in the Operational Area given the depths (20 to 50 m) and distance from known aggregation areas

1.3.1.4 Humpback Whale

The humpback whale (*Megaptera novaeangliae*) is the most commonly sighted whale in north WA waters. Major breeding areas have been identified for the western Australian population in the Kimberley region and particularly between Lacepede Islands (16.8° S) and Camden Sound (15.38° S) (Jenner *et al.*, 2001). Camden sound appears to be the northern most limit for the majority of west coast whales and is considered to be an important breeding area (Jenner *et al.* 2001). Double and colleagues (2010) found that satellite tagged whales in the area of Camden sound tended to move in an inconsistent direction, which suggests this area is used for breeding. The species migrates annually from feeding grounds in Antarctic waters during the summer months to their breeding and calving grounds along the west coast (DCCEEW, 2022d).

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Studies conducted by Jenner *et al.* (2001) indicate that during the southern migration most humpback whales, particularly cow/calf pairs, stay closer to the coast than during the northern migration. On their southern migration, cow-calf pairs frequently rest in aggregation areas along the Western Australian coastline. Important resting areas during the southern migration include Shark Bay, Exmouth Gulf, and the southern Kimberley region (DCCEEW, 2022d).

A migration BIA is within the EMBA, 750km south-west of the Operational Area. It is possible that individual whales may pass through the EMBA in low numbers. Individuals are unlikely to be present in the Operational Area given the distance from known migration routes.

1.3.1.5 Bryde's Whale

Bryde's whales (*Balaenoptera edeni*) migrate seasonally in temperate to tropical waters, in depths ranging from 200m to 1,000m although they more commonly migrate at depths nearer to 200m (DCCEEW, 2022e). Bryde's whales have been sighted in all areas of Australia except NT, with the majority recorded in South Australia, however no specific breeding or feeding grounds have been found within Australia (DCCEEW, 2022e).

It is possible the coastal form of Bryde's whales may also occasionally transit through the EMBA; however, they are not expected to be present in significant numbers. Individuals are unlikely to be present in the Operational Area given the distance from known aggregation areas.

1.3.1.6 Killer Whale


Killer whales (*Orcinus orca*) prefer deep, cold waters (Bannister *et al.*, 1996) and have been recorded along continental slopes (DCCEEW, 2022f). The species is found throughout the world's oceans and has been recorded in all areas of Australia, however no important breeding, nesting or resting grounds have been identified in Australia (DCCEEW, 2022f).

No BIAs have been identified for this species within the EMBA, although the species may be present in low numbers. Individuals are unlikely to be present in the Operational Area given the distance from known aggregation areas.

1.3.1.7 Sperm Whale

Sperm whales (*Pyser macrocephalus*) typically occur in WA along the southern coastline between Cape Leeuwin and Esperance (Bannister *et al.* 1996). Sperm whales are distributed worldwide in deep waters (greater than 400 m) off continental shelves and sometimes near shelf edges, averaging 20 to 30 nautical miles offshore (Hooker *et al.* 1999, Pirota *et al.*, 2011). The sperm whale is known to migrate northwards in winter and southwards in summer, however, detailed information on the distribution of sperm whales is not available for the timing of migrations.

No BIAs have been identified for this species within the EMBA, although the species may be present in low numbers. Individuals are unlikely to be present in the Operational Area given the distance from known aggregation areas.

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1.3.1.8 Australian humpback dolphin

The Australian Humpback Dolphin was previously included with the Indo-Pacific humpback dolphin (*Sousa chinensis*), however *Sousa sahalensis* was recognised as a species in 2014 (DCCEEW2022g). *Sousa chinensis* is now used for humpback dolphins in the eastern Indian and western Pacific Oceans and *S. sahalensis* is used for humpback dolphins in the waters of the Sahul Shelf from northern Australia to southern New Guinea. In Australia, humpback dolphins (*Sousa sahalensis*) are known to occur along the northern coastline, extending to Shark Bay on the west coast, and the Queensland/NSW border region on the east coast (34° S). A recent helicopter survey along the eastern half of the NT found Australian humpback dolphins were sparsely distributed across this region (DCCEEW, 2022g). Australian humpback dolphins inhabit shallow coastal, estuarine, and occasionally riverine habitats, in tropical and subtropical regions. Most studies to date indicate that Australian humpback dolphins occur mostly close to the coast (within 20km from land) and in relatively sheltered offshore waters near reefs or islands, but they have been seen 55km offshore in shallow water (DCCEEW, 2022g).

Given their preference for shallow coastal habitats, the species is expected to transit the shallow water sections of the EMBA only (e.g. coastlines). The species may occasionally transit the Operational Area.


1.3.1.9 Spotted bottlenose dolphin

Spotted bottlenose dolphins (*Tursiops aduncus*) occur in four main regions around Australia, being the eastern Indian ocean, the Tasman sea, the Coral sea and the Arafura/Timor Sea (DCCEEW, 2022h). The species are generally distributed in the tropical waters of the North-West Marine Region, along the Pilbara and Kimberley coasts and inhabiting shallow coastal waters along the continental shelf (DCCEEW, 2022h).

Given the species' use of relatively deeper waters and the potential for long-range migratory movements, it is likely this species will occasionally transit the Operational Area and EMBA.

1.3.1.10 Dugong

Dugongs are not expected to be common inhabitants of the JBG. The dugong (*Dugong dugon*) is listed as vulnerable under the IUCN. Dugongs are patchily distributed throughout tropical and subtropical waters of the Indian and Pacific Oceans, with major concentrations of dugongs coinciding with sizeable seagrass beds, on which they feed. The lack of seagrass in JBG is expected to limit the distribution of dugongs in the region. Specific areas supporting dugongs in the Northern Territory include: the northern coast (Daly River to Millingimbi, including Melville Island and Vernon Islands and the Darwin region); and the Gulf of Carpentaria, including the Sir Edward Pellew Group of Islands, the mouth of the Limmen Bight River, and the waters between Blue Mud Bay and Groote Eylandt. Specific areas supporting dugongs along the Queensland coast of the Gulf of Carpentaria include: the Wellesley Islands (Mornington and Bentick Islands), the mouth of the Norman River, and Albatross Bay. Within the Gulf of Carpentaria, the Sir Edward Pellew and Wellesley Islands are the most important dugong habitats (DCCEEW, 2022i).

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Observations from aerial surveys in the NT focused on dugong populations in the Gulf of Carpentaria and in the northern parts of the NT, such as the Tiwi Islands and Coburg Peninsula. No surveys have been undertaken in the JBG. However, seagrass habitat is limited (Woodside, 2004) and the JBG is therefore not expected to provide a significant habitat for dugong.

1.3.1.11 Australian Snubfin Dolphin

Australian snubfin dolphins (*Orcaella heinsohni*) occur in the offshore waters of northern Australia, ranging from Broome to Brisbane River (Parra et al. 2002a). The species has been recorded up to 23km offshore. Sightings indicate that Australian snubfin dolphins occur mostly in protected shallow coast waters, and near river and creek mouths (Parra, 2006; Parra & Corkeron, 2001; Parra et al., 2002a).

Given their preference for shallow coastal habitats, the species is expected to transit the shallow water sections of the EMBA only (e.g. coastlines) and are unlikely to be present in the Operational area in significant numbers.

1.3.2 Marine Reptiles

Threatened and migratory marine reptile species within the Operational Area and EMBA are listed in Section 4.4 of the EP, along with identified BIAs.

Details on the species identified by the EPBC Act PMST for the Operational Area and EMBA are included in the sections below.

1.3.2.1 Green turtle


Green turtles (*Chelonia mydas*) are generally found in tropical and subtropical waters at around 20°C although the species can be present in temperate waters. Green turtles are known to nest, forage and migrate across tropical northern Australia, with significant nesting grounds including Dampier Archipelago, Ashmore Reef and the Lacepede Islands (DCCEEW, 2022j).

Green turtles are common in the North-west Marine Region, with the JBG AMP identified as an important foraging area for the species (DCCEEW, 2022j). Additionally, the Operational Area overlaps with the green turtle foraging BIA, and the EMBA overlaps several BIAs and Habitat Critical to the Survival of Marine Turtles (refer to Section 4.4 of the EP). Green turtles are likely to forage within the EMBA and may forage out to the Operational Area, albeit in low numbers.

1.3.2.2 Flatback Turtle

A significant flatback turtle nesting area occurs on the north side of Cape Domett, WA (DCCEEW, 2022k) and turtle nesting is also reported on Pelican Island and Lacrosse Island, 75km to the south of the Operational Area. In western Northern Territory, some nesting occurs year-round though nesting density reaches a peak in July. This dry season peak of nesting activity may be adaptive to protect the eggs from the high lethal sand temperatures that occur in the wet season (DCCEEW, 2022k).

A survey was undertaken to address the lack of data on turtle activity between Cape Hay to Pearce Point (including the shoreline of the eastern-most extent of the EMBA).

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The complete findings of this study are contained in the Blacktip Environmental Impact Statement (EIS) (Woodside, 2004). The results indicated that there are low levels of flatback turtle activity in the area of Northern Yelcherr Beach and Injin Beach to the north. Two flatback nests and a track of a flatback that came ashore but did not lay at Northern Yelcherr Beach were found during the survey. This suggests that there could be some tens of nests laid on this beach per year by possibly less than 20 individuals. Immediately south, on Yelcherr Beach, there was no sign of sea turtle nesting. Injin Beach, Northern Yelcherr Beach and Yelcherr Beach overlap the eastern-most extent of the EMBA.

The coastline from Cape Hay to Pearce Point (within the eastern-most extent of the EMBA) includes many sandy beaches, and turtles have been reported to utilise all of these beaches for nesting (LDM, 1994).

Turtle monitoring was undertaken during the construction of the Blacktip facilities in 2009. This confirmed a maximum of 12 nests being laid on Yelcherr Beach per season.


Other nesting areas include Cape Domett, Lacrosse Island and Pelican Island to the south-most extent of the EMBA, which appears to be one of the largest known nesting populations of this species, with an estimated yearly population in the order of several thousand turtles (Whiting *et al.*, 2008).

Flatback turtles nest at Cape Domett throughout the year, with peak occurring August and September (Whiting *et al.*, 2008). Flatback turtles are likely to forage within the EMBA. The species are unlikely to be present in the Operational Area in significant numbers. Studies define suitable internesting habitat as areas of water depths less than 16 m, which are typically within 5 to 10km of coastlines (Whitlock *et al.*, 2016). Water depths in the Operational Area suggest they are unlikely to comprise important habitat for the turtles during any life history phase.

1.3.2.3 Hawksbill Turtle

Hawksbill turtles (*Eretmochelys imbricate*) have a large migratory pattern and are found in both tropical and temperate waters where they are known to forage in coral and rocky reef habitats. They feed on plankton in the open ocean and then on sponges, hydroids, cephalopods, gastropods, jellyfish, seagrass and algae as an adult (DCCEEW, 2022I). The North-west Marine Region supports one of the largest nesting populations of hawksbill turtles in the world, with significant rookeries occurring at Varanus and Rosemary Islands, outside the EMBA (Pendoley, 2005). The closest nesting grounds to the EMBA is located to the approximately 350km north-east at Coburg Peninsula. Although hawksbill turtles are known to nest any time of the year, the peak nesting period in Northern Australia occurs between July and October (DCCEEW, 2022I).

Hawksbills are likely to forage within the EMBA and may forage to the Operational Area, albeit in low numbers.

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1.3.2.4 Loggerhead Turtle

Loggerhead turtles (*Caretta caretta*) have a global distribution throughout tropical, sub-tropical and temperate waters (Marquez, 1990). In Australia, they generally occur around coral and rocky reefs, seagrass beds and muddy bays throughout Eastern, Northern and Western Australia (DCCEEW, 2022m). Known nesting areas in WA extend from Shark Bay to the North West Cape, with the closest nesting ground to the EMBA located at the Dampier Archipelago (DCCEEW, 2022m), southwest of the EMBA. Beagle Bay south of the Dampier Peninsula is reported as a important nesting area by the Nyul – Nyul Traditional Owners.

Loggerhead turtles show fidelity to both their foraging and breeding areas and can migrate over 2,600km between the two (DCCEEW, 2022m). The WA stock forages from Shark Bay through to Arnhem Land in the NT (DCCEEW, 2022m). Loggerhead turtles are known to forage around the pinnacles of the JBG and the carbonate bank and terrace of the Sahul Shelf KEF (which overlaps the EMBA). Beagle Bay


The EMBA overlaps with a foraging BIA for the loggerhead turtle, therefore loggerhead turtles are likely to occur within the EMBA. The species may forage to the Operational Area, albeit in low numbers.

1.3.2.5 Leatherback turtle

The leatherback turtle (*Dermochelys coriacea*) has the widest distribution of any marine turtle species, and can be found in tropical, subtropical and temperate waters throughout the world (Marquez, 1990). Leatherback turtles are relatively rare in northern Australian waters. The species is more commonly observed in southern coastal waters around Australia.

No major breeding sites of leatherback turtles have been recorded in Australia (Limpus, 2009); however, scattered nesting occurs in the Northern Territory, along the coast of Arnhem Land. For example, low numbers of nesting females have been recorded at Cobourg Peninsula in north-west Arnhem Land (Chatto & Baker, 2008), with breeding occurring mostly during December and January.

Nesting occurs on tropical beaches and subtropical beaches (Marquez 1990) but no major centres of nesting activity have been recorded in Australia, although scattered isolated nesting (1-3 nests per annum) occurs in southern Queensland and Northern Territory (Limpus & McLachlin, 1994). However, leatherback turtles are the most pelagic of all marine turtles, and make long migrations between foraging areas and nesting beaches (DCCEEW, 2022n).

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1.3.2.6 Olive ridley turtle

The olive ridley turtle (*Lepidochelys olivacea*) is the smallest Australian marine turtle and is the most numerous of all marine turtles. Nesting aggregations occur worldwide, although no large rookeries have been identified in WA and no major breeding areas have been recorded in Australia (DCCEEW, 2022o). The species forages on shallow benthic habitats and is commonly found in soft-bottomed habitats around the northern parts of Australia (DCCEEW, 2022o). Nesting occurs all year round in Northern Australia and important foraging areas are found within the along the JBG shoreline (DCCEEW, 2022o). The Operational Area overlaps with the olive ridley turtle foraging BIA (Figure 4.6 of the EP).

Olive ridley turtles may forage within the EMBA, as the waters present a potential feeding area. The species are unlikely to be present in the Operational Area in significant numbers. Studies define suitable internesting habitat as areas of water depths less than 16 m, which are typically within 5 to 10km of coastlines (Whitlock et al., 2016). Water depths in the Operational Area (typically 20 - 40m depth) suggest they are unlikely to comprise important habitat for the turtles during any life history phase.

1.3.2.7 Salt-water crocodile


The salt-water crocodile (*Crocodylus porosus*) is distributed throughout northern Australian coastal waters and floodplains, lower reaches of rivers and in swamps and marshes and can be found up to 150km from the coast (Webb et al., 1987). The species is found in most major river systems within the Kimberley region in WA, including the Ord, Durack Pentecost and Forrest rivers which enter the JBG via the Cambridge Gulf estuary (DCCEEW, 2022p). This species nests in elevated isolated freshwater swamps (DCCEEW, 2022p).

It is unlikely that saltwater crocodile will be present in the EMBA or Operational Area, given their preference for river system habitats.

1.3.2.8 Mitchell's water monitor

The Mitchell's water monitor (*Varanus mitchelli*) is listed as Critically Endangered under the EPBC Act from December 2023 due to recent significant population declines (DCCEEW 2023a).

Mitchell's water monitor inhabits freshwater and saline wetlands that range from seasonal gorges in upper catchments to large rivers and coastal floodplains. It is recorded from rivers, creeks, riffle zones, gorges, springs, lagoons, swamps, mangroves, and foreshores (DCCEEW 2023a). They are found within the wet-dry tropics of northern Australia, spanning from the Yampi Sound Training Area near Derby, Western Australia, through the Kimberley and Top End regions of the Northern Territory, and reaching as far as Boodjamulla National Park in northwest Queensland (DCCEEW 2023a). Despite extensive surveys, it has not been detected on any offshore islands in the Kimberley region or the Wessel, English, and Tiwi Island groups.

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As this species does not inhabit offshore environments, it is unlikely that the Mitchell’s water monitor will be present within the Operational Area. However, the monitor may occur within coastal habitats in the EMBA.

1.3.2.9 Mertens water monitor

The Mertens water monitor (*Varanus mertensi*) was categorised as Endangered under the EPBC Act in December 2023 due to a severe and sustained population reduction over the last three generations (DCCEEW 2023b).

The Mertens water monitor is a highly aquatic lizard that displays home range behaviours, seldom venturing more than 5-10 m from the edge of the water body (DCCEEW 2023b).

This species occurs sporadically across tropical northern Australian coastlines and nearshore islands, from Yampi Sound Training Area to the wet tropics of Far North Queensland (DCCEEW 2023b). Extensive island surveys have detected the Mertens water monitor on a number of islands along the Western Australia and Northern Territory, including Augustus, Bathurst and Koolan Islands.

As the Mertens water monitor prefers primarily coastal and island habitats, it is unlikely that this species will be present within the Operational Area. However, this species known habitat is located within the EMBA, and therefore their presence is likely.


1.3.2.10 Short-nosed seasnake

The short-nosed seasnake is endemic to Western Australia. The species prefers to inhabit reef flats or shallow waters along the outer reef edge in water depths to 10m (Cogger 2000). Individuals have been observed in daylight hours, resting beneath small coral overhangs or coral heads in water 1 – 2m deep (McCosker, 1975). Guinea and Whiting (2005) reported that some short-nosed seasnakes may move up to 50m away from the reef flat.

The short-nosed seasnake has been recorded from the Exmouth Gulf, Western Australia (Storr *et al.*, 2002) to the reefs of the Sahul Shelf, which lie in the eastern Indian Ocean. As there are no reefs or shallow waters in the Operational Area it is extremely unlikely the short nosed seasnake would be present. However, seasnakes may occur within the EMBA in shallow waters and reefs.

1.3.2.11 Dusky Sea Snake

The dusky sea snake (*Aipysurus fuscus*) is listed as endangered under the EPBC Act. It occurs in shallow waters (less than 20 m in depth) in complex, hard coral reef and shoal ecosystems that have an extensive cover of healthy coral (DCCEEW, 2024a). The Scott Reef complex supports the largest known population of the dusky sea snake (DCCEEW, 2024) Historical recordings have occurred at Heywood Shoals, Ashmore Reef, Hibernia Reef and, Cartier Island and Seringapatam Reef (DCCEEW, 2024a) (all outside of the EMBA).

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1.3.3 Fish, Sharks and Rays

Threatened and migratory fish, shark and ray species within the Operational Area and EMBA are listed in Section 4.4 of the EP, along with identified BIAs.

Details on the species identified by the EPBC Act PMST for the Operational Area and EMBA are included in the sections below.

1.3.3.1 Whale Shark

The whale shark (*Rhincodon typus*) are normally oceanic and cosmopolitan in their distribution. Whale sharks are widely distributed in tropical to warm temperate oceanic and coastal waters. Their known aggregation sites in Northern Australia are at Ningaloo Reef, outside the EMBA. The species filter feeds in areas of upwelling, with surface waters between 25-35 °C, preferably with upwelling waters of 17 °C or less (Norman, 1999). Offshore sightings are not uncommon; however, they are more commonly observed in coastal waters sitting high in the water column. Wilson et al. (2006) found that whale sharks can travel up to 1,500km northeast after departing Ningaloo Reef.

It is unlikely that the species will be present in the Operational Area or EMBA in significant numbers.

1.3.3.2 Great White Shark


The great white shark (*Carcharodon carcharias*) is a close relative of the Mako shark and porbeagle shark. The species is long living reaching ages of 40 to 50 years (Bruce, 2006). The species has relatively slow development and low reproductive rates and with gestation periods, estimated at up to 18 months. These characteristics imply a low reproductive potential which has implications for the vulnerability of the species (DCCEEW, 2022q). Great white sharks occur worldwide in coastal temperate and subtropical regions but can also occur in tropical regions.

The Operational Area or EMBA do not overlap any BIA for the great white shark, however individuals may pass through the area infrequently.

1.3.3.3 Northern River Shark

The Northern river shark (*Glyphis garricki*) is so far known to only occur in the Adelaide and Alligator River systems in the Northern Territory (NT) of Australia. This species is probably restricted to the relatively shallow, upper freshwater to brackish (0-26 ppt) reaches of the Adelaide and Alligator River systems of the NT. Despite considerable fishing and collecting activity in the NT, no specimens have ever been found in coastal marine habitats.

The species is only likely to occur in certain nearshore areas of the EMBA and is unlikely to occur in the Operational Area given its preference for estuaries and river mouths.

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1.3.3.4 Shortfin Mako

The shortfin mako shark (*Isurus oxyrinchus*) is an active, offshore littoral and epipelagic species, found in tropical and warm-temperate seas from the surface down to at least 500 m, seldom occurring where water temperature is below 16°C (Cailliet *et al.*, 2009). This species has been occasionally found close inshore where the continental shelf is narrow, and may occur from 20-50° between Australia and Chile, and to almost 60° south east of New Zealand (Cailliet *et al.*, 2009).

Due to the broad distribution of this species, they are unlikely to be found in significant numbers in the Operational Area or EMBA.

1.3.3.5 Longfin Mako

The longfin mako shark (*Isurus paucus*) is an oceanic tropical species and is only rarely encountered globally (Reardon *et al.*, 2006). This species is believed to be cosmopolitan in tropical and warm temperate waters and common in the Western Atlantic and possibly the Central Pacific. However, its distribution in Australian waters is poorly known, with only sporadic sightings (Reardon *et al.*, 2006). This is in part due to confusion with the more common shortfin mako shark (Compagno, 2001).

Due to the wide distribution range of the species and the absence of any recognised important habitat in the EMBA, the longfin mako shark is not expected to occur in the Operational Area or EMBA in significant numbers.

1.3.3.6 Freshwater Sawfish

The freshwater sawfish (*Pristis pristis*) appears to be confined to freshwater drainages and the upper reaches of estuaries in northern Australian waters including the Ord, Daly and Victoria rivers (Woodside, 2004a).


The PMST species profile indicates that the species occur in all large rivers of northern Australia from the Fitzroy River, Western Australia, to the western side of Cape York Peninsula, Queensland. Juveniles and sub-adult Freshwater Sawfish predominantly occur in rivers and estuaries, while large mature fish tend to occur more often in coastal and offshore waters up to 25m depth (Giles *et al.*, 2006)

It is unlikely that the species will be present in the Operational Area or EMBA in significant numbers. Any individuals present will likely be limited to larger, more mature fish.

1.3.3.7 Dwarf Sawfish

The distribution of the dwarf sawfish (*Pristis clavata*) is considered to extend north from Cairns around the Cape York Peninsula in Queensland, across northern Australian waters to the Pilbara coast in WA (DCCEEW, 2022r). The dwarf sawfish usually inhabits shallow (2–3m) coastal waters and estuarine habitats (DCCEEW, 2022r).

It is unlikely that the species will be present in the Operational Area or EMBA, particularly given its preference to coastal waters and estuarine habitats.

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1.3.3.8 Green Sawfish

Green sawfish (*Pristis zijsron*) have been recorded in the coastal waters off Broome in WA (DCCEEW, 2022s), however there is little known about their distribution in the NT. The species prefer shallow water with muddy bottom habitats, usually within inshore marine waters, including estuaries and river mouths (DCCEEW, 2022s). It is unlikely that the species will be present in the Operational Area or EMBA, particularly given its preference to estuaries and river mouths.

1.3.3.9 Narrow Sawfish

The narrow sawfish (*Anoxypristis cuspidata*) occurs from the northern Persian Gulf to Australia and north to Japan, inhabiting estuarine waters and nearshore waters up to depths of 100m (D’Anastasi *et al.*, 2013). While population declines have been observed globally, the narrow sawfish is not currently listed as threatened. Northern Western Australia, the NT, the Gulf of Carpentaria and Queensland east coast waters comprise the most ecologically functional populations worldwide, however these populations are suspected to have declined significantly from historic levels (D’Anastasi *et al.*, 2013).


The species may occur within the nearshore estuarine environments of the EMBA and is unlikely to occur in the Operational Area given its preference for estuarine environments.

1.3.3.10 Giant Manta Ray and Reef Manta Ray

Manta rays consist of two individual species; the giant manta ray (*mobula birostris*) and the reef, or coastal manta ray (*mobula alfredi*). The giant manta ray is the largest ray species in the world and is found in tropical marine waters worldwide and occasionally in temperate regions (Marshall *et al.*, 2018a). The giant manta ray spends time on the surface, sometimes even jumping out of the water, and has also been observed diving to depths of over 1,000 metres (Marshall *et al.*, 2018). The species is a seasonal visitor to coastal and offshore sites and is commonly recorded on productive coastlines with regular upwellings. Giant manta rays also visit shallow reefs to be cleaned by ‘cleaner fishes’ and to feed.

Giant manta rays aggregate at Ningaloo Reef, in particular between March and April, outside of the EMBA. Reef manta rays usually occur closer to shore; therefore they may occur in the nearshore areas of the EMBA and infrequently transit through the Operational Area.

Reef manta rays are commonly sighted inshore, but also frequent offshore coral reefs, rocky reefs and seamounts. Sightings suggest the species is more resident to tropical waters and may have smaller home ranges and shorter seasonal migrations than the giant manta ray (Marshall *et al.*, 2018b). Individuals in Australia have been recorded in offshore waters up to 190km from the coast and making seasonal migrations of several hundred kilometres between aggregation sites (Marshall *et al.*, 2018b).

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1.3.3.11 Speartooth Shark

The Speartooth Shark (*Glyphis glyphis*) has so far only been recorded in tidal rivers and estuaries within the Northern Territory and Queensland. To date, the Speartooth Shark has only been captured in tidal rivers and estuaries indicating that large tropical river systems appear to be the primary habitat for this shark. It is inferred that this species may be largely restricted to low salinity environments such as freshwater and brackish areas of rivers (DCCEEW, 2022t).

The species may occur within the nearshore estuarine environments of the EMBA and is unlikely to occur in the Operational Area given its preference for estuarine environments.

1.3.3.12 Grey Nurse Shark

The Grey Nurse Shark (*Carcharias taurus*), listed as vulnerable under Western Australia's Biodiversity Conservation Act 2016 and protected under the EPBC Act as a migratory species, primarily inhabits subtropical to cool-temperate inshore waters around major continental landmasses, excluding the eastern Pacific (DCCEEW 2024b). In Australia, it is mainly found off the coasts of New South Wales, southeast Queensland, and Western Australia. Western Australian populations range from Exmouth in the north to Albany in the south, with commercial shark bycatch fisheries data indicating their presence from the North West Shelf to coastal waters near Cocklebidy in the Great Australian Bight (DAWE 2020).


As the grey nurse shark is a migratory species, they may occasionally be found within the Operational Area and EMBA.

1.3.3.13 Scalloped hammerhead shark

The scalloped hammerhead shark (*Sphyrna lewini*) is threatened throughout its distribution, with populations estimated to have declined by over 80% in the past seventy years (Lopez et al 2023). In Australia, scalloped hammerhead sharks are listed as Conservation Dependent under the EPBC Act. However, this classification is currently under review. Despite global conservation initiatives over the past decade, the populations of scalloped hammerhead sharks have not yet shown signs of recovery (Lopez et al 2023).

The scalloped hammerhead shark has a broad distribution across coastal and semi-oceanic environments in warm-temperate and tropical seas worldwide. In Australia, this species is found along the northern coastline, extending to approximately 34°S on both the east and west coasts, from Sydney, New South Wales to Geographe Bay, Western Australia (TSSC 2024). Juveniles have been known to inhabit shallow inshore environment, while adults generally prefer deeper water on the continental and insular shelves, as well as adjacent deep waters, ranging from surface and intertidal zones to depths of at least 275 meters. Notably, it has also been recorded at depths reaching 1042 meters (TSSC 2024).

Due to this species broad distribution, scalloped hammerhead sharks may be present within the Operational Area and have a likely occurrence within EMBA.

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1.3.3.14 Oceanic whitetip shark

The oceanic whitetip shark (*Carcharhinus longimanus*) is classified as a migratory species under the EPBC Act. This shark is prevalent in tropical and subtropical waters globally, ranging from 30° N to 35° S (IUCN 2024). It is an oceanic and pelagic species, commonly found in waters between 18 to 28°C, typically above 20°C (IUCN 2024). In Australian waters, its range extends from Cape Leeuwin in Western Australia, through parts of the Northern Territory, and down the east coast of Queensland and New South Wales to Sydney (Last and Stevens 2009). These sharks are generally found in surface waters but can dive to depths exceeding 180 meters (Castro et al. 1999). While they are occasionally seen inshore, they are more often located offshore or near oceanic islands and regions with narrow continental shelves (Last and Stevens 1994).

1.3.4 Seabirds/Shorebirds

Threatened and migratory seabird and shorebird species within the Operational Area and EMBA are listed in Section 4.4 of the EP, along with identified BIAs.

Details on the species identified by the EPBC Act PMST for the Operational Area and EMBA are included in the sections below.


1.3.4.1 Threatened Shorebirds

Red Knot

Distribution of the red knot (*Calidris canutus*) in Western Australia is widespread, including the coast from Ningaloo and Barrow Island to the south-west Kimberly Division. Migration occurs to high northern latitudes during the northern hemisphere summer to breeding grounds where food is readily abundant, then southward to escape severe winter conditions under which energy demands are high and prey is scarce. Both Australia and New Zealand host significant populations of red knots during the non-breeding period (Bamford et al., 2008). Important sites for the red knot in Western Australia include Eighty Mile Bay (population of 80,700) and Roebuck Bay (11,200) (Bamford et al., 2008) located over at the furthest south-western extent of the EMBA. Similar to other migratory shorebirds, the red knot frequents intertidal sands, mudflats and coastal wetlands. As these habitats are not present within the Operational Area, occurrence of the species within the area is unlikely outside of brief migratory transit. However, the red knot may be present in these habitats within coastal areas of the EMBA during the non-breeding period.

Eastern Curlew

The Eastern Curlew (*Numenius madagascariensis*) is Australia's largest shorebird. It is a long-haul flyer and easily distinguished by its long, downwards curving bill. The Eastern Curlew breeds in the Northern Hemisphere and arrives in Australia in August to forage for crabs and molluscs in intertidal mudflats (DCCEEW, 2015). The species occurs within Western Australia at Barrow Island, the Damper Archipelago, through the Kimberley and along the NT coasts (DCCEEW, 2015). Eastern Curlews may transit through the Operational Area and are likely to occur within coastal areas of the EMBA.

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Common Sandpiper

The common sandpiper (*Actitis hypoleucos*) has a wide breeding distribution, ranging from eastern Russia to western Europe, and is found throughout Australia, south and south east Asia and Africa (except near the equator) during non-breeding periods (Bamford *et al.*, 2008). Breeding occurs during May-June, with southward migration between mid-July and August until a return to breeding grounds around April (del Hoyo *et al.*, 1996). During non-breeding periods, the species inhabits inland wetland and coastal areas, such as estuaries, streams, pools, tidal creeks and freshwater seeps on coastal shores, but typically avoids large coastal mudflats (del Hoyo *et al.*, 1996). The common sandpiper is unlikely to occur within the operational area except during migratory movements but may occur during non-breeding periods at wetland and coastal areas within the EMBA. Individuals may transit the Operational Area


Fork-tailed Swift

The fork-tailed swift (*Apus pacificus*) is native to over 30 countries and occurs in all Australian states and territories outside of breeding periods. The species is widely distributed in Western Australia from coastal and subcoastal areas between Augusta and Carnarvon (including islands), to the Pilbara and Kimberly regions, the north and north-west Gascoyne region, along the south coast and within Timor Sea (Higgins, 1999). In the NT there are widespread but scattered records of the species in the north (Higgins, 1999).

The fork-tailed swift leaves breeding grounds in Siberia in August-September for warmer climactic conditions, with some populations arriving in Western Australia around October-November. The species is typically present in the Pilbara region from September to late April when they depart northwards (Higgins, 1999). Although almost exclusively aerial, including roosting, the species mostly occurs over inland plains, cliffs, beaches and dry/open habitats, foraging aerially for insects (Higgins, 1999). There is currently no BIA for the fork-tailed swift, however they are likely to be present within the Operational Area and EMBA, particularly near land and during migratory periods.

Great Knot

The Great Knot (*Calidris tenuirostris*) has been recorded around the entirety of the Australian coast, with a few scattered records inland. It is now absent from some sites along the south coast where it used to be a regular visitor. The greatest numbers are found in northern Australia; where the species is common on the coasts of the Pilbara and Kimberley, from the Dampier Archipelago to the Northern Territory border, and in the Northern Territory from Darwin and Melville Island, through Arnhem Land to the south-east Gulf of Carpentaria. In Australasia, the species typically prefers sheltered coastal habitats, with large intertidal mudflats or sandflats. This includes inlets, bays, harbours, estuaries and lagoons. They are occasionally found on exposed reefs or rock platforms, shorelines with mangrove vegetation, ponds in saltworks, at swamps near the coast, saltlakes and non-tidal lagoons. Typically, the Great Knot roosts in large groups in open areas, often at the waters edge or in shallow water close to feeding grounds (DCCEEW, 2022u). Individuals may transit the Operational Area

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Lesser Sand Plover

Within Australia, the Lesser Sand-Plover (*Charadrius mongolus*) is widespread in coastal regions, and has been recorded in all states. The internationally important sites for the species closest to the EMBA include Roebuck Bay, Broome, and the Darwin area. The species roosts and feed around beach areas and occasionally forages on coral reefs, and roosts around beach areas and breeding occurs outside of Australia (DCCEEW, 2022v). Individuals may transit the Operational Area.

Greater Sand Plover

Approximately 68 percent of the Flyway population of Greater Sand Plover (*Charadrius leschenaultia*) spends the non-breeding season in Australia. Whilst in Australia, the species occurs in coastal areas of all the states, but most individuals occur along the north-west coast (DCCEEW 2023d). In general, the distribution of this species is widespread between North West Cape and Roebuck Bay, Western Australia. They are also occasionally recorded along the coast of southern Western Australia. Feeding usually takes place within sheltered sandy, shelly, or muddy coastal areas, as well as around large intertidal mudflats, sandbanks, saltmarshes, estuaries, coral reefs, rocky islands tidal lagoons and dunes near the coast. Greater sand plovers usually roost on sand-spits and banks on beaches or in tidal lagoons (DCCEEW, 2023d).

It is possible for this species to pass through the Operational Area and they are likely to be present within the EMBA.


Ruddy Turnstone

The Ruddy Turnstone (*Arenaria interpres*) is a migratory species common throughout Australasia and widespread within Australia (DCCEEW 2024d). In Western Australia, it thrives on rocky shores, coral reefs, and mudflats, often near tidal pools and shallow waters. Key sites of international importance for this species include Eighty Mile Beach, which hosts up to 3,480 individuals, and Roebuck Bay, with counts reaching 2,060. Other significant locations are Ashmore Reef and Barrow Island, supporting 2,230 and 1,733 birds respectively. These areas provide crucial feeding and resting grounds for the Ruddy Turnstone during its migratory journeys (DCCEEW 2024d).

This species may traverse the Operational Area and are known to be present within the EMBA.

Curlew Sandpiper

The Curlew Sandpiper (*Calidris ferruginea*) is typically found on intertidal mudflats in sheltered coastal areas such as estuaries, bays, inlets, and lagoons. They also inhabit non-tidal swamps, lakes, and ponds in saltworks and sewage farms, and are occasionally seen inland around lakes, dams, and waterholes with bare mud or sand edges (DCCEEW 2024e). In Western Australia, they are prevalent along coastal and subcoastal plains from Cape Arid to the south-west Kimberley Division, with large populations at Port Hedland Saltworks, Eighty Mile Beach, Roebuck Bay, and Lake Macleod. Smaller numbers are found in the north-west Kimberley and occasionally inland south of 26° S. In the Northern Territory, they are mainly around Darwin, extending to Melville Island, Cobourg Peninsula, and other coastal regions (DCCEEW 2024e).

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Globally, Curlew Sandpipers breed in the Arctic tundra of Siberia and migrate to wintering grounds in Africa, South and Southeast Asia, Australia, and New Zealand. This species is critically endangered under the EPBC Act and BC Act due to significant population declines.

Sharp-tailed Sandpiper

The Sharp-tailed Sandpiper (*Calidris acuminata*) is a migratory shorebird that is listed as Vulnerable under the EPBC Act (DoE 2024). The sharp-tailed sandpiper breeds in northern Siberia but migrates south to winter in Australia and New Zealand. In the non-breeding season they can be found in tidal mudflats, saltmarshes, mangroves; shallow fresh, brackish or saline inland wetlands; floodwaters, irrigated pastures and crops; sewage ponds and salt fields (DoE 2024).

In Western Australia, the Sharp-tailed Sandpiper finds significant habitats at Eighty Mile Beach, Port Hedland Saltworks, Lake Gregory, and the Peel-Harvey system (Bamford et al. 2008). These sites provide crucial feeding and resting areas during their migratory journey. The expansive mudflats and saltworks offer abundant food resources, making them ideal stopover points (Bamford et al. 2008). In the Northern Territory, Kakadu National Park and Chambers Bay are key locations. Kakadu's diverse wetlands and Chambers Bay's coastal environment support large numbers of these sandpipers, offering a mix of freshwater and tidal habitats essential for their survival. These areas are vital for the conservation of the species, ensuring they have the necessary resources to thrive during migration.

Red Goshawk


The Red Goshawk (*Erythrotriorchis radiatus*) is endemic to Australia and listed as Endangered under EPBC Act and Vulnerable under the EP Act (DCCEEW 2024f). This species occurs in coastal and subcoastal areas, and prefers tall open forest and woodland, or tall fringing woodlands along rivers in grasslands, shrub-lands, and low open woodlands. Juvenile birds utilise mangroves, open woodland, river floodplains and agricultural pastures (DCCEEW 2024f).

Due to the habitat preference of this species, it is unlikely to be present within the Operational Area, but may occur within coastal locations of the EMBA.

Nunivak bar-tailed godwit

The Nunivak Bar-tailed godwit (Western Alaskan Bar-tailed godwit) is a migratory shorebird that is listed as Endangered under EPBC Act and Vulnerable under BC Act. These birds breed in Alaska in late August before making their way across the Pacific Ocean to China, Australia and New Zealand (DCCEEW 2024g). In Australia, *Limosa lapponica baueri* typically occurs along the east and north coasts, including Torres Strait, Queensland, New South Wales and Victoria (DCCEEW 2024g). Populations have also been recorded in the northern Australia, from Darwin east to the Gulf of Carpentaria.

As this species is highly migratory, they may traverse through the Operational Area occasionally.

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Northern Siberian bar-tailed godwit

The Northern Siberian bar-tailed godwit (*Limosa lapponica menzbieri*) is a shorebird that breeds in northern Siberia and spends the non-breeding period predominantly within north Western Australia, and are commonly found along coastal habitats from Eyre to Derby (DCCEEW 2024h). This species is listed as Migratory and Endangered under the EPBC Act and Critically Endangered under the BC Act.

This species is likely to occur within the EMBA and occasionally travel though the Operational Area.

Black-tailed Godwit

The Black-tailed Godwit (*Limosa limosa*) is a large migratory shorebird listed as Endangered under the EPBC Act. The Black-tailed Godwit is found in all states and territories of Australia; however, it prefers coastal regions, and the largest populations are found on the north coast between Darwin and Weipa. The species is commonly found in sheltered bays, estuaries and lagoons with large intertidal mudflats or sandflats, or spits and banks of mud, sand or shell-grit; occasionally recorded on rocky coasts or coral islets.

During the non-breeding season, several sites in Western Australia and the Northern Territory are internationally important for the Black-tailed Godwit. In Western Australia, these sites include Roebuck Bay and Chambers Bay. In the Northern Territory, important sites are Nungbalgarri Creek, Buckingham Bay, Port McArthur, Boucat Bay, Blue Mud Bay, the Roper River area, the Adelaide River Floodplain, Fog Bay and adjacent islands, and Anson Bay (south) (Bamford et al. 2008). These locations are crucial for the conservation of the Black-tailed Godwit, providing essential habitats for feeding and roosting during their non-breeding season.


Australian Painted Snipe

The Australian painted snipe (*Rostratula australis*) is considered Endangered under the EPBC Act and BC Act. This species occurs in shallow freshwater (occasionally brackish) wetlands, both ephemeral and permanent, such as lakes, swamps, claypans, inundated or waterlogged grassland/saltmarsh, dams, rice crops, sewage farms and bore drains, generally with a good cover of grasses, rushes and reeds, low scrub, open timber or samphire. It has been recorded at wetlands in all states and territories and is most common in eastern Australia (DCCEEW 2024i).

The Australian Painted Snipe is likely to occur within coastal habitats within the EMBA, however it is unlikely they will be present within the Operational Area.

Terek Sandpiper

The Terek Sandpiper (*Xenus cinereus*) is a listed Migratory shorebird that is considered Vulnerable under the EPBC Act (DCCEEW 2024j). Western Australia and the Northern Territory host several critical sites for the Terek Sandpiper (*Xenus cinereus*). Eighty Mile Beach in WA is particularly significant, supporting up to 8,000 individuals, while Roebuck Bay also plays a crucial role with 1,840 birds. In the NT, Chambers Bay is a key habitat

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with 1,530 Terek Sandpipers, and other important areas include Fog Bay and adjacent islands, and the Milingimbi coast, each supporting around 800 birds. These sites provide essential feeding and resting grounds for the species during migration.

Asian Dowitcher

The Asian dowitcher (*Limnodromus semipalmatus*) is an EPBC listed Migratory and Vulnerable species. This bird is a regular visitor to the north-western region of Australia, particularly between Port Hedland and Broome. In the Northern Territory, this species is found in Darwin and Arnhem Land. In Western Australia, it has been recorded at locations such as Albany, Lake McLarty, Lake McLeod, the north-east Pilbara, and the south-west Kimberley division. Notable sites include the Port Hedland Saltworks, Roebuck Bay, Ashmore Reef, and Eighty Mile Beach. The estimated Australian population is around 500 individuals (Bamford et al. 2008).


Australia has several key protection sites for the Asian dowitcher in the Northern Territory and Western Australia. In the Northern Territory, Kakadu National Park provides a vast and crucial habitat. In Western Australia, important sites include Parry Lagoons, Thomsons Lake, and other significant areas (DCCEEW 2024y). These protected regions play a vital role in the conservation of this species, offering essential feeding and breeding grounds.

Common Greenshank

The Common Greenshank (*Tringa nebularia*) does not breed in Australia; however, it occurs in all types of wetlands and has the widest distribution of any shorebird in Australia. In Western Australia, the Common Greenshank is generally absent from the Western Deserts although there are a few records from the Great Sandy Desert and the Nullarbor Plain. It occurs around most of the coast from Cape Arid in the south to Carnarvon in the north-west. In the Kimberley it is recorded in the south-west and the north-east, with isolated records from the Bonaparte Archipelago. The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass. Habitats include embayments, harbours, river estuaries, deltas and lagoons and are recorded less often in round tidal pools, rock-flats and rock platforms (DCCEEW, 2024c).

Grey Plover

The Grey Plover (*Pluvialis squatarola*) is a Migratory species listed as Vulnerable under the EPBC Act. The Grey Plover is widely distributed along the Australian coastline, with significant populations in Western Australia and the Northern Territory. In Western Australia, internationally important sites for the Grey Plover include Eighty Mile Beach, which hosts up to 1650 individuals, Roebuck Bay with 1300 individuals, Peel Inlet with 600 individuals, and Nuytsland Nature Reserve with 409 individuals (DCCEEW 2024z). In the Northern Territory, important sites include Boucaut Bay, which supports 169 individuals, and the Darwin area, with 164 individuals (Watkins 1993). These areas are crucial for the conservation of the Grey Plover, providing essential habitats for feeding and roosting.

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1.3.4.2 Threatened Seabirds

Streaked Shearwater

The streaked shearwater (*Calonectris leucomelas*) is distributed throughout the western Pacific, breeding on islands off the coast of China, North Korea, South Korea and at the coast or offshore islands of Japan and Russia (del Hoyo *et al.*, 1992). Breeding occurs during March in colonies, typically within burrows on forested hills. During the northern hemisphere winter, the species migrates south to the coasts of Australia, New Guinea, the Philippines, Vietnam, Sri Lanka and southern India (del Hoyo *et al.*, 1992). Foraging occurs over pelagic and inshore waters, from which the species seizes food from just below the surface (del Hoyo *et al.*, 1992). There is currently no BIA for the streaked shearwater. However, it is likely to occur within the Operational Area and EMBA during non-breeding periods.

Lesser Frigatebird


The lesser frigatebird (*Fregata ariel*) is native to numerous countries between latitudes 30° N and 20° S, with significant breeding populations found in tropical waters of the Indian and Pacific oceans (del Hoyo *et al.*, 1992). Individuals disperse throughout tropical seas during non-breeding periods, foraging in marine waters for fish and squid. The species' preferred breeding habitat is on remote tropical and sub-tropical islands, within bushes and mangroves or on bare ground (del Hoyo *et al.*, 1992).

Roseate Tern

In Western Australia, the roseate tern (*Sterna dougallii*) has been recorded north from Mandurah to around Eighty Mile Beach, in the Pilbara region, and occurs in coastal and marine areas in subtropical and tropical seas (Higgins & Davies, 1996). Records of the species are scattered along the north coast of the NT, mainly from Darwin to Gove Peninsula, and at North Peron Island (Higgins & Davies, 1996). Breeding occurs in two quite distinct periods, with peak months for laying April to November. At some sites, breeding occurs during both late spring-summer and late autumn-winter (Higgins & Davies, 1996). Colonies may be resident or dispersive. The species inhabits rocky and sandy beaches, coral reefs, sand cays and offshore islands. They usually roost or in the intertidal zone on islands, including on the upper sections of beaches, above the high-water mark (Higgins & Davies, 1996). The EMBA overlaps with the reproduction BIA for the Roseate Tern; the species is also likely to occur within the EMBA, particularly in coastal areas. Individuals may transit the Operational Area.

Abbott's Booby

The Abbott's booby (*Papasula abbotti*) spends most of its time at sea and traverse large distances, but needs to come ashore to breed. Currently, Abbott's Booby is only known to breed on Christmas Island (Stokes 1988) and to forage in the waters surrounding the island (DCCEEW, 2022w). Individuals may transit the Operational Area.

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Red-tailed Tropicbird (Indian Ocean)

The Indian Ocean red-tailed tropicbird (*Phaethon rubricauda westralis*) is a pelagic seabird found in tropical and subtropical regions of the Indian Ocean (Marchant & Higgins 1990). It prefers areas with water salinities below 35‰ and surface temperatures between 24 to 30°C (Pocklington 1979; Dunlop et al. 1988, 2001). This subspecies feeds on fish and cephalopods, foraging by plunge-diving or capturing flying fish in flight (Gibson-Hill 1947). It nests alone or in loose colonies on islands, atolls, and coastal cliffs, laying a single egg in rock crevices or under vegetation (Willacy et al. 2021). The breeding sites are often reused unless overgrown or destroyed (Sommerfeld et al. 2015; Hennicke & Flachsbarth 2009). The subspecies has a restricted area of occupancy of 94 km², with critical breeding habitats on islands such as Christmas Island, Cocos (Keeling) Islands, and Rottnest Island (DCCEEW 2023c).

Christmas Island White-tailed Tropicbird

The Christmas Island White-tailed Tropicbird (*Phaethon lepturus fulvus*) is listed as Endangered under the EPBC Act. The white-tailed tropicbird (Christmas Island) is oceanic, feeding on fish and cephalopods in warm tropical waters.

This species is endemic to Christmas Island, which is the only known breeding location. *Phaethon lepturus fulvus* is widely distributed across the island and roosts and forages over the Indian Ocean (Pizzey & Knight 1997; Dunlop et al., 2001). Both adults and juveniles disperse extensively, with records indicating their presence south and southeast of Christmas Island. This subspecies predominantly occurs north of 18°S but can be found up to approximately 1500 km from Christmas Island, reaching the edge of the continental shelf off Western Australia at 21°S (Dunlop et al., 2001).


Australian Lesser Noddy

The Australian lesser noddy (*Anous tenuirostris melanops*) is primarily found around its breeding islands in the Houtman Abrolhos Islands, Western Australia. This species inhabits coral-limestone islands with dense white mangrove fringes and occasionally sandy or shingle beaches (Higgins & Davies 1996). It is considered sedentary, remaining near its breeding islands year-round, though it may forage widely during the non-breeding season (Higgins & Davies 1996). Breeding occurs mainly on Morley, Wooded, and Pelsaert Islands, with approximately 68,000 breeding pairs supported by mangrove stands (Surman & Nicholson 2006). The population is thought to be decreasing, with historical fluctuations influenced by guano mining and prey abundance (Garnett et al., 2011). There are also unconfirmed reports of breeding on Ashmore Reef and potential colonization of Cocos (Keeling) Island (Stokes & Hinchey 1990).

1.3.4.3 Migratory Birds

The Wildlife Conservation Plan for Migratory Seabirds (DAWE 2020) seeks to facilitate a nationally coordinated effort to protect and conserve EPBC Act listed seabirds and provides an over-arching framework for their research and management, while encouraging an effort to address threats to seabirds and their habitats.

The following migratory species found within the combined EMBA are subject to the Wildlife Conservation Plan for Migratory Shorebirds 2015 and 2020 (DAWE 2020).

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As per the guidelines, if a seabird species listed within the Wildlife Conservation Plan for Seabirds becomes an EPBC Act listed threatened species, the plan ceases to apply. Therefore, the following table includes only species listed as Migratory. Any migratory species that are also listed as threatened under the EPBC Act have been discussed in the section above.




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Table 3 Migratory birds subject to the Wildlife Conservation Plan for Seabirds 2015 and 2020


Species	Common Name	Category	Habitat	Wildlife Conservation Plan for Seabirds 2015	Wildlife Conservation Plan for Seabirds 2020
<i>Limosa lapponica</i>	Bar-tailed Godwit	Shorebird	The Bar-tailed Godwit is found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It is found often around beds of seagrass and, sometimes, in nearby saltmarsh (DCCEEW, 2024k).	Y	N
<i>Onychoprion anaethetus</i>	Bridled Tern	Seabird	Bridled Terns occupy tropical and subtropical seas, breeding on islands, including vegetated coral cays, rocky continental islands and rock stacks. Bridled Terns are only rarely found in inshore continental waters and along mainland coastlines, though the species is reported to breed on the mainland of far southern Western Australia. During the breeding season in south-western Australia, birds forage over offshore, mid- and outer continental shelf waters, usually within approximately 70 km of breeding colonies but mostly within 20 - 40 km of a colony (DCCEEW, 2024l).	N	Y
<i>Limicola falcinellus</i>	Broad-billed Sandpiper	Shorebird	In Western Australia they mostly occur on the coasts of the Pilbara and Kimberley between Onslow and Broome. Sheltered areas of the coast, particularly estuarine mudflats but also saltmarshes, shallow freshwater lagoons, saltworks and sewage farms. Occasionally they occur on reefs or rocky platforms (DCCEEW, 2024m).	Y	N

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Species	Common Name	Category	Habitat	Wildlife Conservation Plan for Seabirds 2015	Wildlife Conservation Plan for Seabirds 2020
<i>Sula leucogaster</i>	Brown Booby	Seabird	In Australia, the Brown Booby is found from Bedout Island in Western Australia, around the coast of the Northern Territory to the Bunker Group of islands in Queensland with occasional reports further south in New South Wales (NSW) and Victoria (Marchant & Higgins 1990). The species is reported further south to Tweed Heads, NSW, and to near Onslow, Western Australia and may be becoming more common in these areas (Blakers et al. 1984).	N	Y
<i>Hydroprogne caspia</i>	Caspian Tern	Shorebird	The Caspian Tern is found in sheltered coastal embayments and those with sandy or muddy margins. In offshore areas the species prefers sheltered situations, particularly near islands, and is rarely seen beyond reefs. In Western Australia, they are widespread in coastal regions, from the Great Australian Bight to the Dampier Peninsula. Breeding in Western Australia occurs from the Recherche Archipelago to Dirk Hartog Island and Faure Island in Shark Bay, and also in the Pilbara region from around Point Cloates to North Turtle Island (DCCEEW, 2024n).	N	Y
<i>Anous stolidus</i>	Common Noddy	Seabird	Blue-water seas, usually far from the mainland from northern seas south to Lancelin Island (Birdlife, 2020).	N	Y
<i>Tringa totanus</i>	Common Redshank	Shorebird	Tidal sandbars and mudflats, mangroves and freshwater swamps (Pizzey & Knight, 2007)	Y	N
<i>Thalasseus bergii</i>	Crested Tern	Seabird	A strictly coastal species. Occasional records in the arid interior of Australia (BirdLife Australia, 2022).	N	Y

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Species	Common Name	Category	Habitat	Wildlife Conservation Plan for Seabirds 2015	Wildlife Conservation Plan for Seabirds 2020
<i>Fregata minor</i>	Great Frigatebird	Seabird	Great frigatebirds are a widespread seabird, found in tropical waters globally. They occur between 25 degrees north and 25 degrees south. They inhabit remote islands in tropical and sub-tropical seas, where it breeds in small bushes, mangroves and even on the ground. The species has not been recorded in the Darwin region in the last 30 years.	N	Y
<i>Tringa brevipes</i>	Grey-tailed tattler	Shorebird	Primarily northern coastal distribution in Australia. In Western Australia, there are a few scattered records for the species along the south coast near the Eyre Bird Observatory, Point Malcolm, Rossiter Bay, Shark Lake Nature Reserve and surrounding swampland. It is found in the south-west between Augusta and Cervantes. Typical habitat is sheltered coasts with reefs and rock platforms or with intertidal mudflats. It can also be found at intertidal rocky, coral or stony reefs as well as platforms and islets that are exposed at low tide. It has been found around shores of rock, shingle, gravel or shells and also on intertidal mudflats in embayments, estuaries and coastal lagoons, especially fringed with mangroves (DCCEEW, 2024o).	N	N
<i>Numenius minutus</i>	Little Curlew	Shorebird	Dry grass plains, floodplains, margins of drying swamps, tidal mudflats, crops and sewage ponds (Pizzey & Knight, 2007).	N	N

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Species	Common Name	Category	Habitat	Wildlife Conservation Plan for Seabirds 2015	Wildlife Conservation Plan for Seabirds 2020
<i>Sternula albifrons</i>	Little tern	Shorebird	Sheltered coastal environments including lagoons, estuaries, ridges or inlets, especially those with exposed sandbanks or open gently sloping sandy beaches (DCCEEW, 2024p).	N	Y
<i>Tringa stagnatilis</i>	Marsh Sandpiper, Little Greenshank	Shorebird	The Marsh Sandpiper is found on coastal and inland wetlands throughout Australia. There are scattered records in Western Australia and the Northern Territory. In Western Australia they are mainly found around the coast. The Marsh Sandpiper lives in permanent or ephemeral wetlands of varying salinity, including swamps, lagoons, billabongs, saltpans, saltmarshes, estuaries, pools on inundated floodplains, and intertidal mudflats and also regularly at sewage farms and saltworks.	N	Y
<i>Sula dactylatra</i>	Masked Booby	Seabird	In Australia, the Masked Booby ranges from the Dampier Archipelago in Western Australia (WA), along the entire north coast and east coast to Brisbane. Individuals have also been recorded in Newcastle (NSW), the NSW north coast and Barrow Island (WA) (Marchant & Higgins 1990; NSW NPWS 1999cq). Few records have been made in the Northern Territory (Marchant & Higgins 1990). Individuals regularly occur on islands off Australia, including Lord Howe, Norfolk, Kermadec and the Cocos-Keeling Islands (Marchant & Higgins 1990). The breeding population on Lord Howe Island (Mutton Bird Point, King Point, Roach Island, South Island, Sugarloaf Island, Mutton Bird Island, Gower Island, Sail Rocks and Ball's Pyramid) is the most southerly breeding colony in the world (NSW DECCW 2005op; Priddel et al. 2005).	N	Y

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Species	Common Name	Category	Habitat	Wildlife Conservation Plan for Seabirds 2015	Wildlife Conservation Plan for Seabirds 2020
<i>Charadrius veredus</i>	Oriental Plover	Shorebird	This species does not breed in Australia. Once they arrive to Australia, Oriental Plovers spend a few weeks in coastal habitats such as estuarine mudflats and sandbanks, on sandy or rocky ocean beaches or nearby reefs, or in near-coastal grasslands, before dispersing further inland (DCCEEW, 2024q).	Y	N
<i>Glareola maldivarum</i>	Oriental Pratincole	Terrestrial Coastal	Open plains, floodplains or short grassland (including farmland), often occurring near terrestrial wetlands, and occurring along the coast. This species also occurs along the coast, inhabiting beaches, mudflats and islands, or around coastal lagoons. The species does not breed in Australia (DCCEEW, 2024r).	Y	N
<i>Acrocephalus orientalis</i>	Oriental Reed-Warbler	Terrestrial Coastal	The Oriental Reed-Warbler is an Asiatic species that is a rare late Spring and Summer vagrant in Australia. This species primarily inhabits reedbeds, marshes, paddy fields, grasslands and scrub areas. While occasionally found in coastal reedbeds during migration, this species lifecycle and foraging habitats are predominantly inland wetland areas (IUCN 2024).	N	N
<i>Pandion haliaetus</i>	Osprey	Seabird	Occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia. They require extensive areas of open fresh, brackish or saline water for foraging. They exhibit a preference for coastal cliffs and elevated islands in some parts of their range, but may also occur on low sandy, muddy or rocky shores and over coral cays.	N	Y

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Species	Common Name	Category	Habitat	Wildlife Conservation Plan for Seabirds 2015	Wildlife Conservation Plan for Seabirds 2020
<i>Pluvialis fulva</i>	Pacific Golden Plover	Shorebird	Within Australia, the Pacific Golden Plover is widespread in coastal regions, though there are also a number of inland records (in all states), sometimes far inland and usually along major river systems (DCCEEW, 2024s).	Y	N
<i>Calidris melanotos</i>	Pectoral Sandpiper	Terrestrial Coastal	Occupies shallow, fresh waters often containing low grass or other small herbs, swamp margins, flooded pastures and saltmarshes (DCCEEW, 2024t; Pizzey & Knight, 2007).	Y	N
<i>Gallinago stenura</i>	Pin-tailed snipe	Terrestrial Coastal	During non-breeding period the Pin-tailed Snipe occurs most often in or at the edges of shallow freshwater swamps, ponds and lakes with emergent, sparse to dense cover of grass/sedge or other vegetation. The species distribution within Australia is not well understood. There are confirmed from from NSW, south-west Western Australia, Pilbara and the The Top End. In Western Australia, the species was reported at Pilbara, Port Hedland, Myaree Pool, Maitland River and near Karratha (DCCEEW, 2024u).	Y	N
<i>Sula sula</i>	Red-footed Booby	Seabird	<p>The Red-footed Booby is essentially confined to tropical waters between 30° N and 30° S in the Atlantic, Indian and Pacific Oceans. The species is found world-wide, though is considered a vagrant to the west African coast (Marchant & Higgins 1990).</p> <p>In Australia, the distribution is apparently disjunct; birds are not known to travel far from breeding colonies, though juveniles travel further than adults and emigrate to other islands. The species has been recorded on the Great Barrier Reef and Coral Sea islands from north of Cape York to east of Innisfail, and has also been recorded near Proserpine, Queensland (Marchant & Higgins 1990). The Red-footed Booby can be a vagrant further</p>	N	Y

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Species	Common Name	Category	Habitat	Wildlife Conservation Plan for Seabirds 2015	Wildlife Conservation Plan for Seabirds 2020
			south along the Queensland coast to as far as northern NSW where one has been recorded near Ballina (Lindsey 1986), however there have been no records from Western Australian or the Northern Territory coasts (Marchant & Higgins 1990).		
<i>Calidris ruficollis</i>	Red-necked Stint	Shorebird	Coastal sheltered areas and exposed or ocean beaches, sometimes on stony or rocky shores, reefs or shoals (DCCEEW, 2024v).	Y	N
<i>Cecropis daurica</i>	Red-rumped Swallow	Shorebird	The Red-rumped Swallow (<i>Cecropis daurica</i>) is a migratory bird from Eurasia that occasionally visits northern Australia. It was first recorded in the region in 1983 and has been spotted in various locations, including Darwin and Groote Eylandt. Notable sightings include multiple records at the Leanyer Sewage Ponds in Darwin (Jackson and Kyne, 2013).	Y	N
<i>Calidris pugnax</i>	Ruff	Shorebird	In Western Australia the species has been recorded at the lower King River and it is mostly found in the south-west region of the state. It has been sighted at the Vasse River estuary, north to Namming Lake and Lake McLarty. It has been periodically recorded at Port Hedland, Kununurra and the Argyle Diamond Mine. There are unconfirmed reports at Curlewis Camp, Millstream Chichester, Broome and Roebuck Bay. In the Northern Territory the species has been recorded around Darwin, Colac Bay, Lake Ellesmere, Lake Poukawa and Lake Wainono (Higgins & Davies 1996).	Y	N

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Species	Common Name	Category	Habitat	Wildlife Conservation Plan for Seabirds 2015	Wildlife Conservation Plan for Seabirds 2020
			<p>In Australia the Ruff is found on generally fresh, brackish or saline wetlands with exposed mudflats at the edges. It is found in terrestrial wetlands including lakes, swamps, pools, lagoons, tidal rivers, swampy fields and floodlands. They are occasionally seen on sheltered coasts, in harbours, estuaries, seashores and are known to visit sewage farms and saltworks (Higgins & Davies 1996).</p>		
<i>Calidris alba</i>	Sanderling	Shorebird	<p>Restricted to the coast, mostly on open sandy beaches exposed to open sea-swell, exposed sandbars and spits, and shingle banks (DCCEEW, 2024w).</p>	Y	N
<i>Gallinago megala</i>	Swinhoe's Snipe	Terrestrial Coastal	<p>Dense clumps of grass and rushes around the edges of fresh, brackish wetlands, including billabongs, rivers pools, small streams and sewage ponds. They are also found in drying clay pans and inundated plains (DCCEEW, 2024x).</p>	Y	N
<i>Numenius phaeopus</i>	Whimbrel	Shorebird	<p>Along the Australian coast, inhabiting estuaries, mangroves, tidal flats, flooded paddocks, and bare grasslands (Pizzey & Knight, 2007)</p>	Y	N
<i>Phaethon lepturus</i>	White-tailed Tropicbird	Seabird	<p>Nests on coastal and inland cliffs on the main islands</p>	N	Y
<i>Motacilla flava</i>	Yellow Wagtail	Terrestrial	<p>Inhabit wet meadows, marshland, grassy and muddy lakeshores. Occurs in fields and often near livestock during migration (eBird, 2024).</p>	N	N

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1.4 Protected and Significant Areas

There are a number of key sensitive areas that overlap the Operational Area and EMBA. These are summarised in Table 4.10 of the EP and described further below.

1.4.1 Australian Marine Parks

A portion of the Blacktip Gas Export Pipeline (GEP) lies within the Joseph Bonaparte Gulf AMP multiple use zone. The Blacktip Condensate Export Pipeline (CEP) in Commonwealth waters lies entirely in the AMP. The Joseph Bonaparte Gulf AMP was established after the construction of the Blacktip offshore facilities.

As described in Section 4.5.1 of the EP, the EMBA overlaps with the Joseph Bonaparte Gulf AMP, Kimberley AMP, Eighty Mile Beach AMP and Oceanic Shoals AMP.

1.4.1.1 Joseph Bonaparte Gulf Marine Park

A summary of characteristics of the JBG AMP is presented in Table 1.4. The JBG AMP is approximately 50km east of the WHP. A portion of the Blacktip GEP lies within the Joseph Bonaparte Gulf AMP multiple use zone. The CEP and SPM are also in the AMP.

Table 1.4: Summary of Characteristics of the Joseph Bonaparte Gulf AMP (DNP, 2018a)

Name	Joseph Bonaparte Gulf AMP
Area	8,597km ²
Depth range	Approximately 5–75m (Average 22 m)
Types of zoning	Multiple Use Zone (IUCN Category VI) – 6,346km ² Special Purpose Zone (IUCN Category VI) – 2,251km ²


Values are to inform the Director’s decisions when authorising activities in Marine Parks. Activities will be assessed in relation to their impacts on and risk to values, to ensure activities are undertaken in a manner that minimises impacts to as small as reasonably practicable. The following values are applicable to the JBG AMP:

- Natural Values
- Cultural Values
- Heritage Values
- Socio-economic values.

Table 1.5 presents details of the value of the AMP.

Table 1.5: Summary of value of the Joseph Bonaparte Gulf AMP (DNP, 2018a)

Value	Summary
Natural Values	Contains habitats, species and ecological communities associated with the Northwest Shelf Transition bioregion. It includes one key ecological feature: the carbonate bank and terrace system of the Sahul Shelf (valued as a unique seafloor feature with ecological properties of regional significance).

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Value	Summary
	<p>Contains a number of prominent shallow seafloor features including an emergent reef system, shoals, and sand banks</p> <p>The key ecological feature in the Marine Park is the carbonate bank and terrace system of the Sahul Shelf—characterised by terraces, banks, channels and valleys supporting sponges, soft corals, sessile filter feeders, polychaetes and ascidians</p> <p>Supports a range of species, including species listed as threatened, migratory, marine or cetacean under the EPBC Act. Biologically important areas within the Marine Park include foraging habitat for marine turtles and the Australian snubfin dolphin.</p>
Cultural Values	The Miriuwung, Gajerrong, Doolboong, Wardenybeng and Gija and Balangarra people have responsibilities for sea country in the Marine Park.
Heritage Values	No international, Commonwealth or national heritage listings apply to the Marine Park at commencement of this plan, however the Marine Park is adjacent to the West Kimberley National Heritage Place.
Socio-economic values.	Tourism, commercial fishing, mining, and recreation including fishing, are important activities in the Marine Park

1.4.1.2 Kimberley Marine Park

Characteristics of the Kimberley AMP are presented in Table 1.6. The Kimberley AMP is approximately 220km to the west of the Operational Area.

Table 1.6: Characteristics of the Kimberley AMP (DPAW, 2016)

Name	Kimberley AMP
Area	74,469km ²
Depth range	Approximately 15-800 m
Types of zoning	Multiple Use Zone (IUCN Category VI) – 66,563km ² Habitat Protection Zone (IUCN Category IV) – 1,131km ² Marine National Park Zone (IUCN Category II) – 6,775km ²

The Kimberley AMP is significant because it includes habitats, species and ecological communities associated with the Northwest Shelf Province, Northwest Shelf Transition and Timor Province. It includes two key ecological features: the ancient coastline at the 125m depth contour (an area of enhanced productivity and migratory pathway for cetaceans and pelagic marine species); and continental slope demersal fish communities (valued for high levels of endemism and diversity and the second richest area for demersal fish species in Australia) (DNP, 2018b).

The following values are applicable to the Kimberley AMP:

- Natural Values
- Cultural Values
- Heritage Values
- Socio-economic values.


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Table 1.7 presents details of the value of the AMP.

Table 1.7 Summary of value of the Kimberley AMP Marine Park (DNP, 2018b)


Value	Summary
Natural Values	<p>Important foraging areas for:</p> <ul style="list-style-type: none"> - migratory seabirds - migratory dugongs - the Australian snubfin dolphin, Indo-Pacific humpback dolphin and spotted bottlenose dolphin - marine turtles <p>Supports a range of species, including protected species listed as threatened, migratory, marine or cetacean under the EPBC Act. Biologically important areas within the Marine Park include breeding and foraging habitat for seabirds, interesting and nesting habitat for marine turtles, breeding, calving and foraging habitat for inshore dolphins, calving, migratory pathway and nursing habitat for humpback whales, migratory pathway for pygmy blue whales, foraging habitat for dugong and foraging habitat for whale sharks.</p> <p>Extent comprises a range of geological features including the continental shelf, slope, plateau, pinnacle, terrace, banks and shoals and valley seafloor</p> <p>Extent contains two key ecological features: the ancient coastline and continental slope demersal fish communities</p>
Cultural Values	The Wunambal Gaambera, Dambimangari, Mayala, Bardi Jawi and the Nyul Nyul people's sea country extends into the Kimberley Marine Park
Heritage Values	No International, Commonwealth or national heritage listings apply to the AMP, however the AMP is adjacent to the national heritage place of The West Kimberley.
Socio-economic values.	Tourism, commercial fishing, mining, recreation, including fishing, and traditional use are important activities in the AMP.

1.4.1.3 Eighty Mile Beach Marine Park

Characteristics of the Eighty Mile Beach AMP are presented Table 1.8. Eighty Mile Beach AMP is approximately 815km to the south-west of the Operational Area.

Table 1.8: Summary of Characteristics of the Eighty Mile Beach AMP (DNP, 2018b)

Name	Eighty Mile Beach AMP
Area	10,785km ²
Depth range	less than 15m to 70 m
Types of zoning	Multiple Use Zone (IUCN Category VI) 10, 785km ²

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Values are to inform the Director’s decisions when authorising activities in Marine Parks. Activities will be assessed in relation to their impacts on and risk to values, to ensure activities are undertaken in a manner that minimises impacts to as small as reasonably practicable. The following values are applicable to the Eighty Mile Beach AMP (DNP, 2018c):

- Natural Values
- Cultural Values
- Heritage Values
- Socio-economic values.

Table 1.9 presents details of the value of the AMP.


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Table 1.9: Summary of Value of the Eighty Mile Beach AMP (DNP, 2018b)

Value	Summary
Natural Values	<p>The Marine Park includes examples of ecosystems representative of the Northwest Shelf Province—a dynamic environment influenced by strong tides, cyclonic storms, long-period swells and internal tides. The bioregion includes diverse benthic and pelagic fish communities, and ancient coastline thought to be an important seafloor feature and migratory pathway for humpback whales. The Marine Park supports a range of species including species listed as threatened, migratory, marine or cetacean under the EPBC Act. Biologically important areas within the Marine Park include breeding, foraging and resting habitat for seabirds, interesting and nesting habitat for marine turtles, foraging, nursing and pupping habitat for sawfish and a migratory pathway for humpback whales.</p>
Cultural Values	<p>Sea country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their sea country for tens of thousands of years.</p> <p>The sea country of the Nyangumarta, Karajarri and Ngarla people extends into Eighty Mile Beach Marine Park. Sea country is culturally significant and important to their identity. They have an unbroken, deep spiritual connection to their sea country, with traditional practices continuing today. Staple foods of living cultural value for the Nyangumarta, Karajarri and Ngarla people include saltwater fish, turtles, dugong, crabs and oysters. Access to sea country by families is important for cultural traditions, livelihoods and future socio-economic development opportunities.</p> <p>The native title holders for the Nyangumarta, Karajarri and Ngarla people are represented by the Karajarri Aboriginal Corporation, Nyangumarta Karajarri Aboriginal Corporation, Nyangumarta Warrarn Aboriginal Corporation, and Wanparta Aboriginal Corporation. These Prescribed Body Corporates represent traditional owners with native title over coastal area adjacent to the Marine Park and are the points of contact for their respective areas of responsibility for sea country in the Marine Park.</p> <p>The Kimberley Land Council and the Yamatji Marlpa Aboriginal Corporation are the Native Title Representative Bodies for Kimberley and Pilbara regions.</p>
Heritage Values	<p>No international, Commonwealth or national listings apply to the Marine Park</p> <p>The Marine Park contains three known shipwrecks listed under the Historic Shipwrecks Act 1976: Lorna Doone (wrecked in 1923), Nellie (wrecked in 1908), and Tifera (wrecked in 1923).</p>
Socio-economic values.	<p>Tourism, commercial fishing, pearling and recreation are important activities in the Marine Park</p>

1.4.1.4 Oceanic Shoals Marine Park

Characteristics of the Oceanic Shoals AMP are presented in Table 1.10. The Oceanic Shoals AMP is approximately 140km to the north of the Operational Area.


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Table 1.10: Summary of Characteristics of the Oceanic Shoals AMP (DNP, 2018a)

Name	Oceanic Shoals AMP
Area	71, 743km ²
Depth range	Approximately 15-500 m
Types of zoning	National Park Zone (IUCN Category II) 406km ² Habitat Protection Zone (IUCN Category IV) 6929km ² Multiple Use Zone (IUCN Category VI) 39,964km ² Special Purpose Zone (Trawl) (IUCN Category VI) 24,444km ²


Values are to inform the Director's decisions when authorising activities in Marine Parks. Activities will be assessed in relation to their impacts on and risk to values, to ensure activities are undertaken in a manner that minimises impacts to as small as reasonably practicable. The following values are applicable to the Oceanic Shoals AMP:

- Natural Values
- Cultural Values
- Heritage Values
- Socio-economic values.

Table 1.11 presents details of the value of the AMP.

Table 1.11: Summary of Value of the Oceanic Shoals AMP (DNP, 2018a)

Value	Summary
Natural Values	<p>The Marine Park includes examples of ecosystems representative of the Northwest Shelf Transition— a dynamic environment influenced by strong tidal currents, upwellings of nutrient-rich waters, and a range of prominent seafloor features. The pinnacles, carbonate banks and shoals are sites of enhanced biological productivity.</p> <p>Key ecological features of the Marine Park are:</p> <ul style="list-style-type: none"> – carbonate bank and terrace systems of the Van Diemen Rise— an area characterised by terraces, banks, channels and valleys supporting sponges, soft coral, polychaetes, ascidians, turtles, snakes and sharks; – carbonate bank and terrace system of the Sahul Shelf—an area characterised by terraces, banks, channels and valleys, supporting sponges, soft corals, sessile filter feeders, polychaetes and ascidians; – pinnacles of the Bonaparte Basin—an area that contains the largest concentration of pinnacles along the Australian margin, where local upwellings of nutrient-rich water attract aggregations of fish, seabirds and turtles; and – shelf break and slope of the Arafura Shelf—an area characterised by continental slope, patch reefs and hard substrate pinnacles that support over 280 demersal fish species. <p>The Marine Park supports a range of species, including species listed as threatened, migratory, marine or cetacean under the EPBC Act.</p>

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	Biologically important areas within the Marine Park include foraging and interesting habitat for marine turtles.
Cultural Values	Sea country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their sea country for tens of thousands of years. At the commencement of this plan, there is limited information about the cultural significance of this Marine Park. The Northern Land Council and the Kimberley Land Council are the Native Title Representative Bodies for the Northern Territory's northern region, and the Kimberley region. The Tiwi Land Council collectively represents traditional owners of the Tiwi Islands. The Oceanic Shoals MP includes important sea country for the Tiwi people (TLC 2021).
Heritage Values	No International, Commonwealth or national heritage listings apply to the AMP.
Socio-economic values.	Commercial fishing and mining are important activities in the AMP.

1.4.1.5 Roebuck Bay Marine Park

Characteristics of the Roebuck Bay AMP are presented in Table 1.12. Roebuck AMP is approximately 815km to the south-west of the Operational Area and within the EMBA.

Table 1.12: Summary of Characteristics of the Roebuck AMP (DNP, 2018b)

Name	Roebuck AMP
Area	304km ²
Depth range	less than 15m to 70 m
Types of zoning	Multiple Use Zone (IUCN Category VI) 304km ²

Values are to inform the Director's decisions when authorising activities in Marine Parks. Activities will be assessed in relation to their impacts on and risk to values, to ensure activities are undertaken in a manner that minimises impacts to as small as reasonably practicable. The following values are applicable to the Oceanic Shoals AMP (DNP, 2018c):

- Natural Values
- Cultural Values
- Heritage Values
- Socio-economic values.

Table 1.13 presents details of the value of the AMP.



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Table 1.13: Summary of value of the Roebuck AMP (DNP, 2018b)

Value	Summary
Natural Values	<p>The Marine Park includes examples of ecosystems representative of the Northwest Shelf Province—a dynamic environment influenced by strong tides, cyclonic storms, long-period swells and internal tides. The bioregion includes diverse benthic and pelagic fish communities, and ancient coastline thought to be an important seafloor feature and migratory pathway for humpback whales.</p> <p>The Marine Park supports a range of species including species listed as threatened, migratory, marine or cetacean under the EPBC Act. Biologically important areas within the Marine Park include breeding and resting habitat for seabirds, foraging and internesting habitat for marine turtles, a migratory pathway for humpback whales and foraging habitat for dugong.</p>
Cultural Values	<p>Sea country is valued for Indigenous cultural identity, health and wellbeing. Across Australia, Indigenous people have been sustainably using and managing their sea country for tens of thousands of years.</p> <p>Yawuru people have always recognised the waters of Roebuck Bay as nagula (Yawuru sea country), and have customary responsibilities to care for it. They have a deep spiritual connection to offshore landscapes from Bugarrigarra (creator beings), and believe that snake-like metaphysical beings inhabit the sea. Cultural sites in sea country are also a source of law. The Yawuru people harvest marine resources according to the six Yawuru seasons. They have harvested pearl shell for food and cultural purposes. Fish are a staple food source, and fishing a form of cultural expression, connecting people to their country, modelled on tradition and based in traditional law. Access to sea country by families is important to cultural traditions, livelihoods and future socio-economic development opportunities. The Yawuru Native Title Holders Aboriginal Corporation is the Prescribed Body Corporate representing traditional owners with native title over coastal areas adjacent to the Marine Park, and is the point of contact for sea country in the Marine Park. The Kimberley Land Council is the Native Title Representative Body for the Kimberley region</p>
Heritage Values	<p>No international, Commonwealth or national listings apply to the Marine Park at commencement of this plan, however the Marine Park is adjacent to the West Kimberley National Heritage Place.</p>
Socio-economic values.	<p>Tourism, commercial fishing, pearling and recreation, including fishing, are important activities that occur in the Marine Park. These activities contribute to the wellbeing of regional communities and the prosperity of the nation.</p>

1.4.2 State Marine Protected Areas

No State managed Marine Parks occur within the Operational Area, however the North Kimberley, Lalang-gaddam, and Eighty Mile Beach Marine Parks overlap the EMBA (EP Section 4.5.1). The newly established Bardi Jawi Gaarra and Mayala Marine Parks in the Buccaneer Archipelago also overlap the far most western extent of the EMBA.

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1.4.2.1 North Kimberley Marine Park

The North Kimberley Marine Park overlaps with the western extent of the EMBA and is located 130km west of the Operational Area. The Marine Park is within the west Kimberley region. There are more than 1000 islands within the boundaries of the North Kimberley Marine Park, each providing an array of intertidal and subtidal habitats. There are extensive coral reefs, large estuaries, mudflats and mangroves forests supporting many threatened, protected and culturally important species such as dugongs, turtles and sawfish (DPaW, 2016).


Table 1.14 presents details of the value of the North Kimberley Marine Park.

Table 1.14: Summary of value of the North Kimberley Marine Park (DPaW, 2016)

Value	Summary
Aboriginal heritage	Contains many places of cultural and spiritual importance to traditional owners
Natural Values	<p>Contains many islands, bays and estuaries with mangroves, sandy beaches, coral reefs, seagrass meadows and sponge gardens.</p> <p>Marine turtle nesting sites and breeding sites for sea and shorebird have been identified on the majority of the islands in the Kimberley, and fringing reefs line the shores of almost all the Islands. Open sea reef provide foraging habitat for marine mammals and pelagic fish. Marine fauna in the Marine Park include:</p> <ul style="list-style-type: none"> - Marine turtle species (green, flatback, loggerhead, hawksbill, leatherback turtles). - Dugong - Finfish (barramundi, threadfin salmon, mangrove jack) - Snubfin dolphin
Social Values (recreation, tourism and community)	<p>Tourism is significant for the Kimberley, generating economic, social and employment benefits for regional communities.</p> <p>Expedition cruise boat operates in the dry months (April to October) between Broome and Wyndham and Darwin</p> <p>Remote communities and towns close to the park use the area for fishing, hunting and recreational areas. The nearest town within the Marine Park to the EMBA is Wyndham, approximately 130km to the south of the EMBA.</p>
Commercial values and resource	The commercial fishing industry in the Marine Park provides regional economic benefits, employment

1.4.2.2 Eighty Mile Beach Marine Park

The Eighty Mile Beach Marine Park, located between Port Hedland and Broome, was gazetted on 29 January 2013. It covers an area of approximately 200,000 ha stretching for some 220km from Cape Missiessy to Cape Keraudren, and includes sanctuary, recreation, general use and special purpose zones. The park is managed under the Eighty Mile Beach Marine Park Management Plan 2014-20124 (DPaW, 2014).

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The listed ecological values of the Eighty Mile Beach Marine Park include its high sediment and water quality, the juxtaposition of the beach, coastal topography and seabed and the diverse and ecologically important habitats and marine/coastal flora and fauna. The listed habitat values of the Marine Park are as follows:

- The intertidal sand and mudflat communities supporting a high abundance and diversity of invertebrate life and providing a valuable food source for shorebirds (including migratory species) and other fauna
- The diverse subtidal filter-feeding communities
- Macroalgal and seagrass communities providing habitat and feeding opportunities for fish, invertebrates and dugongs
- High diversity intertidal and subtidal coral reef communities
- Mangrove communities and adjacent saltmarshes provide nutrients to the surrounding waters and habitat for fish and invertebrates.


The listed marine and coastal fauna values are as follows:

- A high diversity and abundance of nationally and internationally important shorebirds and waders (including migratory species) are found in the Marine Park
- Flatback turtles are endemic to northern Australia and nest at Eighty Mile Beach
- Dugongs and several whale and dolphin species inhabit or migrate through the Marine Park
- A highly diverse marine invertebrate fauna provides an important food source for a variety of animals, including birds, fish and turtles, along with recreational and commercial fishing opportunities
- A diversity of fish species provides recreational and commercial fishing opportunities; and
- A diversity of sharks and rays, including several protected species, are found in the park.

In addition to these natural values, the Marine Park contains land and sea important to traditional Indigenous owners through identity and place, family networks, spiritual practice and resource gathering. The sea country of the Nyangumarta and Karajarri people extends into Eighty Mile Beach MP (DNP, 2018a; KTLA, 2014).

The Marine Park also has a history of European activity including exploration, pastoralism and commercial fishing (e.g. the pearl oyster fishery). The park contains a historical WWII plane wreck (*Dornier Do-24 X-36*) and shipwrecks (two pearl luggers). The Marine Park provides tourism opportunity and recreational value through its remoteness, diversity and abundance of habitats and marine fauna and the pristine nature of the marine and coastal environment.

The Marine Park contains vast intertidal sand and mudflats that extend up to 4km wide at low tide and provide a rich source of food for many species. Eighty Mile Beach Marine Park is one of the world's most important feeding grounds for small wading birds that migrate to the area each summer, travelling from countries thousands of kilometres away (DPaW 2014)

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1.4.2.3 Lalang-gaddam

The Lalang-gaddam MP is located in the Kimberley region of WA and covers an area of approximately 13,085 km². The Lalang-gaddam MP borders the Mayala MP (Section 1.4.2.5) and Port of Yampi Sound to the west and the North Kimberley MP (Section 1.4.2.1 to the northeast (DBCA, 2022c). The MP aligns with the limit of coastal waters of WA to the north west, bordering the Kimberley AMP (Section 1.4.1.2).

In July 2022, four MPs were amalgamated to create the Lalang-gaddam MP these include Lalang-garram/Camden Sound MP, Lalang-garram/Horizontal Falls MP, North Lalang garram MP and the Maiyalam MP (DBCA, 2022c).

The subtidal habitats and communities of the MP include diverse filter-feeding communities of sponges and hard and soft corals. The intertidal and subtidal habitats of the MP also provide critical foraging and nursery areas for a wide range of threatened, protected and culturally important species such as dugong, marine turtles, saltwater crocodiles, dolphins and marine avifauna (Mustoe & Edmunds 2008). In addition, the MP also falls within an area of the Kimberley identified as the principal calving habitat and resting area for the humpback whale (*Megaptera novaeangliae*) (DBCA, 2022c).


There are no major developments in the MP and commercial activities are currently limited to tourism, commercial fishing, pearling and aquaculture supported by the pristine, warm tropical waters of the MP (DBCA, 2022c).

1.4.2.4 Bardi Jawi Gaarra Marine Park

The Bardi Jawi Gaarra MP is situated in the west Kimberley region of WA surrounding the northern part of the Dampier Peninsula and the western islands of the Buccaneer Archipelago. The Bardi Jawi Gaarra MP covers an area of 2,040 km². The Bardi Jawi Gaarra MP will come into effect on 1st July 2023 and will be reserved as a 'Class A' MP providing the highest level of protection (DBCA, 2022b). The Bardi Jawi Gaarra MP extends around the tip of the Dampier Peninsula from Pender Bay on the western side of the Dampier Peninsula to Cunningham Point on the eastern side of the Peninsula. The eastern boundary of the MP borders the Mayala MP and the western boundary extends out to the seaward limit of WA State waters (three nm from the territorial baseline) and includes intertidal areas to the high-water mark. The southern boundary of the Bardi Jawi Gaarra MP is situated approximately 160 km north of Broome (DBCA, 2022b).

Similar to the adjacent Mayala MP (Section 1.4.2.5) the Bardi Jawi Gaarra MP supports a diverse array of plants and animals. Fringing reefs have formed around the many islands of the Buccaneer Archipelago with large tides and complex currents created between the islands. Important nursery habitat is provided through many areas of mangroves, seagrasses and macroalgae communities. Sunday Island located within the Bardi Jawi Gaarra MP is recognised as having particularly extensive and diverse seagrass meadows with eight species being recorded in the raised lagoons of the islands (Kendrick et al. 2017). The high rates of growth and consumption of the seagrass and macroalgae in the lagoons, indicate they are important habitats for marine herbivores such as green turtles and rabbitfish (*Siganus lineatus*).

The warm tropical waters of the Bardi Jawi Gaarra MP also provide optimal conditions for commercial activities such as pearling, aquaculture and commercial fishing.

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The Bardi Jawi Gaarra MP also contains many places of cultural and spiritual importance to Bardi and Jawi people. The majority of significant cultural sites and places occur on land, but many have sea-related aspects (DBCA, 2022b).

1.4.2.5 Mayala Marine Park

The Mayala MP covers an area of approximately 3,150km². The Mayala MP is located in the Buccaneer Archipelago within the Kimberley region of WA, approximately 200 km northeast of Broome. The Mayala MP came into effect on 1st July 2023 and is a 'Class A' MP providing the highest level of protection (DBCA, 2022a). The Mayala MP is bordered to the west by the Bardi Jawi Gaarra MP and bordered to the east by the Lalang-gaddam MP described in Section 1.4.2.4 and Section 1.4.2.3 respectively. The Mayala MP comprises an extensive network of hundreds of islands. No terrestrial areas are included within the Mayala MP but intertidal areas to the high-water mark are included (DBCA 2022a). The area covered by the Mayala MP is home to a diverse range of marine life. Fringing reefs have formed around the many islands of the Buccaneer Archipelago, withstanding a tidal range in excess of 11 m (Richards et al. 2017; Mayala Inninalang Aboriginal Corporation RNTBC 2019). Mangrove-lined creeks, seagrass meadows and macroalgae communities create important nursery areas for fish, and turtles are regularly seen foraging and nesting in the area. From June to November each year humpback whales (*Megaptera novaeangliae*) migrate to Mayala sea country and beyond to give birth to their young, and dugongs visit the proposed marine park from May to July. The Mayala MP supports commercial activities such as pearling, aquaculture and commercial fishing. Customary hunting of turtles, dugongs and saltwater crocodiles is permitted by Mayala people in the MP.

The Mayala MP contains many places of cultural and spiritual importance such as the Port of Yampi Sound; and the establishment of the Mayala MP will contribute to the conservation and enhancement of the outstanding cultural, ecological, recreational and commercial values in the area (DBCA, 2022a; Mayala Inninalang Aboriginal Corporation RNTBC, 2019).


1.4.3 Key Ecological Features

No KEFs overlap the Operational Area. The closest KEF is the carbonate bank and terrace system of the Sahul Shelf, approximately 22km west from the Operational Area and within the EMBA.

1.4.3.1 Carbonate bank and terrace system of the Sahul Shelf

The carbonate bank and terrace system of the Sahul Shelf is located in the western JBGand to the north of Cape Bougainville and Cape Londonderry. The banks consist of a hard substrate and flat tops at depths of 150–300 m. Each bank occupies an area generally less than 10km² and is separated from the next bank by narrow sinuous channels with depths up to 150 m. The origin of the banks is uncertain, though the area contains predictably high levels of productivity, in comparison to the generally low productivity of the region (DSEWPac, 2012a).

The banks are foraging areas for loggerhead, olive ridley and flatback turtles and provide habitat for humpback whales, and green and freshwater sawfish (Donovan et al. 2008 in DSEWPac, 2012a). The hard substrate of the banks is thought to support diverse

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organisms including sessile benthic invertebrates such as sponges, soft and hard corals, gorgonians, bryozoans, ascidians and associated reef fish and elasmobranchs (Brewer et al. 2007). Cetaceans, green and fresh sawfish are also likely to occur in the area, as well as possibly the Australian snubfin dolphin, a migratory species occurring mostly on the northern extent of the Sahul Shelf (DSEWPaC 2012a).

According to DSEWPaC (2012a) the carbonate banks and terrace system of the Sahul Shelf are regionally important because of their role in enhancing productivity relative to their surrounds. Little is known about the banks, terraces and associated channels but they are believed to be areas of enhanced productivity and biodiversity due to the upwellings of cold nutrient-rich water at the heads of the channels and the availability of hard substrate (Brewer et al. 2007).

1.4.3.2 Continental Slope Demersal Fish Communities


The Australian Continental Slope provides important habitat for demersal fish communities, characterised by high endemism and species diversity. Specifically, the continental slope between North West Cape and the Montebello Trough is the most diverse slope bioregion in Australia with more than 500 fish species, 76 of which are endemic (Last et al. 2005 in DSEWPaC 2012).

The Continental Slope consists of two distinct community types, associated with the upper and mid slope, 225 – 500m and 750 – 1000m respectively. The Timor Province and Northwest Transition bioregions are the second-richest areas for demersal fish across the entire continental slope (DSEWPaC 2012). The bacteria and fauna that is present in the system on the Continental Slope are the basis for the food web for demersal fish and higher order consumers in the system. Further information of this system has been poorly researched, though it has been suggested that it is a detritus-based system, where infauna and epifauna become prey for a range of teleost fish, molluscs and crustaceans (Brewer et al. 2007). The higher order consumers supported by this system are likely to be carnivorous fish, deep water sharks, large squid and toothed whales (Brewer et al. 2007). The pelagic production is known to be phytoplankton based, with hotspots located around oceanic reefs and islands (Brewer et al. 2007).

It is believed that the loss of the benthic habitat along this continental shelf region would likely lead to a decline in the species diversity and endemism that this feature is associated with (DoEE 2017e). The endemism of the region is not supported by large data sets and is scarce. It is consequently not well understood what interactions exist between the physical processes and trophic structures that lead to this high diversity of fish and the suggested presence of endemic species in the region (DoEE 2017e).

1.4.3.3 Ancient Coastline at 125m Depth Contour

The shelf of the North-west Marine Region contains several terraces and steps which reflect changes in sea level that occurred over the last 100,000 years. The most prominent of these features occurs at a depth of 125m as an escarpment along the North West Shelf and Sahul Shelf (DSEWPaC 2012). Where the ancient submerged coastline provides areas of hard substrate it may contribute to higher biological diversity. Little detailed knowledge is available, but the hard substrate of the escarpment is likely to support sponges, crinoids, molluscs, echinoderms (DSEWPaC

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2012). It is understood that changes in topography at these depths are critical points for the generation of internal waves (Holloway *et al.* 2001 cited in DEWHA 2008b), playing a minor role in aiding localised upwelling or at least regional mixing associated with the seasonal changes in currents and winds. It is also believed that this prominent floor feature could be important as a migratory pathway for cetaceans and pelagic species such as the whale shark and humpback whale, as they move north and south between feeding and breeding grounds (DEWHA 2008b).

Parts of the ancient coastline are thought to provide biologically important habitats in areas otherwise dominated by soft sediments. The topographic complexity of these escarpments may also facilitate vertical mixing of the water column providing a relatively nutrient-rich environment for species present on the escarpment (DSEWPaC 2012). This enhanced productivity could potentially be attracting baitfish, which in turn provide food for the migratory species. The pressures of potential concern on the biodiversity value of this feature generally include ocean acidification as a result of climate change (DoEE 2017).

1.4.3.4 Carbonate bank and terrace system of the Van Diemen Rise

Lying on the north-eastern side of the Joseph Bonaparte Gulf, the carbonate banks and valleys of the Van Diemen Rise provide more habitat diversity than in the central gulf, resulting in a higher diversity of epifauna (Przeslawski *et al.* 2011). The region has been identified as a sponge biodiversity hotspot (Przeslawski *et al.* 2014).


The banks, ridges and terraces of the Van Diemen rise are raised geomorphic features with relatively high proportions of hard substrate which support sponge and octocoral gardens. These, in turn, provide habitat to other epifauna, by providing structure in an otherwise flat environment (Przeslawski *et al.* 2011). As they are further from the coast, these raised features are influenced less by tides and the associated increased turbidity compared to the central Joseph Bonaparte Gulf. The variability in water depth and substrate composition may contribute to the presence of unique ecosystems in the channels. This may also contribute to the richness of epifauna found here.

Rich sponge gardens and octocorals have been identified on the eastern Joseph Bonaparte Gulf along the banks, ridges and some terraces (Heap *et al.* 2010, Przeslawski *et al.* 2014). Plains and deep holes/valleys are characterised by scattered epifauna and infauna that include polychaetes and ascidians. Epibenthic communities such as the sponges found in the channels support first and second-order consumers. Biophysical maps associated with clustering analysis (Ellis & Pitcher 2009) show greater clustering in this area, which indicates greater environmental variability compared with the rest of the North Marine Region.


The Carbonate bank and terrace system of the Van Diemen rise is defined as a key ecological feature considered important for its role in enhancing biodiversity and local productivity relative to its surrounds and for supporting relatively high species diversity.

1.4.3.5 Pinnacles of the Bonaparte Basin

Covering more than 520km² within the Bonaparte Basin, this feature contains the largest concentration of pinnacles along the Australian margin. The pinnacles of the Bonaparte Basin are thought to be the eroded remnants of underlying strata; it is likely that the

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vertical walls generate local upwelling of nutrient-rich water, leading to phytoplankton productivity that attracts aggregations of planktivorous and predatory fish, seabirds and foraging turtles (CoA, 2008).

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ATTACHMENT B1: OPERATIONAL AREA PMST RESULTS



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 06-Dec-2024

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar)	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	2
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	21
Listed Migratory Species:	41

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	65
Whales and Other Cetaceans:	15
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	2
Habitat Critical to the Survival of Marine Turtles:	1

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	14
Key Ecological Features (Marine):	1
Biologically Important Areas:	3
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Commonwealth Marine Area

[\[Resource Information \]](#)

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name

Commonwealth Marine Areas (EPBC Act)

Commonwealth Marine Areas (EPBC Act)

Listed Threatened Species

[\[Resource Information \]](#)

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name

Threatened Category

Presence Text

BIRD

[Calidris acuminata](#)

Sharp-tailed Sandpiper [874]

Vulnerable

Species or species habitat may occur within area

[Calidris canutus](#)

Red Knot, Knot [855]

Vulnerable

Species or species habitat may occur within area

[Calidris ferruginea](#)

Curlew Sandpiper [856]

Critically Endangered

Species or species habitat may occur within area

[Numenius madagascariensis](#)

Eastern Curlew, Far Eastern Curlew [847]

Critically Endangered

Species or species habitat may occur within area

[Phaethon rubricauda westralis](#)

Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]

Endangered

Species or species habitat may occur within area

MAMMAL

[Balaenoptera borealis](#)

Sei Whale [34]

Vulnerable

Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
REPTILE		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis garricki Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

Listed Migratory Species [[Resource Information](#)]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area

Migratory Marine Species

Scientific Name	Threatened Category	Presence Text
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat likely to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat likely to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa sahalensis as Sousa chinensis Australian Humpback Dolphin [87942]		Species or species habitat known to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area
Fish		
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
Corythoichthys flavofasciatus Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys haematopterus Reef-top Pipefish [66201]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Seadragon [66226]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys parvicarinatus Short-keel Pipefish, Short-keeled Pipefish [66230]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area

Mammal

Scientific Name	Threatened Category	Presence Text
Dugong dugon Dugong [28]		Species or species habitat may occur within area
Reptile		
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis atriceps Black-headed Sea Snake [1101]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowellii as Hydrophis mcdowellii MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis zweiffei as Enhydrina schistosa Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahalensis Australian Humpback Dolphin [87942]		Species or species habitat known to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Australian Marine Parks [\[Resource Information \]](#)

Park Name	Zone & IUCN Categories
Joseph Bonaparte Gulf	Multiple Use Zone (IUCN VI)
Joseph Bonaparte Gulf	Special Purpose Zone (IUCN VI)

Habitat Critical to the Survival of Marine Turtles [\[Resource Information \]](#)

Scientific Name	Behaviour	Presence
Aug - Sep		
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur

Extra Information

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Development of Blacktip Gas Field	2003/1180	Controlled Action	Post-Approval
Trans-territory Gas Pipeline	2003/1186	Controlled Action	Completed
Not controlled action			
2D seismic survey, exploration permit NT/P67	2004/1587	Not Controlled Action	Completed
2D Seismic Survey in Permit Areas WA-318-P & WA-319-P, near Cape Londonderry	2004/1687	Not Controlled Action	Completed
Nexus Drilling Program NT-P66	2007/3745	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D and 3D Seismic Survey	2011/6197	Not Controlled Action (Particular Manner)	Post-Approval
2D Marine Seismic Survey	2009/4728	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic survey	2009/5076	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Survey in WA Permit Area TP/22 and Commonwealth Permit Area WA-280-P	2005/2100	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Bonaparte 2D & 3D marine seismic survey	2011/5962	Not Controlled Action (Particular Manner)	Post-Approval
Nova 3D Seismic Survey	2013/6825	Not Controlled Action (Particular Manner)	Post-Approval
Petrel MC2D Marine Seismic Survey	2010/5368	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval

Referral decision

Nova 3D Seismic Survey, WA 442-NT/P81, Joseph Bonaparte Gulf	2013/6820	Referral Decision	Completed
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Key Ecological Features

[\[Resource Information \]](#)

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Carbonate bank and terrace system of the Sahul Shelf	North-west

Biologically Important Areas

[\[Resource Information \]](#)

Scientific Name	Behaviour	Presence
Marine Turtles		
Chelonia mydas		
Green Turtle [1765]	Foraging	Known to occur
Lepidochelys olivacea		
Olive Ridley Turtle [1767]	Foraging	Known to occur
Natator depressus		
Flatback Turtle [59257]	Internesting buffer	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.


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 eni australia	Company document identification 000036_DV_PR.HSE.0887.000	Owner document identification	Rev. index. 15	Appendix B
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ATTACHMENT B2: EMBA PMST RESULTS



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 06-Dec-2024

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	1
Wetlands of International Importance (Ramsar)	3
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	4
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	68
Listed Migratory Species:	81

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	3
Commonwealth Heritage Places:	2
Listed Marine Species:	137
Whales and Other Cetaceans:	27
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	13
Habitat Critical to the Survival of Marine Turtles:	3

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	33
Regional Forest Agreements:	None
Nationally Important Wetlands:	6
EPBC Act Referrals:	127
Key Ecological Features (Marine):	6
Biologically Important Areas:	62
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

National Heritage Places [\[Resource Information \]](#)

Name	State	Legal Status
Natural		
The West Kimberley	WA	Listed place

Wetlands of International Importance (Ramsar Wetlands) [\[Resource Information \]](#)

Ramsar Site Name	Proximity
Eighty-mile beach	Within Ramsar site
Ord river floodplain	Within Ramsar site
Roebuck bay	Within 10km of Ramsar site

Commonwealth Marine Area [\[Resource Information \]](#)

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

Feature Name

Commonwealth Marine Areas (EPBC Act)

Commonwealth Marine Areas (EPBC Act)

Commonwealth Marine Areas (EPBC Act)

Commonwealth Marine Areas (EPBC Act)

Listed Threatened Ecological Communities [\[Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Monsoon vine thickets on the coastal sand dunes of Dampier Peninsula	Endangered	Community likely to occur within area

Listed Threatened Species [\[Resource Information \]](#)

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		

Scientific Name	Threatened Category	Presence Text
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Breeding known to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Chloebia gouldiae listed as Erythrura gouldiae Gouldian Finch [90091]	Endangered	Species or species habitat known to occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat known to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat known to occur within area
Falcunculus frontatus whitei Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Geophaps smithii blaauwi Partridge Pigeon (western) [66501]	Vulnerable	Species or species habitat likely to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat may occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Endangered	Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat may occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Phaethon rubricauda westralis Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824]	Endangered	Species or species habitat known to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area

Scientific Name	Threatened Category	Presence Text
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area
Tyto novaehollandiae kimberli Masked Owl (northern) [26048]	Vulnerable	Species or species habitat known to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area
MAMMAL		
Antechinus bellus Fawn Antechinus [344]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Conilurus penicillatus Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma [132]	Vulnerable	Species or species habitat may occur within area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Isoodon auratus auratus Golden Bandicoot (mainland) [66665]	Vulnerable	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat known to occur within area
Macrotis lagotis Greater Bilby [282]	Vulnerable	Species or species habitat known to occur within area
Mesembriomys gouldii gouldii Black-footed Tree-rat (Kimberley and mainland Northern Territory), Djintamoonga, Manbul [87618]	Endangered	Species or species habitat may occur within area
Petrogale concinna canescens Nabarlek (Top End) [87606]	Endangered	Species or species habitat likely to occur within area
Petrogale concinna concinna Nabarlek (Victoria River District) [87605]	Critically Endangered	Species or species habitat likely to occur within area
Petrogale concinna monastria Nabarlek (Kimberley) [87607]	Endangered	Species or species habitat known to occur within area
Phascogale pirata Northern Brush-tailed Phascogale [82954]	Vulnerable	Species or species habitat likely to occur within area
Phascogale tapoatafa kimberleyensis Kimberley brush-tailed phascogale, Brush-tailed Phascogale (Kimberley) [88453]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheath-tail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Trichosurus vulpecula arnhemensis Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
REPTILE		
Acanthophis hawkei Plains Death Adder [83821]	Vulnerable	Species or species habitat may occur within area
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area
Aipysurus fuscus Dusky Sea Snake [1119]	Endangered	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour known to occur within area
Liopholis kintorei Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu [83160]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
Tiliqua scincoides intermedia Northern Blue-tongued Skink [89838]	Critically Endangered	Species or species habitat known to occur within area
Varanus mertensi Mertens' Water Monitor, Mertens's Water Monitor [1568]	Endangered	Species or species habitat known to occur within area
Varanus mitchelli Mitchell's Water Monitor [1569]	Critically Endangered	Species or species habitat likely to occur within area
SHARK		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis garricki Northern River Shark, New Guinea River Shark [82454]	Endangered	Breeding known to occur within area
Glyphis glyphis Speartooth Shark [82453]	Critically Endangered	Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding known to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat known to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat known to occur within area

Listed Migratory Species

[[Resource Information](#)]

Scientific Name

Threatened Category

Presence Text

Migratory Marine Birds

[Anous stolidus](#)

Common Noddy [825]

Species or species
habitat likely to occur
within area[Apus pacificus](#)

Fork-tailed Swift [678]

Species or species
habitat likely to occur
within area[Calonectris leucomelas](#)

Streaked Shearwater [1077]

Species or species
habitat known to
occur within area[Fregata ariel](#)Lesser Frigatebird, Least Frigatebird
[1012]Breeding known to
occur within area[Fregata minor](#)Great Frigatebird, Greater Frigatebird
[1013]Breeding known to
occur within area[Hydroprogne caspia](#)

Caspian Tern [808]

Breeding known to
occur within area[Onychoprion anaethetus](#)

Bridled Tern [82845]

Breeding known to
occur within area[Phaethon lepturus](#)

White-tailed Tropicbird [1014]

Species or species
habitat known to
occur within area[Sterna dougallii](#)

Roseate Tern [817]

Breeding known to
occur within area[Sternula albifrons](#)

Little Tern [82849]

Breeding known to
occur within area[Sula dactylatra](#)

Masked Booby [1021]

Breeding known to
occur within area[Sula leucogaster](#)

Brown Booby [1022]

Breeding known to
occur within area

Scientific Name	Threatened Category	Presence Text
Sula sula Red-footed Booby [1023]		Breeding known to occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area

Scientific Name	Threatened Category	Presence Text
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Dugong dugon Dugong [28]		Migration route known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour known to occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat known to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Breeding known to occur within area

Scientific Name	Threatened Category	Presence Text
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Breeding known to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat known to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Sousa sahalensis as Sousa chinensis Australian Humpback Dolphin [87942]		Breeding known to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat known to occur within area
Migratory Terrestrial Species		
Cecropis daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area
Hirundo rustica Barn Swallow [662]		Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Motacilla cinerea Grey Wagtail [642]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat known to occur within area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Glareola maldivarum Oriental Pratincole [840]		Roosting known to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting known to occur within area

Scientific Name	Threatened Category	Presence Text
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding known to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
Tringa totanus Common Redshank, Redshank [835]		Roosting known to occur within area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands

[\[Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Commonwealth Land Name	State
Defence	
Defence - BRADSHAW FIELD TRAINING AREA [70043]	NT
Defence - MT GOODWIN RADAR SITE [70063]	NT

Commonwealth Land Name	State
Defence - YAMPI SOUND TRAINING AREA [50145]	WA

Commonwealth Heritage Places [[Resource Information](#)]

Name	State	Status
Natural		
Bradshaw Defence Area	NT	Listed place
Yampi Defence Area	WA	Listed place

Listed Marine Species [[Resource Information](#)]

Scientific Name	Threatened Category	Presence Text
Bird		
Acrocephalus orientalis Oriental Reed-Warbler [59570]		Species or species habitat known to occur within area overfly marine area
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Breeding known to occur within area
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting known to occur within area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting known to occur within area overfly marine area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area overfly marine area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Roosting known to occur within area overfly marine area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting known to occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding known to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Breeding known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Breeding known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
Glareola maldivarum Oriental Pratincole [840]		Roosting known to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Hirundo rustica Barn Swallow [662]		Species or species habitat known to occur within area overfly marine area
Hydroprogne caspia as Sterna caspia Caspian Tern [808]		Breeding known to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area overfly marine area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat known to occur within area overfly marine area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area overfly marine area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat known to occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat known to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting known to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat known to occur within area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area overfly marine area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting known to occur within area overfly marine area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding known to occur within area
Sternula albifrons as Sterna albifrons Little Tern [82849]		Breeding known to occur within area
Stiltia isabella Australian Pratincole [818]		Roosting known to occur within area overfly marine area
Sula dactylatra Masked Booby [1021]		Breeding known to occur within area
Sula leucogaster Brown Booby [1022]		Breeding known to occur within area
Sula sula Red-footed Booby [1023]		Breeding known to occur within area
Thalasseus bengalensis as Sterna bengalensis Lesser Crested Tern [66546]		Breeding known to occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding known to occur within area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Roosting known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Tringa totanus Common Redshank, Redshank [835]		Roosting known to occur within area overfly marine area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area overfly marine area
Fish		
Bhanotia fasciolata Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
Corythoichthys flavofasciatus Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys haematopterus Reef-top Pipefish [66201]		Species or species habitat may occur within area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus nitidus Glittering Pipefish [66224]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Haliichthys taeniophorus Ribbioned Pipehorse, Ribbioned Seadragon [66226]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys parvicarinatus Short-keel Pipefish, Short-keeled Pipefish [66230]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammal		
Dugong dugon Dugong [28]		Migration route known to occur within area
Reptile		
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area
Aipysurus fuscus Dusky Sea Snake [1119]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area
Aipysurus tenuis Brown-lined Sea Snake, Mjoberg's Sea Snake [1121]		Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Crocodylus johnstoni Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]		Species or species habitat may occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area
Ephalophis greyae as Ephalophis greyi Mangrove Sea Snake [93738]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Scientific Name	Threatened Category	Presence Text
Hydrelaps darwiniensis Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100]		Species or species habitat may occur within area
Hydrophis atriceps Black-headed Sea Snake [1101]		Species or species habitat may occur within area
Hydrophis coggeri Cogger's Sea Snake [25925]		Species or species habitat may occur within area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area
Hydrophis inornatus Plain Sea Snake [1107]		Species or species habitat may occur within area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area
Hydrophis macdowelli as Hydrophis mcdowelli MacDowell's Sea Snake, Small-headed Sea Snake, [75601]		Species or species habitat may occur within area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Pacific Sea Snake, Large-headed Sea Snake [1112]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area
Hydrophis zweiffei as Enhydrina schistosa Australian Beaked Sea Snake [93514]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
Parahydrophis mertoni Arafura Smooth Sea Snake, Northern Mangrove Sea Snake [1090]		Species or species habitat may occur within area

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Migration route known to occur within area

Current Scientific Name	Status	Type of Presence
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Feresa attenuata Pygmy Killer Whale [61]		Species or species habitat may occur within area
Globicephala macrorhynchus Short-finned Pilot Whale [62]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Kogia breviceps Pygmy Sperm Whale [57]		Species or species habitat may occur within area
Kogia sima Dwarf Sperm Whale [85043]		Species or species habitat may occur within area
Lagenodelphis hosei Fraser's Dolphin, Sarawak Dolphin [41]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Breeding known to occur within area
Mesoplodon densirostris Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Breeding known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Sousa sahalensis Australian Humpback Dolphin [87942]		Breeding known to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat known to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks [[Resource Information](#)]

Park Name	Zone & IUCN Categories
Kimberley	Habitat Protection Zone (IUCN IV)
Kimberley	Habitat Protection Zone (IUCN IV)
Oceanic Shoals	Habitat Protection Zone (IUCN IV)
Eighty Mile Beach	Multiple Use Zone (IUCN VI)
Joseph Bonaparte Gulf	Multiple Use Zone (IUCN VI)
Kimberley	Multiple Use Zone (IUCN VI)
Oceanic Shoals	Multiple Use Zone (IUCN VI)
Oceanic Shoals	Multiple Use Zone (IUCN VI)
Roebuck	Multiple Use Zone (IUCN VI)
Kimberley	National Park Zone (IUCN II)
Oceanic Shoals	National Park Zone (IUCN II)
Joseph Bonaparte Gulf	Special Purpose Zone (IUCN VI)
Oceanic Shoals	Special Purpose Zone (Trawl) (IUCN VI)

Habitat Critical to the Survival of Marine Turtles [[Resource Information](#)]

Scientific Name	Behaviour	Presence
Aug - Sep		
Natator depressus Flatback Turtle [59257]	Nesting	Known to occur
Dec - Jan		
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur
May - Jul		

Scientific Name	Behaviour	Presence
Lepidochelys olivacea Olive Ridley Turtle [1767]	Nesting	Known to occur

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Adele Island	Nature Reserve	WA
Balanggarra	Indigenous Protected Area	WA
Bardi Jawi	Indigenous Protected Area	WA
Browse Island	Nature Reserve	WA
Coulomb Point	Nature Reserve	WA
Dambimangari	Indigenous Protected Area	WA
Eighty Mile Beach	Marine Park	WA
Jinmarnkur	Conservation Park	WA
Jinmarnkur Kulja	Nature Reserve	WA
Karajarri	Indigenous Protected Area	WA
Keep River	Proposed National Parks NT Act park or park addition	
Lacepede Islands	Nature Reserve	WA
Lalang-garram / Camden Sound	Marine Park	WA
Lalang-garram / Horizontal Falls	Marine Park	WA
Lesueur Island	Nature Reserve	WA
Low Rocks	Nature Reserve	WA
Marri-Jabin (Thamurrurr - Stage 1)	Indigenous Protected Area	NT

Protected Area Name	Reserve Type	State
Niwalarra Islands	National Park	WA
North Kimberley	Marine Park	WA
North Lalang-garram	Marine Park	WA
Ord River	Nature Reserve	WA
Swan Island	Nature Reserve	WA
Tanner Island	Nature Reserve	WA
Unnamed WA28968	5(1)(h) Reserve	WA
Unnamed WA37168	5(1)(h) Reserve	WA
Unnamed WA41775	5(1)(h) Reserve	WA
Unnamed WA44669	5(1)(h) Reserve	WA
Unnamed WA44673	5(1)(h) Reserve	WA
Unnamed WA44677	5(1)(h) Reserve	WA
Unnamed WA53015	Nature Reserve	WA
Uunguu	Indigenous Protected Area	WA
Yawuru	Indigenous Protected Area	WA
Yawuru Nagulagun / Roebuck Bay	Marine Park	WA

Nationally Important Wetlands [\[Resource Information \]](#)

Wetland Name	State
Bunda-Bunda Mound Springs	WA
Legune Wetlands	NT
Moyle Floodplain and Hyland Bay System	NT
Ord Estuary System	WA
Willie Creek Wetlands	WA
Yampi Sound Training Area	WA

EPBC Act Referrals [\[Resource Information \]](#)

Title of referral	Reference	Referral Outcome	Assessment Status

Title of referral	Reference	Referral Outcome	Assessment Status
Cockatoo Island Multi-User Supply Base, WA	2017/7986		Assessment
Construction of dam wall	2004/1365		Post-Approval
Darwin Pipeline Duplication (DPD) Project	2022/09372		Post-Approval
Koolan Island Operations	2022/09392		Assessment
Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West	2024/09826		Completed
Northern Endeavour Phase 1 Decommissioning	2022/09327		Post-Approval
Ocean Barramundi Expansion Project	2022/09272		Assessment
Project Crux Cable Lay and Operation	2022/09441		Completed
Project Fitzroy Expansion Offshore Cable Lay	2023/09674		Referral Decision
Controlled action			
275 km gas pipeline from Wadeye to existing Darwin gas pipeline	2006/2930	Controlled Action	Post-Approval
2-D seismic survey Scott Reef	2000/125	Controlled Action	Post-Approval
Blacktip Project - Wharf Construction	2007/3293	Controlled Action	Completed
Bonaparte Liquefied Natural Gas Project	2011/6141	Controlled Action	Post-Approval
Decommissioning of Buffalo Oil Field	2003/984	Controlled Action	Post-Approval
Develop Ichthys gas-condensate field permit area W	2006/2767	Controlled Action	Completed
Development of Blacktip Gas Field	2003/1180	Controlled Action	Post-Approval
Development of Browse Basin Gas Fields (Upstream)	2008/4111	Controlled Action	Completed
Ichthys Gas Field, Offshore and onshore processing facilities and subsea pipeline	2008/4208	Controlled Action	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Iron ore mine	2006/2522	Controlled Action	Post-Approval
Montara 4, 5, and 6 Oil Production Wells, and Montara 3 Gas Re-Injection Well	2002/755	Controlled Action	Post-Approval
Pluton Irvine Island Iron Ore Project	2011/6064	Controlled Action	Proposed Decision
Prelude Floating Liquefied Natural Gas Facility and Gas Field Development	2008/4146	Controlled Action	Post-Approval
Project Sea Dragon stage 1 prawn aquaculture project, NT	2015/7527	Controlled Action	Post-Approval
PTTEP AA Floating LNG Facility	2011/6025	Controlled Action	Completed
Trans-territory Gas Pipeline	2003/1186	Controlled Action	Completed
Not controlled action			
2D seismic survey, exploration permit NT/P67	2004/1587	Not Controlled Action	Completed
2D Seismic Survey in Permit Areas WA-318-P & WA-319-P, near Cape Londonderry	2004/1687	Not Controlled Action	Completed
3D marine seismic survey in WA 314P and WA 315P	2004/1927	Not Controlled Action	Completed
Adele Trend TQ3D Seismic Survey	2001/252	Not Controlled Action	Completed
Aquaculture - Barramundi grow out, Yampi Sound	2005/2476	Not Controlled Action	Completed
Backpacker-1 Offshore Hydrocarbon Exploration Well	2001/300	Not Controlled Action	Completed
Buffalo In-Fill Production Wells	2001/475	Not Controlled Action	Completed
Construction and operation of Radar Infrastructure	2004/1406	Not Controlled Action	Completed
Controlled Source Electromagnetic 2D Survey	2009/4980	Not Controlled Action	Completed
Controlled Source Electromagnetic Survey	2010/5434	Not Controlled Action	Completed
Coot-1 hydrocarbon exploration well, Permit Area AC/L2 or AC/L3	2001/296	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Crux-A and Crux-B appraisal wells, Petroleum Permit Area AC/P23	2006/2748	Not Controlled Action	Completed
Crux gas-liquids development in permit AC/P23	2006/3154	Not Controlled Action	Completed
Drilling of 12 Hydrocarbon Exploration Wells, Permit Area WA-371-P	2006/3005	Not Controlled Action	Completed
Drilling of Marina-1 Exploration Well	2007/3586	Not Controlled Action	Completed
Establish a 4m wide trace line along the road alignment for James Price Point	2010/5682	Not Controlled Action	Completed
Exploration Well AC/P23	2001/234	Not Controlled Action	Completed
Koolan Island Mine - Reconstruction of seawall and capital dewatering of mine pit, 130km northwest of	2016/7848	Not Controlled Action	Completed
Marine Seismic Survey in WA-239-P	2000/24	Not Controlled Action	Completed
Marine Survey for the Australia-ASEAN Power Link AAPL	2020/8714	Not Controlled Action	Completed
Montara-3 Offshore Hydrocarbon Exploration Well Permit Area AC/RL3	2001/489	Not Controlled Action	Completed
Nexus Drilling Program NT-P66	2007/3745	Not Controlled Action	Completed
P30 Hydrocarbon Exploration Well	2001/293	Not Controlled Action	Completed
Project Highclere Geophysical Survey	2021/9023	Not Controlled Action	Completed
Saucepan 1 Exploration Well ACP23	2000/2	Not Controlled Action	Completed
Strumbo-1 Gas Exploration Well Permit Area WA-288-P	2002/884	Not Controlled Action	Completed
Thresher-1 Well	2000/84	Not Controlled Action	Completed
Not controlled action (particular manner)			
2D and 3D Seismic Survey	2011/6197	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
2D and 3D Seismic Survey WA-405-P	2008/4133	Not Controlled Action (Particular Manner)	Post-Approval
2D and 3D Seismic Survey WA-405-P	2009/5104	Not Controlled Action (Particular Manner)	Post-Approval
2D Marine Seismic Survey	2009/4728	Not Controlled Action (Particular Manner)	Post-Approval
2D marine seismic survey of Braveheart, Kurrajong, Sunshine and Crocodile	2006/2917	Not Controlled Action (Particular Manner)	Post-Approval
2D marine seismic survey within permit area WA-318-P	2007/3879	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Marine Survey	2001/363	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic survey	2009/5076	Not Controlled Action (Particular Manner)	Post-Approval
2D seismic survey in permit areas WA-274P and WA-281P	2004/1521	Not Controlled Action (Particular Manner)	Post-Approval
2D Seismic Survey in WA Permit Area TP/22 and Commonwealth Permit Area WA-280-P	2005/2100	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey	2009/4681	Not Controlled Action (Particular Manner)	Post-Approval
3D Marine Seismic Survey, Permit AC/P 23	2005/2364	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
3D Seismic Survey	2006/2729	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey (NT/P68)	2006/2980	Not Controlled Action (Particular Manner)	Post-Approval
3D seismic survey of AC/P4, AC/P17 and AC/P24	2006/2857	Not Controlled Action (Particular Manner)	Post-Approval
3D Seismic Survey WA-406-P Bonaparte Basin	2007/3904	Not Controlled Action (Particular Manner)	Post-Approval
Acacia East Pit Cutback Mining Project,northern Kimberley, WA	2013/6752	Not Controlled Action (Particular Manner)	Post-Approval
Aurora MC3D Marine Seismic Survey	2010/5510	Not Controlled Action (Particular Manner)	Post-Approval
Bassett 3D Marine Seismic Survey	2010/5538	Not Controlled Action (Particular Manner)	Post-Approval
Blacktip Gas Project Yelcherr Beach Wharf Construction	2007/3537	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte 2D & 3D marine seismic survey	2011/5962	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte 3D & 2D Seismic Survey, in NT/P82, Timor Sea	2012/6398	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte Basin Seabed Mapping Survey	2009/4951	Not Controlled Action (Particular Manner)	Post-Approval
Bonaparte Seismic and Bathymetric Survey	2012/6295	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Braveheart 2D Infill Marine Seismic Survey 100km offshore	2008/4442	Not Controlled Action (Particular Manner)	Post-Approval
Braveheart 2D Marine Seismic Survey	2005/2322	Not Controlled Action (Particular Manner)	Post-Approval
Canis 3D Marine Seismic Survey	2008/4492	Not Controlled Action (Particular Manner)	Post-Approval
Cartier East and Cartier West 3D Marine Seismic Surveys	2009/5230	Not Controlled Action (Particular Manner)	Post-Approval
Caswell MC3D Marine Seismic Survey	2012/6594	Not Controlled Action (Particular Manner)	Post-Approval
Construction of a 43km long sealed access road to the Browse LNG precinct	2011/5852	Not Controlled Action (Particular Manner)	Post-Approval
Deep Water Northwest Shelf 2D Seismic Survey	2007/3260	Not Controlled Action (Particular Manner)	Post-Approval
Drilling of Exploration & Appraisal Wells Braveheart-1 & Cornea-3	2009/5160	Not Controlled Action (Particular Manner)	Post-Approval
Effect of marine seismic sounds to demersal fish and pearl oysters, north-west WA	2018/8169	Not Controlled Action (Particular Manner)	Post-Approval
Endurance 3D Marine Seismic Data Acquisition Survey	2007/3667	Not Controlled Action (Particular Manner)	Post-Approval
Exploration Drilling Campaign	2011/6047	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Exploration Drilling in Permit Areas WA-402-P & WA-403-P	2010/5297	Not Controlled Action (Particular Manner)	Post-Approval
Fishburn2D Marine Seismic Survey	2012/6659	Not Controlled Action (Particular Manner)	Post-Approval
Floyd 3D and Chisel 3D Seismic Surveys	2011/6220	Not Controlled Action (Particular Manner)	Post-Approval
Geoscience Australia - Marine survey in Browse Basin to acquire data to assist assessment of CO2 sto	2013/6747	Not Controlled Action (Particular Manner)	Post-Approval
Gicea 3D Marine Seismic Survey	2008/4389	Not Controlled Action (Particular Manner)	Post-Approval
Gold 2D Marine Seismic Survey Permit Areas WA375P and WA376P	2009/4698	Not Controlled Action (Particular Manner)	Post-Approval
Ichthys 3D Marine Seismic Survey	2010/5550	Not Controlled Action (Particular Manner)	Post-Approval
Joseph Bonaparte Gulf Seabed mapping survey	2010/5517	Not Controlled Action (Particular Manner)	Post-Approval
Kingtree & Ironstone-1 Exploration Wells	2011/5935	Not Controlled Action (Particular Manner)	Post-Approval
Koolama 2D Seismic Survey Dampier Basin	2010/5420	Not Controlled Action (Particular Manner)	Post-Approval
Malita West 3D Seismic Survey WA-402-P and WA-403-P	2007/3936	Not Controlled Action (Particular Manner)	Post-Approval
Marine Environmental Survey 2012	2012/6310	Not Controlled Action (Particular	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
		Manner)	
Nova 3D Seismic Survey	2013/6825	Not Controlled Action (Particular Manner)	Post-Approval
NT/P77 3D Marine Seismic Survey	2009/4683	Not Controlled Action (Particular Manner)	Post-Approval
NT/P80 2010 2D Marine Seismic Survey	2010/5487	Not Controlled Action (Particular Manner)	Post-Approval
Octantis 3D Marine Seismic Survey, Permit Area AC/P41 off northern Western Australia	2007/3369	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Exploration Drilling Campaign	2011/6222	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Fibre Optic Cable Network Construction & Operation, Port Hedland WA to Darwin NT	2014/7223	Not Controlled Action (Particular Manner)	Post-Approval
Offshore Gas Exploration Drilling Campaign	2012/6384	Not Controlled Action (Particular Manner)	Post-Approval
Petrel MC2D Marine Seismic Survey	2010/5368	Not Controlled Action (Particular Manner)	Post-Approval
Removal of Potential Unexploded Ordnance within NAXA	2012/6503	Not Controlled Action (Particular Manner)	Post-Approval
Santos Petrel-7 Offshore Appraisal Drilling Programme (Bonaparte Basin)	2011/5934	Not Controlled Action (Particular Manner)	Post-Approval
Schild MC3D Marine Seismic Survey	2012/6373	Not Controlled Action (Particular Manner)	Post-Approval

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action (particular manner)			
Schild Phase 11 MC3D Marine Seismic Survey, Browse Basin	2013/6894	Not Controlled Action (Particular Manner)	Post-Approval
Sonar and Acoustic Trials	2001/345	Not Controlled Action (Particular Manner)	Post-Approval
Songa Venus Drilling Programme, Bonaparte Basin	2009/4990	Not Controlled Action (Particular Manner)	Post-Approval
Sunshine Infill 2D and Mimosa 2D Marine Seismic Surveys	2009/4699	Not Controlled Action (Particular Manner)	Post-Approval
Tow West Atlas wreck from present location to boundary of EEZ	2010/5652	Not Controlled Action (Particular Manner)	Post-Approval
Vampire 2D Non Exclusive Seismic Survey, WA	2010/5543	Not Controlled Action (Particular Manner)	Post-Approval
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval
Zeemeermin MC3D seismic survey, Browse Basin, Offshore WA	2009/5023	Not Controlled Action (Particular Manner)	Post-Approval
Zeppelin 3D Seismic Survey	2011/6148	Not Controlled Action (Particular Manner)	Post-Approval
Referral decision			
2D Marine Seismic Survey	2008/4623	Referral Decision	Completed
3D Seismic Survey (NT/P68)	2006/2949	Referral Decision	Completed
Aurora extension MC3D Marine Seismic Survey	2011/5887	Referral Decision	Completed
BRSN08 3D Marine Seismic Survey	2008/4582	Referral Decision	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Referral decision			
Field efficacy trial of the Hisstory bait for feral cats, at Yampi Sound Defence Training Area, Kimb	2017/7977	Referral Decision	Completed
Nova 3D Seismic Survey, WA 442-NT/P81, Joseph Bonaparte Gulf	2013/6820	Referral Decision	Completed
Seismic Data Acquisition, Browse Basin	2010/5475	Referral Decision	Completed
Tidal Power Generation Turbine	2009/5235	Referral Decision	Completed

Key Ecological Features

[\[Resource Information \]](#)

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Ancient coastline at 125 m depth contour	North-west
Carbonate bank and terrace system of the Sahul Shelf	North-west
Carbonate bank and terrace system of the Van Diemen Rise	North
Continental Slope Demersal Fish Communities	North-west
Pinnacles of the Bonaparte Basin	North-west
Pinnacles of the Bonaparte Basin	North

Biologically Important Areas

[\[Resource Information \]](#)

Scientific Name	Behaviour	Presence
Dolphins		
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Breeding	Known to occur
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Calving	Known to occur
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Foraging	Known to occur
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Foraging (high density prey)	Known to occur

Scientific Name	Behaviour	Presence
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Foraging likely	Known to occur
Orcaella heinsohni Australian Snubfin Dolphin [81322]	Resting	Known to occur
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Breeding	Known to occur
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Breeding	Likely to occur
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Calving	Likely to occur
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Calving	Known to occur
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Foraging	Likely to occur
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Foraging	Known to occur
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Foraging (high density prey)	Likely to occur
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Foraging (high density prey)	Known to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Breeding	Known to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Calving	Known to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Foraging	Known to occur
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Foraging likely	Known to occur

Scientific Name	Behaviour	Presence
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Migration likely	Known to occur
Dugong		
Dugong dugon Dugong [28]	Foraging	Likely to occur
Dugong dugon Dugong [28]	Migration likely	Known to occur
Marine Turtles		
Caretta caretta Loggerhead Turtle [1763]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Foraging	Likely to occur
Chelonia mydas Green Turtle [1765]	Foraging	Known to occur
Chelonia mydas Green Turtle [1765]	Internesting	Known to occur
Chelonia mydas Green Turtle [1765]	Internesting buffer	Known to occur
Chelonia mydas Green Turtle [1765]	Nesting	Known to occur
Lepidochelys olivacea Olive Ridley Turtle [1767]	Foraging	Known to occur
Natator depressus Flatback Turtle [59257]	Foraging	Known to occur
Natator depressus Flatback Turtle [59257]	Internesting	Known to occur
Natator depressus Flatback Turtle [59257]	Internesting	Likely to occur
Natator depressus Flatback Turtle [59257]	Internesting buffer	Known to occur

Scientific Name	Behaviour	Presence
Nator depressus Flatback Turtle [59257]	Nesting	Known to occur
River shark		
Pristis clavata Dwarf Sawfish [68447]	Foraging	Known to occur
Pristis clavata Dwarf Sawfish [68447]	Juvenile	Known to occur
Pristis clavata Dwarf Sawfish [68447]	Nursing	Known to occur
Pristis clavata Dwarf Sawfish [68447]	Pupping	Known to occur
Pristis pristis Largetooth Sawfish [60756]	Foraging	Known to occur
Pristis pristis Largetooth Sawfish [60756]	Nursing	Known to occur
Pristis pristis Largetooth Sawfish [60756]	Nursing	Likely to occur
Pristis pristis Largetooth Sawfish [60756]	Pupping	Likely to occur
Pristis zijsron Green Sawfish [68442]	Foraging	Known to occur
Pristis zijsron Green Sawfish [68442]	Nursing	Known to occur
Pristis zijsron Green Sawfish [68442]	Pupping	Known to occur
Seabirds		
Ardena pacifica Wedge-tailed Shearwater [84292]	Breeding	Known to occur
Fregata ariel Lesser Frigatebird [1012]	Breeding	Known to occur

Scientific Name	Behaviour	Presence
Fregata minor Greater Frigatebird [1013]	Breeding	Known to occur
Phaethon lepturus White-tailed Tropicbird [1014]	Breeding	Known to occur
Sterna dougallii Roseate Tern [817]	Breeding	Known to occur
Sterna dougallii Roseate Tern [817]	Resting	Known to occur
Sternula albifrons sinensis Little Tern [82850]	Breeding	Known to occur
Sternula albifrons sinensis Little Tern [82850]	Resting	Known to occur
Sula leucogaster Brown Booby [1022]	Breeding	Known to occur
Sula sula Red-footed Booby [1023]	Breeding	Known to occur
Thalasseus bengalensis Lesser Crested Tern [66546]	Breeding	Known to occur
Sharks		
Rhincodon typus Whale Shark [66680]	Foraging	Known to occur
Whales		
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Migration	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Calving	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Migration	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Migration (north and	Known to occur

Scientific Name	Behaviour	Presence
Megaptera novaeangliae Humpback Whale [38]	south) Nursing	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Resting	Known to occur

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [-Geoscience Australia](#)
- [-CSIRO](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.


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APPENDIX C:

RELEVANT PERSON CONSULTATION

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APPENDIX C1:


RELEVANT PERSONS CONSULTATION METHODOLOGY FOR THE BLACKTIP OPERATIONS ENVIRONMENT PLAN – BRIDGING DOCUMENT

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APPENDIX C1:

RELEVANT PERSONS CONSULTATION METHODOLOGY FOR THE BLACKTIP OFFSHORE OPERATIONS EP

– BRIDGING DOCUMENT

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1. INTRODUCTION

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is responsible for regulating environmental management arrangements for offshore petroleum and greenhouse gas activities in Commonwealth waters. The primary legislation regulating these activities is the *Offshore Petroleum and Greenhouse Gas Storage (OPGGS) Act 2006* and associated regulations. When developing or revising an Environment Plan (EP) in accordance with the OPGGS Environment (E) Regulations, titleholders must consult with relevant persons.

The OPGGS Act and associated regulations provides the legal framework for the exploration and recovery of petroleum and greenhouse gas activities in Commonwealth waters (those areas more than 3 nautical miles from the territorial sea baseline). The OPGGS(E) Regulations require that a petroleum or greenhouse gas activity is undertaken in an ecologically sustainable manner, and in accordance with an accepted EP.

OPGGS(E) Regulation 25 requires a titleholder to undertake consultation with relevant authorities, persons and organisations in the course of preparing a new or a revision to an EP. Specifically OPGGS(E) Regulation 25 requires:

1. In the course of preparing an environment plan, or a revision of an environment plan, a titleholder must consult each of the following (a relevant person):
 - a) each Commonwealth, State or Northern Territory agency or authority to which the activities to be carried out under the environment plan may be relevant
 - b) if the plan relates to activities in the offshore area of a State—the Department of the responsible State Minister
 - c) if the plan relates to activities in the Principal Northern Territory offshore area—the Department of the responsible Northern Territory Minister
 - d) a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the Environmental Plan,
 - e) any other person or organisation that the titleholder considers relevant.
2. For the purpose of the consultation, the titleholder must give each relevant person sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on the functions, interests or activities of the relevant person.
3. The titleholder must allow a relevant person a reasonable period for the consultation.
4. The titleholder must tell each relevant person the titleholder consults that:
 - a) the relevant person may request that particular information the relevant person provides in the consultation not be published, and
 - b) information subject to such a request is not to be published under this Part.

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This Appendix acts as a Bridging Document to the Eni Blacktip Stakeholder Management Plan (0000_DV_PR.DPM.0110.000) and outlines the approach Eni has utilised for the identification of, and consultation with, relevant persons as required under the OPGGS(E) Regulations for the petroleum activities within the Blacktip Offshore Operations EP (000036_DV_PR.HSE.0677.000).

All relevant person consultation for the Blacktip Offshore Operations EP has been performed in accordance with the intentions set within the Eni Blacktip Stakeholder Management Plan (0000_DV_PR.DPM.0110.000).

This Bridging Document covers:

- the process for identifying relevant persons applicable to the Blacktip Offshore Operations EP.
- the process of consultation, including the preparation of appropriate consultation materials and forms of consultation for each relevant person identified, as well as the assessment of information and feedback received.
- all other information to demonstrate to NOPSEMA that appropriate consultation has been undertaken in accordance with the OPGGS(E) Regulations, including any additional information incorporated into the EP as a result of consultation.

Eni's strategy has been, and is, to develop and maintain long-term relationships with stakeholders (including relevant persons) in and around the Blacktip Project, both onshore at Yelcherr Gas Plant and offshore, which may result in consultation and engagement at levels above and beyond that required for the purposes of compliance with the OPGGS(E) Regulations.

It should be noted that the relevant person consultation for the Blacktip Offshore Operations EP has been completed in conjunction with the Blacktip Offshore Drilling EP (000036_DV_PR.HSE.0887.000) relevant person consultation, to avoid duplication of effort and reduce stakeholder fatigue. The environments that may be affected (EMBA) in these EPs are very similar and the relevant persons identified are the same.

1.1 Process for Relevant Person Engagement

Since Blacktip has been operational since 2009, and through the implementation of its Blacktip Stakeholder Management Plan (0000_DV_PR.DPM.0110.000), Eni has maintained relationships with local communities and other users of the marine environment in the region. Relevant persons previously identified have been continually informed of Blacktip activities and operations over the life of the asset, including those activities covered by the in-force Blacktip Operations Environmental Plan (000036_DV_PR.HSE.0677.000).

Figure 1-1 outlines the process that Eni follows across all assets, in the consideration of authentic engagement of stakeholders that have an interest in the associated activities.



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Figure 1-1: Eni’s Process for Engaging with Relevant Persons

This model has been implemented for this Bridging Document to show the clear process Eni has undertaken to identify and engage with relevant persons associated with the activities within the Blacktip Offshore Operations EP.

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2. REGULATIONS AND GUIDELINES

Table 2-1 provides an overview of the guidance or guidelines that were considered when developing this Bridging Document and the associated consultation approach for the Blacktip Offshore Operations EP.


Table 2-1: Guidance or Guidelines Relevant to the Consultation Approach

Guidance or Guidance Document	Content
NOPSEMA Guideline: Consultation in the course of preparing an environment plan (NOPSEMA, 2023)	Provides guidance on consultation for EPs. Focuses on the instructive reasons given by the Full Federal Court of Australia, in its appeal decision Santos NA Barossa Pty Ltd v Tipakalippa [2022], FCAFC 193 (appeal decision), on 2 December 2022.
NOPSEMA Guideline: Consultation with Commonwealth agencies with responsibilities in the marine area (NOPSEMA, 2022a)	Provides guidance on consultation for EPs, specifically Australian Government agencies with responsibilities in the Commonwealth marine area.
NOPSEMA Guidance Note: Responding to public comment on environment plans (NOPSEMA, 2022b)	Provides guidance on consultation for EPs. Reflects NOPSEMA's interpretation of the requirements of the OPGGS(E) Regulations.
NOPSEMA Guidance Note: Petroleum activities and Australian Marine Parks (NOPSEMA, 2020)	Provides guidance on managing petroleum activities risks and impacts to Australian Marine Parks and to support consultation with the Director of National Parks.
NOPSEMA Guideline: Environment Plan decision making (Doc#: N-04750-GL1721, 2024)	Sets out NOPSEMA's considerations in making decisions in accordance with the legislated criteria relevant to EPs. Some clear definitions are extracted from this guideline.
Interim Engaging with First Nations People and Communities on Assessments and Approvals Under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (DCCEEW, 2023)	Outlines the statutory obligations that apply to, and DCCEEW's expectations of, proponents engaging with First Nations people and communities under the EPBC Act.
Consultation approach for unplanned events (WAFIC, 2023)	Outlines Western Australian Fishing Industry Council's preferred consultation strategy for significant unplanned events (e.g. oil spill) where titleholders can demonstrate the likelihood of such events occurring is extremely low.
Australian Fisheries Management Authority: Petroleum industry consultation with the commercial fishing industry (AFMA, 2023)	Provides information for the petroleum industry on how to consult with the Commonwealth commercial fishing industry.


The definitions in Table 2-2 have been used as the basis for the approach to identifying and consulting with relevant persons and have been referred to throughout this Bridging Document.

Table 2-2: List of Definitions


Definition	Description
Activities	In relation to sub-regulation 25(1) of the OPGGS(E) Regulations, something that a person or group does. This is likely directed to what the relevant person is already doing'.
Blacktip Project	Refers to the Blacktip Project as a whole, both onshore (Yelcherr Gas Plant) and offshore components.

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Definition	Description
Consultation period	Defines the general consultation period during development of the EP. The consultation period is set within the email to the relevant person and is at least a six-week period (30 business days). This is a default initial expected response period unless there is justification for an alternative period. Where dialogue with relevant persons is ongoing after this period, Eni will continue to consult with relevant persons until Eni believes it has provided sufficient evidence/justification to close the consultation.
EMBA	The environment that may be affected, as defined in Section 4 of the EP. Broadly, it is the area within which the environment that may be affected from both planned and unplanned activities, encompassing the outermost boundary of the worst-case spatial extent of the credible hydrocarbon release scenarios
EP Implementation Engagement	Following the consultation period, arrangements for ongoing consultation with relevant authorities, persons, and organisations is included in the implementation strategy, in order to demonstrate that there is an effective two-way communication process in place between the titleholder and those relevant persons (as per OPGGS(E) Regulations Subsection 22[15]).
Environment Plan	Refers to the Blacktip Offshore Operations EP.
Functions	In relation to subregulation 25(1) of the OPGGS(E) Regulations. Functions refer to a power or duty to do something.
Interests	In relation to subregulation 25(1) of the OPGGS(E) Regulations. Interests represent a connection to the values described in the EP. Any interest possessed by an individual, whether or not the interest amounts to a legal right or is a proprietary or financial interest or relates to reputation. However, an interest does not extend to general public interest in an activity.
Interested person	A person who may have an interest in the activities but is not a relevant person.
Objection or claim	<p>May include:</p> <ul style="list-style-type: none"> An expression of opposition, protest, concern or complaint about the proposed activities. A request or demand that certain action be taken by the titleholder to address adverse impacts. An assertion that there will be an adverse impact. An allegation to cast doubt about the manner in which the activities will be managed.
Operational Area	The spatial boundary of the Blacktip operations, as defined in Section 3.2.2. of the EP. The area encompassing all planned activities to be undertaken by Eni including the spatial extent within which impacts from planned activities can or will occur, such as operational discharges.
Petroleum activities	The petroleum activities referred to within the Blacktip Offshore Operations EP.
Reasonable period	A reasonable time for relevant persons to consider the effect of a proposed activity on their functions, interests or activities and have opportunity to make a response detailing any objections or claims. Defined by the consultation period.
Reasonable attempt	Making reasonable attempts to make contact with all identified relevant persons for the EP (where a reasonable and workable avenue exists). Recognising that specific consultation methods of engagement and ways to pass on information may be more appropriate for certain groups of relevant persons.
Relevant matter	A matter raised by a relevant person that has been assessed as being relevant to the activity. May also include a request for further relevant information, or provision of information that is relevant to the activities.

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Definition	Description
Relevant person	Can be a person, organisation, department or agency that falls within one of the categories as defined by subregulation 25(1) of the OPGGS(E) Regulations; however, it does not include those whose functions, interests or activities will only be affected by an activity in an immaterial or negligible way.
Sensitive information	Captures personal information about an individual that is contained in information given by a relevant person in the consultation period or any person during public comment on a EP - as defined in S.5 of the OPGGS(E) Regulations.
Subject matter experts (SME)	Specialists from either within Eni or contracting to Eni, such as engineers, Aboriginal Affairs experts, Environment team members and other technical experts relative to an activity.
Values	Values described in the EP, broadly: <ul style="list-style-type: none"> • natural values • cultural and heritage values • socioeconomic values.
ZPI	The zone of potential impact (or moderate exposure zone) as defined in Section 4 and shown in Figure 4.1 of the EP. This zone is smaller than the EMBA and may be representative of an area of biological impact from hydrocarbons (refer Section 8.5 for more information).

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3. RELEVANT PERSON IDENTIFICATION AND ANALYSIS

To identify relevant persons, the required inputs include:

- a description of the petroleum activities detailed within the EP
- the spatial footprint of the petroleum activities, being the:
 - Operational Area
 - The zone of potential impact (ZPI)
 - The environment that may be affected (EMBA)
- an assessment of the impacts and risks from both planned and unplanned events.

Eni works through a relevant person identification process, including coastline, nearshore and Sea Country scopes, to ensure all potentially relevant persons are identified and afforded the opportunity to comment on the petroleum activities. Broadly, this identification process includes:

- a review of Eni's stakeholder database, including relevant persons consulted for other relevant activities in the area
- a review of legislation and guidelines applicable to petroleum and marine activities to ensure relevant administrative and regulatory agencies are consulted
- identification of marine user groups and interest groups active in the area, such as commercial fisheries, charter operators and Traditional Owner groups
- a review of the Commonwealth, Northern Territory (NT) and Western Australian (WA) fisheries data, including licence holders of relevant fisheries
- discussions with other identified relevant persons and industry organisations to identify other potentially relevant persons.

Opportunities for self-reporting relevance are presented through the engagement process and are encouraged; for example, by providing contact details on the materials provided to relevant persons.

3.1 Relevant Person Identification

An initial list of relevant persons for the EP was compiled by a third-party subject matter expert, with subsequent reviews and workshops attended by relevant Eni personnel. The Relevant Persons Register (Appendix C2) presents the list of the currently identified relevant persons. Outside of this EP, Eni will continue to review and update its Blacktip Stakeholder Register, throughout the lifecycle of the broader Blacktip Project (e.g., whenever new potential relevant persons and interested persons are identified).

In circumstances where there is uncertainty as to whether the functions, interests or activities of a person, organisation, department or agency may be affected by the petroleum activities, these persons are categorised as a relevant person in the first instance (under subregulation 25 1e), any other person or organisation that the titleholder considers relevant).

Each relevant person has been classified into one of the categories as defined by subregulation 25(1) (a)-(e) of the OPGGS(E) Regulations.



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Table 3-1 presents the categories and examples of those relevant persons against the identifiers required under subregulation 25(1) (a)-(e) of the OPGGS(E) Regulations.

Table 3-1: Relevant Person Categories

Category	Definition	Examples of relevant persons
25(1) a	Each Commonwealth, State or Northern Territory agency or authority to which the activities to be carried out under the environment plan may be relevant;	This category includes, but is not limited to, Commonwealth, State and Northern Territory departments or agencies regulating the activities in the Operational Area, such as Department of Climate Change, Energy, the Environment and Water, Department of Agriculture, Fisheries and Forestry, NT Department of Environment, Parks and Water Security, NT Department of Infrastructure, Planning and Logistics, WA Department of Primary Industries and Regional Development, etc..
25(1) b	If the plan relates to activities in the offshore area of a State—the Department of the responsible State Minister;	This category includes the associated mining, energy and/or resources department/s for State Minister of Western Australia.
25(1) c	If the plan relates to activities in the Principal Northern Territory offshore area—the Department of the responsible Northern Territory Minister;	This category includes the associated mining, energy and/or resources department/s for Minister for Northern Territory.
25(1) d	A person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the environment plan	This category includes but is not limited to, relevant persons such as Aboriginal land councils/prescribed body corporate representatives, industry (e.g., commercial fishing, tourism) representative bodies, and other industries (e.g., fisheries, petroleum) that overlap within the EMBA.
25(1) e	Any other person or organisation that the titleholder considers relevant	This category includes any other relevant persons, as determined by Eni during the relevant person identification process.

It is understood that during the consultation process, new information may become available to inform the extent of effect of an activity on a relevant person's functions, interests or activities, which may result in an identified relevant person being removed from the Relevant Persons Register (Appendix C2). For example, a relevant person identified by Eni may advise that they do not believe they are relevant, or new information may become available which further informs/clarifies a relevant person's actual functions, interests or activities which are not to the extent as previously perceived by Eni.

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Eni also maintains a database of interested persons, being those who may have an interest in the Blacktip Project (onshore and offshore components), but not be a relevant person. This database is included in the Blacktip Stakeholder Management Plan (0000_DV_PR.DPM.0110.000).

Figure 3-1 summarises the process of identifying relevant persons for this EP.

The detail and data sources used for relevant persons identification for the EP are presented in Table 3-2, along with relevant persons categorisation under subregulation 25(1).

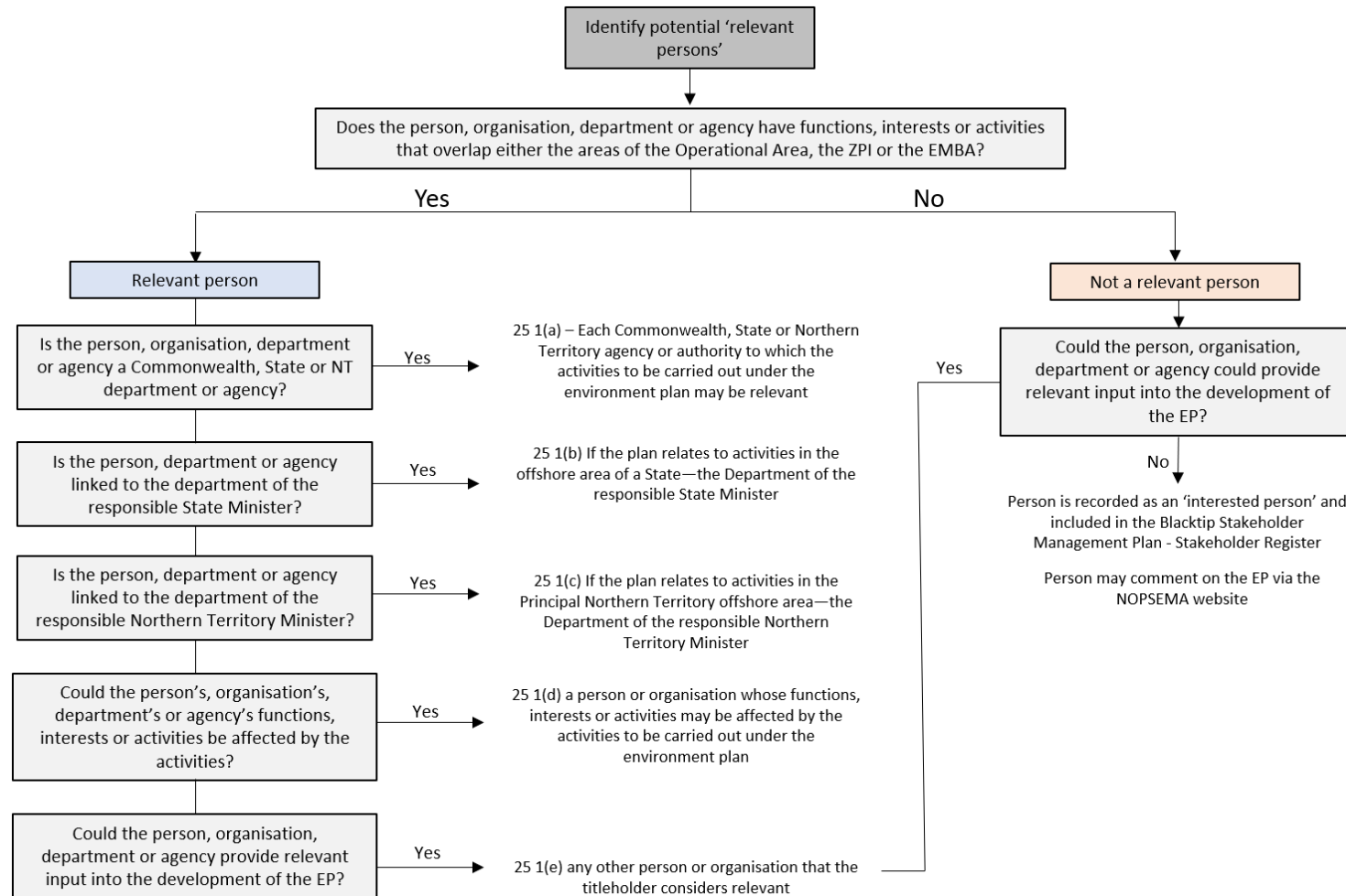


Figure 3-1: Determination of relevant persons




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Table 3-2: Data sources and the factors considered when identifying relevant persons

Category	Data sources	Factors considered in relevant person determination
Government departments and agencies and ministers	<p>The data sources that were used to determine potentially relevant Government departments, agencies and ministers are:</p> <ul style="list-style-type: none"> relevant data previously obtained during Blacktip activities consultation http://www.directory.gov.au/departments-and-agencies https://www.wa.gov.au/agency https://nt.gov.au/about-government/government-agencies https://nt.gov.au/about-government/the-cabinet https://parliament.nt.gov.au/members https://www.parliament.wa.gov.au/parliament/memblast.nsf/WAMembers https://www.wa.gov.au/government/premier-and-cabinet-ministers Current Ministry List – Parliament of Australia (aph.gov.au) Relevant Decision Makers (nopta.gov.au). 	<p>Government departments and agencies defined under subregulation 25(1) a are deemed relevant where their functions or activities overlap the Operational Area, ZPI and/or EMBA.</p> <p>Relevant persons defined under subregulation 25(1) b and c, are limited to departments of responsible State/Northern Territory ministers that are representatives of the Offshore Petroleum Joint Authorities for offshore areas adjacent to where the activities occur.</p>
Local government authorities (LGAs)	<p>The following data sources were used to determine potentially relevant LGAs:</p> <ul style="list-style-type: none"> relevant data previously obtained during Blacktip activities consultation NT Councils Local Government Association of the Northern Territory WA Online Local Government Directory Western Australian Local Government Association. 	<p>Only LGAs with coastal boundaries and where shoreline contact is predicted are deemed relevant.</p> <p>Consideration given to whether an LGA is located in an area (or in the vicinity) of the Blacktip Project long-term area of operational presence.</p>
First Nations	<p>The following data sources were used to determine potentially relevant First Nations and community organisations:</p> <ul style="list-style-type: none"> relevant data previously obtained during Blacktip activities consultation (e.g., during meetings/community events) input from internal and external technical subject matter experts National Native Title Tribunal Register of Native Title Claims and Determinations Aboriginal and Torres Strait Islander people’s ranger groups (e.g., Thamarrurr Rangers) Marine Park Management Plans previous work established by Eni in the Thamarrurr region (e.g., sea country mapping exercise) KRED Enterprises expertise and unique knowledge of the Traditional Owner groups in the Kimberley. 	<p>PBCs, Native Title Representative bodies and organisations representing First Nations people who are associated with the ZPI and/or EMBA are considered relevant persons (category 25(1) d) conservatively, on the basis of uncertainty as to whether their functions, interests or activities would be affected by activities.</p> <p>Prescribed Bodies Corporate (PBCs), Native Title representative bodies and organisations representing First Nations people who are not associated with the ZPI and/or EMBA and are not associated with coastal areas are excluded.</p>


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Category	Data sources	Factors considered in relevant person determination
Commercial fishing (licence holders, fisheries, associations/ councils) and recreational fishing associations	<p>The following data sources were used to determine potentially relevant commercial and recreational fishers and associated organisations:</p> <ul style="list-style-type: none"> • relevant data previously obtained during Blacktip activities consultation • Commonwealth, State and Territory fishery management areas • historic fishing effort data • databases, fishery reports or publications developed by relevant Commonwealth, State and Territory departments • requests for licence holder details • AFMA list of fishing industry associations (petroleum industry consultation with the commercial fishing industry Australian Fisheries Management Authority (afma.gov.au)). 	<p>Only those commercial fisheries with fishery management areas that overlap the ZPI and/or EMBA are considered relevant persons.</p> <p>Only recreational fishing associations with activities that overlap the ZPI and/or EMBA are considered relevant persons.</p> <p>Consideration given to whether fisheries are impacted by planned Blacktip petroleum activities.</p>
Businesses	<p>The following data sources were used to determine potentially relevant Chambers of Commerce, fishing charters and tourism operators:</p> <ul style="list-style-type: none"> • relevant data previously obtained during Blacktip activities consultation • operator data previously obtained • subject matter expertise • Online web searches. 	<p>Only businesses reliant on marine or coastal environments were considered relevant if they overlapped areas of the ZPI and/or EMBA.</p> <p>Consideration given to whether a business is located in an area of the Blacktip Project long-term area of operational presence.</p>
Oil and gas or greenhouse gas titleholders	<p>The following data sources were used to determine potentially relevant oil and gas or greenhouse gas titleholders:</p> <ul style="list-style-type: none"> • relevant data previously obtained during Blacktip activities consultation • National Offshore Petroleum Titles Administrator title search and use of interactive map • subject matter expertise • Online web searches. 	<p>Consideration given to whether a titleholder is located in the vicinity (within approximately 100 km radius) of the petroleum activities.</p>
Environmental organisations (non-government)	<p>The following data source was used to determine potentially relevant environmental organisations:</p> <ul style="list-style-type: none"> • relevant data previously obtained during Blacktip activities consultation • subject matter expertise • Online web search for those with an active interest in areas of WA and the NT. 	<p>Non-government organisations are limited to those with invested local interests within the Operational Area, ZPI and/or EMBA (i.e., State, Territory and local area organisations), and other organisations that have self-identified as being relevant due to a specific function, interest or activity that directly relates to the possible consequences of the activity.</p>

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3.2 Self-Identified Relevant Person

Promulgation of consultation materials may result in the self-identification of additional relevant persons. Eni welcomes self-identified relevant persons and effort has been made to facilitate this through extended enquiry (refer Section 5.2). The opportunity exists for such persons to contact Eni, via Eni's specific email address. In this scenario, newly identified relevant persons are consulted in the manner described in this Bridging Document. Further, new relevant persons have been added to the Relevant Persons Register (Appendix C2).

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4. RELEVANT PERSON CONSULTATION PLANNING

4.1 Provision of Information to Relevant Persons

Subregulation 25 (2) of the OPGGS(E) Regulations provides that:

For the purpose of the consultation, the titleholder must give each relevant person sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on the functions, interests of activities or the relevant person.

In accordance with the above, when developing consultation materials, the information to be provided to relevant persons in high-level materials (e.g., EP fact sheets) are:


- summary of activity description, including location, timing and duration, including distances from the Australian coastline and a map with coordinates listed.
- high-level description of the environment that may be exposed in relation to values associated with the EMBA, such as marine protected areas and protected species habitats.
- summary of potential impacts associated with the activity, including a high-level description of emissions, discharges and wastes.
- summary of management controls to be implemented.
- statement of reasons as to why the relevant person is being consulted.

The information provided is to also seek advice from the relevant person as to next steps for consultation and Eni's expectations on a response (i.e., what information is being sought, within what timeframe and how the information will be used).

On request by a relevant person, or in a situation where Eni have not received responses following two attempts of email communication, further communication methods will be used to exchange the above information, such as:

- written documentation (e.g., presentation materials/slides).
- verbal communication during telephone calls (pre-emptory or in response or follow-up), targeted meetings, information sessions.

Regardless of the method applied, the information provided is targeted to reduce the information burden on the relevant person, to reduce the possibility of confusion or misinformation, and to improve the likelihood of receiving feedback from the consultation process.

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4.2 Planning and Preparing for Consultation

In order to prepare for effective consultation to have taken place, a number of strategies were applied to ensure all relevant person groups: appropriately received all information; were provided a reasonable opportunity for input; and were given opportunity to participate in genuine two-way dialogue.

Planning and preparation included:

- Preparation of content, lay-out and QR code for newspaper advertisements and preparation of script for radio advertisements.
- Development of high-level resources (e.g., EP Fact sheets / information packages).
- Tailored content preparation for consistency of message in correspondence, emails and phone calls and follow-up phone calls.
- Preparation of other targeted materials (e.g., slides and handouts), for distribution at meetings and roadshows (in person and online).

Note: the materials used during consultation with First Nations relevant persons have been included in Appendix C3.

4.2.1 Specific Consultation Approaches and Information Requirements


Some relevant persons have developed guidance documents or have information on their websites, which outline specific information they require from a titleholder during EP consultation. Any specific guidance (identified in Section 2) was also utilised when preparing consultation materials and engagement approaches.

The below provides details of the specific consultation approaches for certain relevant persons.

Other Petroleum or Greenhouse Gas Titleholders

Given other titleholders have an understanding of the industry and the potential consequences of associated activities, Eni provided a factsheet to titleholders who have known ongoing operational interests within proximity (approximately 100 km radius) of the petroleum activities Operational Area, via email. It is recognised some titleholder within the EMBA may not be captured in this method; however, given these titleholders are not impacted by planned activities, Eni considers this a reasonable approach.

Eni followed up with these titleholders as appropriate to their functions, interests and activities, with a focus on those with known operational interests closest to the petroleum activities Operational Area.

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Commercial Fishers

The designated licenced areas of many of the fisheries are extensive over the Australian coast, including within the EMBA. The EP provides an assessment of the potential interaction of these fisheries with the petroleum activities, based on the nature of the fishery and historic effort and catch data. Based on this data and historic consultation efforts for the Blacktip Project petroleum activities, it was determined that the only commercial fishery with effort in proximity (approximately 50km) to the petroleum activities is the Northern Prawn Fishery.

Given all planned petroleum activities occur within the already in place 500m petroleum safety zone around the wellhead platform, interaction with commercial fisheries is not anticipated (refer to the EP) for the operations activities. Whilst the peak bodies representing the commercial fisheries are considered by Eni to be established representatives of the fishing licence holders, and were provided with consultation materials. Where peak body representation could not be established Eni went further to ensure direct engagement with individual license holders whose fishing management or licence area overlaps the EMBA. To avoid unnecessary consultation fatigue with individual licence holders and in consideration of the long-established activities at the Blacktip Project, and the activities occurring within an already established petroleum safety zone, Eni has determined this the most appropriate means of consultation. Eni has sent individual licence holders consultation material in the past for the Blacktip Project petroleum activities and has not received responses.

The Northern Prawn Fishery peak body is to be provided with more detailed specific information about the proposed activities at its request. Eni has also established consultation with the Northern Prawn Fishery peak body for historic Blacktip Project petroleum activities.


Traditional Indonesian Fishers Approaches

The EMBA overlaps the MoU Box. However, Indonesian traditional fishing effort is largely focused on shallow waters (e.g. banks and shoals). Given the traditional nature of the fishery and there is no requirement for the fishery to be licensed, a register of contact details is not maintained (either by Indonesian or Australian government) or publicly available, as such there is no way to identify these individuals. Eni therefore has no reasonable means of identifying or contacting these individuals. Eni has inferred that the interest of these persons is similar as those licensed commercial fisheries (referred to in the above section).

First Nations Relevant Persons

Subject matter experts have provided guidance on culturally appropriate consultation approaches for First Nations relevant persons to inform the engagement.

In the first instance, Eni utilised land councils and registered PBCs recognised under the *Native Title Act* and other land rights legislation (e.g., *Aboriginal Land Rights (Northern Territory) Act*), to facilitate consultation with First Nations relevant persons. This initial consultation was used as a first line of enquiry and, where applicable, used to facilitate further identification and engagement with other First Nations relevant persons.

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Engagement with First Nations persons has been conducted in a culturally appropriate manner, ensuring local traditions, customs and protocols are considered prior to scheduling engagements.

Thamarrurr Region Engagement

Eni already has a partnership with the Thamarrurr Development Commission – Thamarrurr Rangers to map the ecological and cultural values of Sea Country in the Thamarrurr Region. The results of this mapping exercise were published by Streten *et al.* (2020) in the Australian Petroleum Production and Exploration Association Journal under the title ‘Mapping traditional ecological knowledge of Sea Country to understand biodiversity and areas of cultural importance’. Eni continues to maintain strong relationships with the Thamarrurr Rangers. During the most recent engagement of direct face-to-face communication in Wadeye, Eni distributed flyers to ensure the opportunity for self-identification of further relevant persons within the Wadeye community.

Eni published an advertisement in the Wadeye newsletter with the aim for relevant persons to self-identify and attend a community booth set up in Wadeye.

Further to this, Eni initiated engagement through Wadeye Regional Council and provided information about Eni’s activity. Noting the continual waves of unrest and conflict across the community since 2022, with violent surges recently in December 2023 to February 2024, Eni has been resolute in facilitating an ongoing engagement process in the Thamarrurr Region through Eni’s attendance at monthly community meetings.


Kimberley Region Engagement

After several unsuccessful attempts of seeking support from Kimberley Land Council, Eni took the initiative to engage KRED Enterprises (<https://www.kred.org.au/>) to facilitate engagement with First Nations people within the Kimberley. KRED was selected due to:

- KRED’s experience/connection through *Native Title Act* around WA
- KRED’s plans and abilities to facilitate meetings with Traditional Owner groups linked to the EMBA
- referrals from other titleholders.

Eni, with support from KRED Enterprises, identified PBCs that fall within the EMBA (through the process in Table 3-2, and noting KRED Enterprises’ expertise and unique knowledge of the Traditional Owner groups in the Kimberley) and commenced initial engagement through emails. Emails were sent by KRED, which included flyers with summary information on Eni’s process to prepare the EP, as well as invitation for relevant persons to self-identify.

KRED then arranged for roadshow or site visits to all the PBCs captured within the EMBA to hold public gatherings or targeted meetings.

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Broader NT Engagement including Tiwi Islands

Engagement with Northern Land Council (NLC) was initiated with meetings and emails, mainly seeking support with community engagement. Eni was advised by NLC to proceed with the community engagements without involvement of NLC.


Eni sought the support of Tiwi Land Council in engaging with Traditional Owners or relevant person within the Tiwi Islands.

4.3 The Consultation Period

As defined in Table 2-2, for consultation to be effective, relevant persons need to be afforded a 'reasonable period' to identify the effect of the proposed activity. For the EP, Eni set a default consultation period of 30 business days, based on the nature and scale of impact or risk to the relevant persons. It is noted an adequate period of time needs to be provided for the relevant person to receive the information provided, to make an evaluation of the information which may include third party input, and to then prepare and provide a response to Eni. As such, where there is justification for an alternative period, due to the need to extend the period, this will be implemented.

The consultation period with relevant persons during development of the EP was outlined within the consultation material (2023 Blacktip Operations Material Factsheet) at initially 31 July (approximately six weeks). However, where no response was received from a relevant person, subsequent deadlines for receiving comments were set. Eni has continued to follow up with relevant persons and has left the consultation period open up to 14 June 2024 to exhaust all offered opportunities for consultation to occur.

This then adds up to an in-total 11-month duration with appropriate follow-up of relevant persons since the consultation period commenced. It should also be noted that the Blacktip facilities have been operational since 2009 and Eni is familiar with local communities and other users of the marine environment in the region, previously identified relevant persons have been continually informed of Blacktip activities and operations over the life of the asset.

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5. CONSULTATION METHODOLOGY WITH RELEVANT PERSONS

Following assessment of regulations and guidelines; relevant person identification and analysis; and relevant person engagement planning, this section (linked to Figure 1.1: *Eni's Process for Engaging with Relevant Persons*) describes the actual stakeholder engagement with relevant persons to take place.


5.1 Consultation Approach

Following the planning for consultation which included development of high-level resources; scripting of correspondence messaging; tailored email/phone content preparation; preparation of other targeted materials; and development of a tool to consider whether consultation has appropriately been achieved, Eni implemented the following consultation approach:

1. Issuance of emails providing summary of activity and seeking response from stakeholders should they wish to consult (Where self-identified, further review to confirm and respond to any objection/claim).
2. Email and high-level information pack distribution to all stakeholders with default response period of 30 business days.
3. Mail-out of high-level information pack distribution to selected stakeholders upon receipt of direct addresses – default response period of 30 business days.
4. Phone calls as a follow up to initial email to all relevant persons with functions, interests or activities that overlap with the EMBA (or low exposure zone) and the ZPI (or moderate exposure zone).
5. Where phone numbers are available, further phone/email/text messages to follow up calls & emails to identified relevant persons.
6. Review of Relevant Persons Consultations Log (Appendix C4a) to ensure appropriate consultation with relevant persons has taken place.

A range of other engagement methods were considered and offered as appropriate, including the following:

- Announcement, ahead of time, of visits to relevant persons, through subject matter experts / associations that relate to regional stakeholders.
- Targeted materials (e.g., slides & handouts), distributed via meetings/roadshows with question-and-answer sessions (both in person and online).
- In person meetings/roadshows with support from subject matter experts / associations where targeted materials were distributed alongside the opportunity for question-and-answer sessions.
- Online meetings where targeted materials were issued and discussed alongside the opportunity for question-and-answer sessions.
- Where no response received, further tailored emails, direct phone calls and texts by stakeholder focal point to directly engage with relevant persons with functions,

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interests or activities that overlap the ZPI (or moderate exposure zone) and with the EMBA (or low exposure zone).

- Further attempts to directly engage with relevant persons who have not responded, with stakeholder focal point utilising tailored emails, direct phone calls and texts.

5.2 Extended Enquiry (Broader Consultation)

There may be instances where other persons, organisations, departments or agencies may consider themselves relevant and wish to be included in the consultation process. Therefore, as an additional proactive step to provide an opportunity to identify new relevant persons, Eni undertook:

- leafletting during roadshows or site visits (e.g., leaving consultation material leaflets in community centres and high traffic areas)
- local newspaper advertisement campaigns
- Advertisements on local radio stations.

The objective of this approach was to help identify any other relevant persons (through an opportunity to self-identify) that may not have already been identified as per category (and OPGGS(E) 25(1) in Table 3.1.


Note that the extended enquiry approach also provided another means of broadcasting information to existing relevant persons.

5.3 Follow-Up with No Response

Eni considers it advantageous to follow up with a relevant person on information provided for several reasons, particularly in the circumstance of documentation being provided by email or mail:

- to confirm that the information has been received.
- to enquire as to any questions on the information provided and if more/different information is required to enable the relevant person to make a sound consideration.
- to support Eni's position that a consultation period is adequate for the relevant person to respond to the information provided.
- as a common courtesy and an opportunity to build relationships with the relevant person, particularly in the interests of EP Implementation engagement.

It is also appreciated that relevant persons are not obligated to respond to a titleholder request to participate in the consultation process. In cases where no response has been received from a relevant person, after multiple relevant follow-ups, and where sufficient information and a reasonable period of time has been afforded to the relevant person, Eni then considers consultation to be closed for the purposes of the consultation period for the preparation of the EP.

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As shown in Figure 5-1, if no acknowledgement or response was received from attempts to contact a relevant person, as per Appendix C4a, Eni attempted alternative methods of contact, where this information was available. For example, this included phone calls, using alternative email addresses, or identifying an alternative contact person.

Eni recognises that email information may not be appropriate for some relevant persons (e.g., some Traditional Owner groups), and other engagement methods were subsequently used.

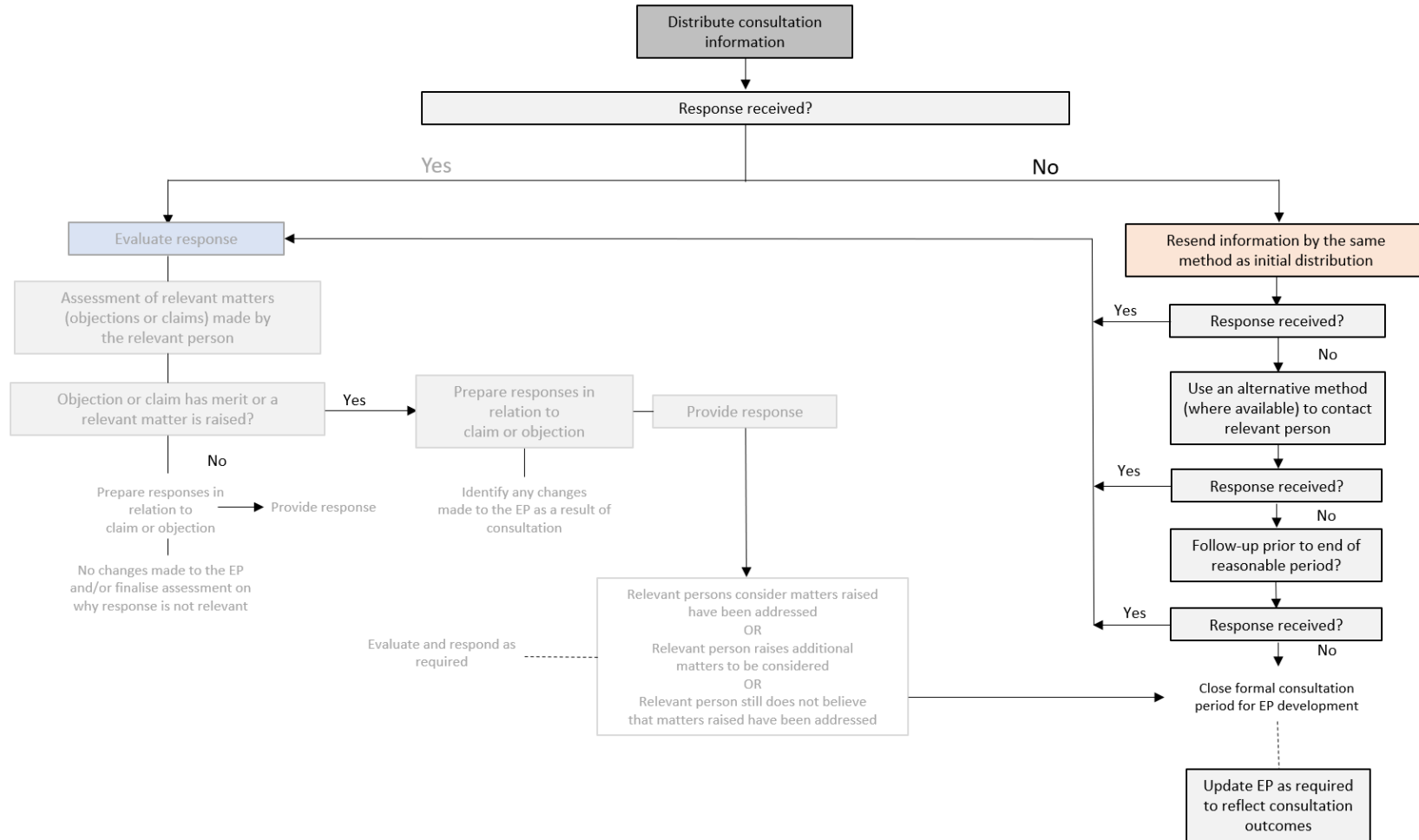



Figure 5-1: No Response Follow-up Flow Chart

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6. MONITORING OF RELEVANT PERSON CONSULTATION

6.1 Monitoring Consultation and Closing Consultation Period


Tracking progress for all relevant person consultation occurs through completion of the *Relevant Person Consultation Log* (Appendix C4a). This Log is derived from the *Relevant Persons Register* (Appendix C2) where all relevant persons have been identified and then transferred to the Log. This Consultation Log captures the number, and methods of consultation for each relevant person including, but not limited to emails, direct phone call canvassing, direct mail, follow ups, and face-to-face and virtual meetings.

In terms of considering whether consultation has appropriately been achieved for each relevant person, a monitoring system utilising relevant person groupings was established (Table 6-1) and this, combined with the process outlined in Figure 5-1: *No Response Follow-up Flow Chart*, enables Eni to assess whether there has been enough attempted approaches made to allow consultation for development of the EP to be closed.

Note that relevant person groupings as per Table 6-1 have been represented in Appendix C2 and again in Appendix C4a.

Table 6-1: Ensuring Appropriate Consultation with Relevant Person Groups


Group	Description	Consultation
Group 1	Relevant persons with functions, interests or activities that are associated with the Operational Area who may be affected by planned activities'	<p>Relevant person must be informed/consulted/involved (where the relevant person wishes to be consulted) during E.P. preparation to ensure targeted and tailored information is provided by titleholder focal point regarding planned activity.</p> <p>These relevant persons also experience extended enquiry notifications, broader, focused higher-level consultation, targeted and tailored information sharing.</p> <p>(i.e., newspaper ads with QR code that e-links to information package; radio ads; multiple email follow up; scheduled phone calls; coordinated roadshow visits; meetings and/or presentations; issue of tailored information packages; and responsiveness to clarifications on request).</p> <p>May include further meetings or presentations upon request.</p>
Group 2	Relevant persons with functions, interests or activities that are associated with the ZPI (or moderate exposure zone) who may be affected by unplanned activities (i.e. spills) and who require information	<p>Relevant person to be approached/ informed/ consulted during E.P. preparation to ensure targeted and tailored information is provided by titleholder focal point regarding planned activity.</p> <p>These relevant persons also experience extended enquiry notifications and broader, focused higher-level consultation.</p>

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Group	Description	Consultation
		(i.e., newspaper ads with QR code that e-links to information package; radio ads; multiple email follow up; scheduled phone calls; coordinated roadshow visits; meetings and/or presentations; issue of tailored information packages; and responsiveness to clarifications on request).
Group 3	Relevant persons with functions, interests or activities that are associated with the EMBA (but not the OA or ZPI) who may be affected by unplanned activities and who may have an interest and/or expectation to be informed about the unplanned activities	<p>Relevant person to be approached, informed and consulted via broader, focused higher-level consultation during E.P. preparation with targeted and tailored information provided regarding planned activity.</p> <p>(i.e., newspaper ads with QR code that e-links to information package; radio ads; email and phone follow up)</p>
Group 4	Any other relevant persons who may be indirectly impacted or have interests in the unplanned activities. Includes extended enquiry for persons who may not be known to Eni.	<p>Relevant person to be consulted via extended enquiry to notify of the activities during E.P. preparation.</p> <p>(i.e., newspaper ads with QR code that e-links to information package; radio ads; follow up emails).</p>

Table 6-1 above enables comprehension of the following planned sequential processes for consultation throughout EP preparation:

1. Direct engagement between all Eni key focal points (across disciplines) and relevant persons with functions, interests or activities that overlap with the **Operational Area** through providing tailored information with scheduled phone/email/meeting follow up to invite comments.
2. Targeted emails with tailored information and phone calls specifically to identified relevant persons with functions, interests or activities that overlap with the **EMBA** (low exposure zone). Initial default response period of 30 business days (unless there is justification for an alternative period) inviting comments.
3. Follow-up targeted emails and phone calls (within the 30-day response period) to the above identified relevant persons with functions, interests or activities that overlap with the EMBA (low exposure zone) to ensure receipt of information and to invite comments.
4. Eni stakeholder focal point providing tailored information to relevant persons with functions, interests or activities that overlap the **ZPI** (moderate exposure zone) who may be affected by unplanned activities (i.e., spills) through targeted emails and phone calls. Initial default response period of 30 business days (unless there is justification for an alternative period) inviting comments.

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5. Further scheduled phone/email follow up within 30-day response period; roadshow visits; meetings and/or presentations; and provision of detailed responsive correspondence upon request, to relevant persons with functions, interests or activities that overlap the ZPI (moderate exposure zone).
6. Notification to all potentially relevant persons of the activities via newspaper advertisements with a QR code that links the audience to the tailored information package. Additional notification via radio advertisements.

6.2 It should be noted that this 'relevant person groupings system' is only to monitor the sufficiency of allowing for a reasonable opportunity for input, and for determining whether consultation for development of the EP can be closed. The groupings system is not linked to any application and/or interpretation of information received from Relevant Persons in the groups. For information received from any Relevant Persons, this is addressed via the process outlined in Section 6.3, 'Assessment of Merit - Objections or Claims and Relevant Matters'. Monitoring Responses Received

Given one of the purposes of consulting relevant persons is to gather information that allows confirmation of assumptions made during the impact and risk assessment process for the petroleum activities, the assessment step of consultative responses is imperative to successfully undertaking and completing the petroleum activities.


Where relevant persons provided specific responses to Eni in relation to the EP, these are extracted from the *Relevant Person Consultation Log* (Appendix C4a) and recorded into the *Relevant Persons Consultations Feedback Assessment* (Appendix C4b).

When responses were received, an assessment of relevant matters, claims or objections has been undertaken so that an appropriate response can be provided (where appropriate) to the relevant person, and appropriate steps taken to address the matter.

6.3 Assessment of Merit - Objections or Claims and Relevant Matters

Eni's assessment of relevance and assessment of merit for the EP has considered the following:

- **Objection or claim has merit** – the objection or claim raised is relevant to both the petroleum activities and the relevant person's or organisation's functions, activities or interests. The objection or claim has merit if there is a reasonable/scientific basis for related effects or impacts to occur or there is a reasonable basis for the objection or claim to be addressed in the EP.
- **Objection or claim does not have merit** – the objection or claim raised may be relevant to the petroleum activities or the relevant person's or organisation's functions, activities or interests; however, the objection or claim raised has no credible or scientific basis.
- **Relevant matter** – the matter raised does not fit the criteria descriptions for objections or claims with or without merit. However, the matter raised is relevant to the petroleum activities, comprises a request to Eni for further relevant information, or provides information to Eni that is relevant to the EP development and petroleum activities.


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- **Not a relevant matter** – correspondence does not relate to the planned activity or the relevant person's, or organisation's functions, interests or activities being affected by the petroleum activities, such as a response with specific issues raised (or acknowledgement).

Figure 6-1 below summarises the process outlined in Section 6.2 and 6.3 above. Application and/or interpretation of all information received from Relevant Persons occurs in alignment with OPGGS(E) Regulation 24, which requires Eni to provide:

- responses made by relevant persons.
- an assessment of the merits of any objection or claim by relevant persons.
- statements of Eni's response to each objection or claim; and
- a copy of the associated response, if received, by the relevant person.

A report on all consultations of relevant persons under OPGGS(E) Regulation 25, can be found in Appendix C4a and C4b, which includes all details dot-pointed above.

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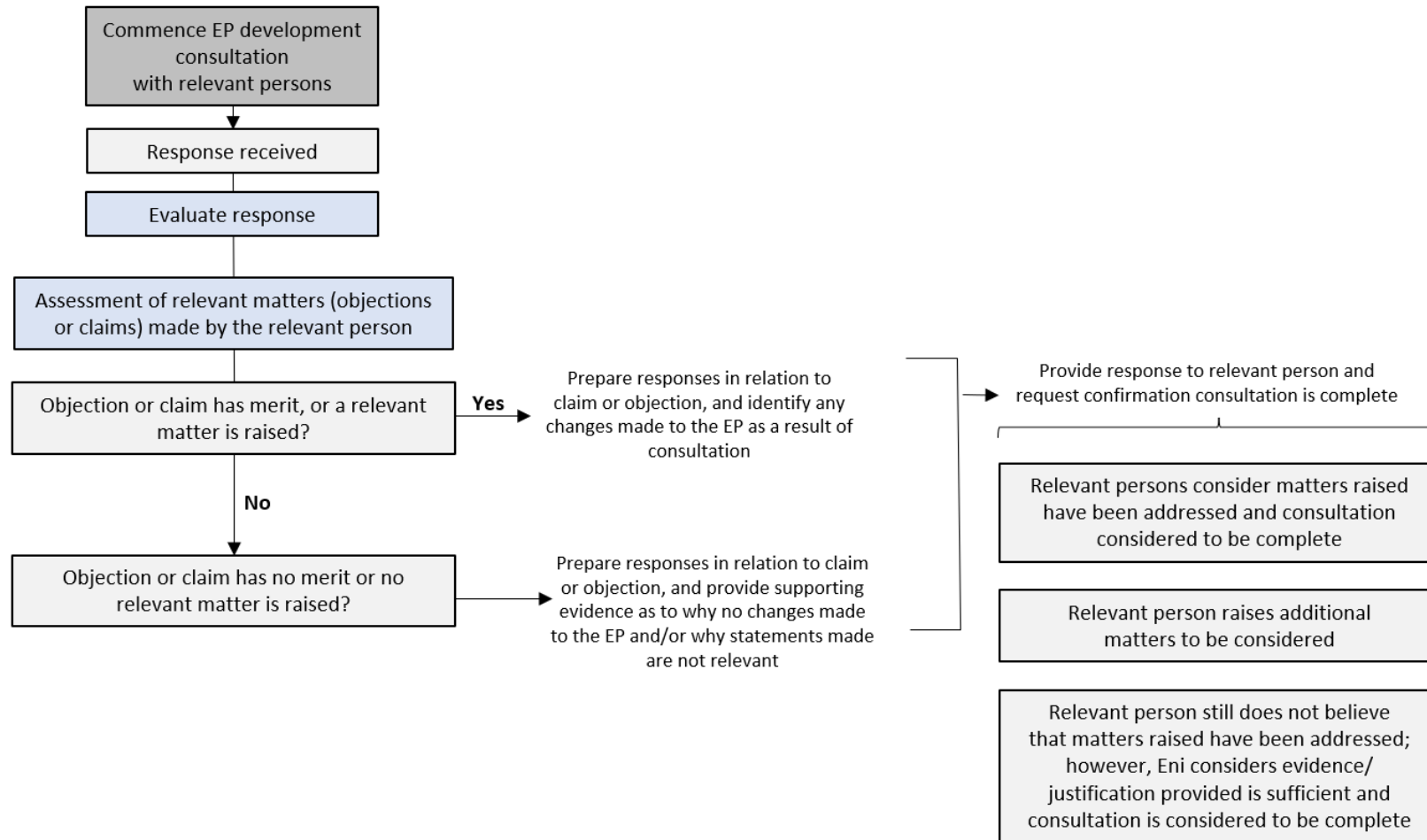



Figure 6-1: Assessment of relevant matters

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6.4 Updates to the Environment Plan to Incorporate Consultation Feedback

6.4.1 Consultation Report

Appendix C4b (*Relevant Persons Consultations Feedback Assessment*) the 2023/24 Consultation Report provides an overview of all consultations between the titleholder and a relevant person [regulation 24(b)] undertaken throughout both in 2023/24. The consultation reports contain:


- a summary of each response made by a relevant person.
- an assessment of the merits of any objection or claim about the adverse impact of each activity to which the EP relates.
- a statement of Eni's response, or proposed response, if any, to each objection or claim; and
- a copy of the full text of any response by a relevant person.

6.4.2 Sensitive Matters Report

Notwithstanding Section 6.4.1. above, it is noted, as per Regulation 26(8) of the OPGGS(E) Regulations, that the EP must not contain any sensitive information other than in the sensitive information part of the EP.

Sensitive information will, be submitted in a separate report (referred to as the *Sensitive Matters Report*) and does not form part of the publicly available EP.

The Sensitive Matters Report contains a record of all consultation activities undertaken with relevant persons for the EP. The includes all outgoing and incoming emails and phone logs and any sensitive information contained in meeting slides used for presentations, handout materials and meeting minutes.

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7. EP IMPLEMENTATION ENGAGEMENT

Throughout the execution of the planned activities, as per section 22(15) of the OPGGS(E) Regulations, relevant interested persons and organisations engagement for the petroleum activities will be ongoing. Eni key focal points will continue to work with relevant persons and organisations to address any future concerns if they arise throughout the duration of the EP in the context of the associated activities. Should any new relevant interested persons and organisations be identified, they will be added to the stakeholder database and included in all future engagement as required, including specific activity notifications.


An ongoing engagement process is occurring in the Thamarrurr Region through Eni's attendance at monthly community meetings.

In addition to any EP consultation process, as a matter of best practice and outside of regulatory compliance, Eni conducts external relations engagement visits with stakeholders located in, or near the areas where it operates. In the Australian jurisdiction, this includes the Kimberley and Northern Territory regions. Eni operates under the assumption that it is good corporate social responsibility to engage with stakeholders within or near its footprint; it looks to build partnerships and potential long-term value proposition opportunities; and by continuing to talk to stakeholders within or near its footprint, Eni can gain better knowledge of the context, needs and interests of these stakeholders.

Although outside of the 'preparation of EP' and 'execution of planned activities' consultation processes, this engagement assists with the building and maintaining of relationships to facilitate the ability for consultation to occur.

Eni will continue to accept feedback from all relevant persons and organisations throughout the duration of the accepted EP. Where any new information is received, that is assessed as a new relevant matter or objection/claim with merit, the EP will be updated in accordance with the Management of Change process described in the EP, ensuring risks remain managed to acceptable and as low as reasonably practicable levels.

Additional consultation with relevant persons will occur in the event there is any significant change to the proposed activities.

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APPENDIX C2:

RELEVANT PERSONS REGISTER


Relevant Person	Target Group	Functions, Interests and Activities	Relevant person category under OPGGS(E)Regs Section 25(1) (Table 2.1 of Appendix C1)	Basis of selection for relevant persons engagement during development of this EP
Government				
Commonwealth Government				
Australian Communications & Media Authority (ACMA) within the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDC) (Cth)	Group 1	Administrator of submarine cable protection zones. Relevant when active activity may impact on subsea cables.	25(1)(a)	Provide advise on whether the activities may have impact on subsea cables.
Australian Fisheries Management Authority (AFMA) (Cth)	Group 1	AFMA is the Australian Government agency responsible for the efficient management and sustainable use of Commonwealth fish resources on behalf of the Australian community. AFMA manages and monitors commercial Commonwealth fishing to ensure Australian fish stocks and the Australian fishing industry is viable now and in the future.	25(1)(a)	Commonwealth Fishery boundaries extend from 3nm to the EEZ within which Eni Australia activities occur.
Australian Hydrographic Office (AHO) (Cth)	Group 1	AHO is part of the Department of Defence, responsible for providing Australia's national charting service under the terms of SOLAS and the <i>Navigation Act 2012 (Cth)</i> . Role includes provision of nautical charting (including charts in electronic form) and associated services in support of maritime safety. Responsible for the publication and distribution of nautical charts and other information required for the safe shipping and navigation in Australian waters.	25(1)(a)	Need to be kept informed of location of activities so the notice to mariners can be published.
Australian Maritime Safety Authority (AMSA) (Cth)	Group 1	AMSA is the statutory authority established under the Australian Maritime Safety Act 1990. Principal functions are promoting maritime safety and protection of the maritime environment, preventing and combating ship-sourced pollution in the marine environment, providing infrastructure to	25(1)(a)	Publish radio and navigation warnings for activities in the Commonwealth marine area. AMSA provide specific information to be included in the EP (notifications).
Clean Energy Regulator (CER) (Cth)	Group 1	The Clean Energy Regulator administers schemes legislated by the Australian Government for measuring, managing, reducing or offsetting Australia's carbon emissions, determined by climate change law.	25(1)(a)	Has administrative responsibilities for the National Greenhouse and Energy Reporting Scheme, the Emissions Reduction Fund, the Renewable Energy Target and the Australian National Registry of Emissions Units.
Department of Agriculture, Fisheries & Forestry (DAFF) (Cth)	Group 1	Responsible for ensuring management processes are implemented, such as limits on catch or effort levels, and regulations of fishing methods to manage Australia's fisheries in a sustainable way. Also responsible for managing biosecurity threats to Australia.	25(1)(a)	DAFF have advised they wish to be engaged where there is possible disruption to Commonwealth fisheries.
Department of Defence (DOD) (Cth)	Group 1	Responsible for Australian defence activities. Relevant when the activity encroaches on known training areas and /or restricted airspace.	25(1)(a)	The Operational Area overlaps the training area R202G and the North Australia Exercise Area (NAXA).
Department of Foreign Affairs and Trade (DFAT)	Group 3	Promotes and protects Australia's interests internationally. Manages relationships with countries bordering Australia's north, including Indonesia, Timor Leste and Papua New Guinea. Relevant when the activity may impact on waters outside Australia's maritime jurisdiction (such as an oil spill).	25(1)(a)	Relevant when the activity may impact on waters outside Australia's maritime jurisdiction (such as an oil spill).
Department of Industry, Science & Resources (DISR) (Cth)	Group 3	DISR is responsible for development and reform of policy relating to the resources sector, including oil and gas.	25(1)(a)	Relevant due to influence on Commonwealth Government sector policy.
Director of National Parks, Parks Australia, part of the Department of Climate Change, Energy, the Environment and Water (DCCEEW)	Group 1	Parks Australia supports the Director of National Parks who has responsibility under federal environment law for six Commonwealth national parks, the Australian National Botanic Gardens and 60 Australian Marine Parks. DCCEEW requires notification of any harm or mortality to an EPBC-listed species of marine fauna.	25(1)(a)	Responsible for the management of Australian Marine Parks, provision of advice on management of activities located in AMPs or in proximity. The ZPI overlaps with Australian Marine Parks and a national heritage property.
Maritime Border Command (MBC), part of Australian Border Force (ABF), part of the Department of Home Affairs (DHA)	Group 3	MBC is enabled by ABF and the Australian Defence Force (ADF), supporting the whole of government effort to protect Australia's national interests by responding with assigned maritime and air assets for civil maritime security operations.	25(1)(a)	Can advise whether activity may impact on border protection activities (e.g. vessel patrols).
National Offshore Petroleum Titles Administrator (NOPTA) (Cth)	Group 1	NOPTA is responsible for the day-to-day administration of petroleum & greenhouse gas titles in Commonwealth waters in Australia.	25(1)(a)	The Blacktip activities are operating under a petroleum title, administered by NOPTA.
Office of Northern Australia (ONA), within the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDC) (Cth)	Group 3	Office of Northern Australia (ONA) is the Australian Government's area of expertise for Northern Australia. ONA coordinates implementation of the Government's Northern Australia policy agenda to achieve a sustainable and contemporary northern economy.	25(1)(a)	ONA provides policy advice, coordinates operational support for the Northern Australia Infrastructure Facility, supports Indigenous inclusion of First Nations involvement in the agenda, coordinates whole-of-government reporting, and facilitates governance structures.
Northern Territory Government				
Aboriginal Areas Protection Authority (AAPA) (NT)	Group 3	AAPA is an independent statutory authority established under the Northern Territory Aboriginal Sacred Sites Act, responsible for overseeing the protection of Aboriginal sacred sites on land and sea across the whole of Australia's Northern Territory. Can provide information on registered	25(1)(a)	NT government agency with a function to protect Aboriginal sacred sites on both land and sea that falls within the EMBA. Can provide information on registered sacred sites within the EMBA.
Department of Environment, Parks and Water Security (DEPWS) (NT)	Group 3	Protect the environment and natural resources in the Northern Territory, including marine fauna management.	25(1)(a)	Relevant when activities may impact on marine or coastal values (such as an oil spill). The EMBA extends into NT waters.

Department of Industry Tourism and Trade (DITT) (NT)	Group 2	The Department of Industry, Tourism and Trade is the Northern Territory coordinating agency for economic and industry development. The Department administers and regulates petroleum tenure and activities in within the Territory's coastal waters. This includes petroleum resource exploration and development and the construction and operation of oil and gas facilities and transmission pipelines. The Department manages Northern Territory commercial fisheries. Relevant when the activity has the potential to impact on fisheries resources in Northern Territory managed fisheries.	25(1)(a)	Some NT fisheries (whose boundaries may extend beyond NT waters) are located in the ZPI. Impacts to commercial fishing in the NT from activities described in the EP.
Northern Territory Environment Protection Authority (NTEPA)	Group 3	NTEPA is an independent authority established under the Northern Territory Environment Protection Act. NTEPA provides advice on the environmental impacts of development proposals and advice and regulatory services to encourage effective waste management, pollution	25(1)(a)	NT government agency with a function to regulate pollution events in the NT. The EMBA extends into NT waters.
Northern Territory Gas Taskforce (NT)	Group 3	The Gas Taskforce drives the Northern Territory Government's vision for the Territory to become a world class hub for gas production, manufacturing and services by 2030.	25(1)(a)	Relevant as a supporter of the industry sector and potential facilitator in dealing with urgent project matters to do with Northern Territory Government Departments and Agencies.
Northern Territory Regional Harbourmaster, part of the Department of Infrastructure, Planning and Logistics (DIPL) (NT)	Group 3	Responsible for moorings in the Port of Darwin. Relevant when the activity could impact on Port operations.	25(1)(a)	Relevant when the activity could impact on Port operations (such as an oil spill).
<i>Western Australian Government</i>				
Department of Biodiversity, Conservation and Attractions (DBCA) (WA)	Group 2	Manage State marine parks and reserves and protected marine fauna and flora.	25(1)(a)	Relevant when activities undertaken outside of a marine park may impact on the values within a marine park (such as an oil spill). The ZPI overlaps with some state reserves.
Department of Mines, Industry Regulation and Safety (DMIRS) (WA)	Group 2	The mission of DMIRS is to support a safe, fair and responsible future for the Western Australian community, industry and resources sector. The DMIRS Resource and Environmental Regulation Group is responsible for regulating one of Western Australia's largest industry sectors, and plays a critical role in building Western Australia's economy while ensuring the State's resources are developed in a sustainable and responsible manner.	25(1)(a)	Department of responsible WA Minister who sits on the Offshore Petroleum Joint Authority. Planned activities occur in the Commonwealth marine environment offshore areas of WA. Notifications are required for drilling and seismic activities. The ZPI enters into WA state waters.
Department of Planning, Lands & Heritage (DPLH) (WA)	Group 3	Protect aboriginal heritage, assist with compliance with the Aboriginal Heritage Act 1972 and provide access to heritage information.	25(1)(a)	Can advise on Registered Aboriginal sites and known onshore places of heritage within EMBA. Relevant if the activity results in impacts to Aboriginal heritage (such as an oil spill).
Department of Primary Industries and Regional Development (DPIRD) (WA)	Group 2	A primary responsibility of the DPIRD is to conserve, sustainably develop and share the use of Western Australia's aquatic resources and their ecosystems for the benefit of present and future generations, through managing fisheries and aquatic ecosystems, assessment and monitoring of fish stocks, enforcement and education, biosecurity management and	25(1)(a)	Can provide information on marine protected areas/protected species and fisheries. Further, can provide information on management controls implemented to manage marine pest risks associated with the activities. The ZPI enters into WA state waters.
Department of Transport (DOT) (WA)	Group 2	In accordance with the Western Australian Emergency Management Act 2005 (the Act) and Emergency Management Regulations 2006 (the Regulations), the WA DoT is the Hazard Management Agency (HMA) for the Marine Oil Pollution (MOP) hazard in State waters. The MOP hazard is prescribed in the Regulations as an: 'actual or impending spillage, release or escape of oil or an oily mixture that is capable of causing loss of life,	25(1)(a)	Informs the development of the Blacktip OPEP - preparedness and response as they relate to State Control Agency functions. The ZPI enters into WA state waters.
<i>Fisheries</i>				
<i>National Fisheries</i>				
Austral Fisheries	Group 1	Austral Fisheries is one of Australia's largest integrated commercial fishing companies. They operate 11 of the 52 licensed vessels in the Northern Prawn Fishery.	25(1)(d)	Integrated commercial fishing company that may be operating in the Operational Area.
A Raptis & Sons	Group 1	A Raptis & Sons owns and operates 15 commercial fishing vessels in the northern prawn and NT demersal fishery zones.	25(1)(d)	Privately owned integrated fishing company that may be operating in the Operational Area.
Commonwealth Fisheries Association (CFA)	Group 1	The peak body representing the collective rights, responsibilities and interests of a diverse commercial fishing industry in Commonwealth regulated fisheries.	25(1)(d)	Represent commercial fishers with fishing management areas that overlap with the Operational Area, ZPI and EMBA.
Northern Prawn Fishing (NPF) Industry Pty Ltd	Group 1	The NPF Industry Pty Ltd is a collective of trawler operators, processors and marketers acting together as a single voice for the industry in the Northern Prawn Fishery, which occurs between Cape York to the Kimberley's.	25(1)(d)	Fishery management area overlaps the Operational Area, ZPI and EMBA. The Operational Area falls within a low effort fishing intensity area.
Pearl Producers Association (PPA)	Group 3	Peak representative organisation of the Australian South Sea Pearling Industry.	25(1)(d)	Represent WA and NT pearling companies operating within the EMBA.
Seafood Industry Australia (SIA)	Group 2	Seafood Industry Australia is committed to ensuring there is appropriate consultation between the Australian seafood industry and oil and gas companies on matters including impact, access, regulation and the long-term impacts to fish-stocks from petroleum-related activities.	25(1)(d)	Represent commercial fishers operating in the ZPI and EMBA.
<i>Northern Territory Fisheries</i>				

Northern Territory Seafood Council (NTSC). Full NT Seafood Council Membership is through ownership of a professional fishing licence in the Northern Territory. These licenses included : Bait Net Fishery Offshore Net & Line Fishery Spanish Mackerel Fishery Coastal Line Fishery Demersal Fishery Barramundi Fishery Pearl Oyster Fishery 56 individual license holders represented by NTSC were sent letters.	Group 1	Represents the seafood industry in the Northern Territory. May operate within the Operational Area, ZPI or EMBA.	25(1)(d)	Fishing management areas that members operate in overlaps with the Operational Area, ZPI and EMBA.
Northern Wildcatch Seafood Australia (NWSA)	Group 2	NWSA is an Australian company specialising in catching and selling tropical fin fish such as snapper, emperor and cod and the provision of charter services to the oil and gas sector, government and research institutions. NWSA ships fresh product all over Australia from the Port of Darwin, with three vessels fishing throughout the year. May operate within the EMBA.	25(1)(d)	Commercial fishery that may be operating in the EMBA
<i>Western Australian Fisheries</i>				
Western Australian Fishing Industry Council (WAFIC) which represents: -Kimberley Gillnet & Barramundi Fishery -Kimberley Prawn Fishery -Kimberley Crab Fishery	Group 2	Peak industry body representing the interests of the Western Australian commercial fishing, pearling and aquaculture sectors. May operate within the ZPI or EMBA.	25(1)(d)	Represent commercial fishers with license areas that overlap the ZPI and EMBA.
<i>Aboriginal and Torres Strait Islander/ First Nations Community</i>				
<i>National</i>				
Northern Australian Indigenous Land & Sea Management Alliance (NAILSMA)	Group 3	NAILSMA is an Indigenous led not-for-profit company operating across northern Australia, working to assist Indigenous people manage their country sustainably for future generations, by providing Indigenous leadership in the delivery of large-scale and complex programs that meet the environmental, social, cultural, and economic needs of Indigenous people across northern Australia. Relevant when the activity could impact on the coastline, coastal waters and sea country.	25(1)(d)	Relevant persons whose function may indirectly be impacted in emergency conditions as the EMBA extends into NT waters.
<i>Northern Territory</i>				
Larrakia Nation Aboriginal Corporation	Group 3	The Larrakia Nation Aboriginal Corporation was established in 1997 through the Northern Land Council, to provide a corporate identity for Larrakia people to uphold Native Title claims, to represent the Traditional Owners of the Darwin region and to speak on behalf of Larrakia people while delivering community and outreach services to the broader Darwin community, including land and sea Rangers. The Larrakia Rangers work across Larrakia land and sea country, which comprises the greater Darwin region west across the Cox Peninsula and east to the Adelaide River.	25(1)(d)	LNAC represents Traditional Owners who may have sea country that overlaps the EMBA. Located in an area of long term Eni operational presence.
Northern Land Council (NLC)	Group 2	The NLC is an independent statutory authority of the Commonwealth, responsible for assisting Aboriginal peoples in the Top End of the Northern Territory to acquire and manage their traditional lands and seas.	25(1)(d)	The NLC's Native Title Act statutory area of responsibility overlaps the ZPI.
Thamarrurr Development Corporation (TDC), including the Thamarrurr Rangers representative of the Traditional Owner Groups: Rak Wudipuli Rak Thinti Rak Perrederr Rak Nuthunthu Rak Nganthawudi Rak Namarluk Rak Nadirri Rak Merrepen Rak Kuy Rak Kungarbarl Rak Kulingmirr Rak Kubiyrri Rak Kimmu Rak Angilini Yek Diminin Yek Maninh Yek Nangu Yek Ngudanimarn Yek Wunh Yek Yederr Note: Consultation within the Wadeye Community was organised in coordination with TDC. Board members of TDC are representatives of 20 clans in Wadeye.	Group 2	TDC is a not-for-profit corporate entity owned by members of the Wangka, Lirga and Tjanpa peoples. TDC has been established by the 20 clans of the Thamarrurr Region, to represent them in relation to business, socio-economic development, employment and training. Blacktip YGP is in the Thamarrurr region and the Rangers assist on Blacktip activities.	25(1)(d)	The TDC represents Thamarrurr people in an area adjacent to the EMBA. There could be areas of sea country that do overlap within the Joseph Bonaparte Gulf Marine Park and nearshore Wadeye. Blacktip YGP is in the Thamarrurr region and the Rangers assist on Blacktip activities.

<p>Tiwi Land Council (TLC) - representative of the following Traditional Owner Groups: Jikilaruwu Malawu Mantiyupwi Marrikawuyanga Munupi Yimpinari Wurankuwu Wulirankuwu</p>	Group 3	The Tiwi Land Council represents all Tiwi people in the protection of our land, sea and environment, while at the same time supporting sustainable economic development to improve Tiwi lives through employment, income, education and health opportunities.	25(1)(d)	The TLC represents the interests of Traditional Owners with country that overlaps with the EMBA.
Western Australia				
Balanggarra Aboriginal Corporation RNTBC	Group 2	Kimberley Coastal PBC. Administers land on behalf of the Balanggarra People. Located in the Northern Kimberley. The EMBA extends close to declared sea country	25(1)(d)	Traditional Owner group with potential sea country that overlaps with ZPI.
Bardi Jawi Niimidiman Aboriginal Corporation RNTBC	Group 3	Kimberley Coastal PBC. Represent Traditional Owners located in the Dampier Peninsula and surrounding sea country. The EMBA extends close to declared sea country.	25(1)(d)	Traditional Owner group with potential sea country that overlaps with EMBA.
Gogolanyngor Aboriginal Corporation	Group 3	Kimberley Coastal PBC. Located North of Broome on the Dampier Peninsula and represents Traditional Owners in this area. The EMBA extends close to declared sea country.	25(1)(d)	Traditional Owner group with potential sea country that overlaps with EMBA.
Kimberley Land Council (KLC)	Group 1	Peak Indigenous body in the Kimberley region.	25(1)(d)	The KLC's Native Title Act statutory area of responsibility overlaps the Operational Area.
Mayala Inninalang Aboriginal Corporation	Group 3	Kimberley Coastal PBC. Located East of the Dampier peninsula and encompasses the Buccaneer Archipelago and the surrounding sea country. The EMBA extends close to declared sea country.	25(1)(d)	Traditional Owner group with potential sea country that overlaps with EMBA.
<p>MG Corporation - representative of the following Traditional Owner Groups: Miriungung and Gajerrong #1 (Native Title PBC) Aboriginal Corporation RNTBC</p>	Group 2	Indigenous organisation in the East Kimberley, MG Corporation is committed to building a strong economic and social base for MG people beyond the life of the OFA by pursuing an inclusive economic development agenda, while protecting and enhancing MG culture and heritage. The EMBA extends close to declared sea country.	25(1)(d)	Relevant as ZPI may overlap with MG sea country.
Nyangunmartka Karajarri Aboriginal Corporation and Karajarri Traditional Lands Association (Aboriginal Corporation) RNTBC	Group 3	Kimberley Coastal PBC. Located South of Broome and encompasses adjacent sea country West of Broome. The EMBA extends close to declared sea country.	25(1)(d)	Traditional Owner group with potential sea country that overlaps with EMBA.
Nyul Nyul PBC Aboriginal Corporation	Group 3	Kimberley Coastal PBC. Located in the Central Dampier Peninsula. Nominated as trustee of the Jabirr Jabirr/Ngumbarl, Nyul Nyul, and Nimanburr peoples' native title. The EMBA extends close to declared sea country.	25(1)(d)	Traditional Owner group with potential sea country that overlaps with EMBA.
Walalakoo Aboriginal Corporation RNTBC	Group 3	Kimberley Coastal PBC. Key political, social and economic body representing the Nyikina Mangala people of the Kimberley region in Western Australia. The EMBA extends close to declared sea country.	25(1)(d)	Traditional Owner group with potential sea country that overlaps with EMBA.
Wanjina-Wunggurr (Native Title) Aboriginal Corporation RNTBC	Group 2	Kimberley Coastal PBC. Represents the Traditional Owners of the Wunaamin Milliwundi Ranges East of Broome. The EMBA extends close to declared sea country.	25(1)(d)	Traditional Owner group with potential sea country that overlaps with ZPI.
Warrwa People Aboriginal Corporation RNTBC	Group 3	Kimberley Coastal PBC. Located East of Derby represents the traditional Owners of this area. The EMBA extends close to declared sea country.	25(1)(d)	Traditional Owner group with potential sea country that overlaps with EMBA.
Yawuru Native Title Holders Aboriginal Corporation	Group 3	Kimberley Coastal PBC. Coastal PBC that surrounds Broome. Holds and manages native titles of the Yawuru people. The EMBA extends close to declared sea country.	25(1)(d)	Traditional Owner group with potential sea country that overlaps with EMBA.
Business				
National Businesses				
Australian Maritime Oil Spill Centre (AMOSC)	Group 1	AMOSC operates the Australian oil industry's major oil spill response facility. AMOSC's stockpile of oil spill response equipment includes oil spill dispersant and containment, recovery, cleaning, absorbent and communications equipment.	25(1)(d)	Provide support for oil spill response activities.
Moonson Aquatics	Group 3	Monsoon Aquatics are a world leading supplier of premium hand-picked Australian Coral and Marine life. With state of the art facilities in Darwin, Cairns and Bundaberg, collection capability in the North, East and West of Australia and a growing aquaculture program, Monsoon Aquatics supplies an unmatched range of coral to retailers in Australia and wholesalers and public aquaria all around the world. May operate within the EMBA.	25(1)(d)	Could be affected in the result of an hydrocarbon spill. May operate within the EMBA.
Oil Spill Response Limited (OSRL)	Group 1	OSRL is the largest international industry-funded oil spill response cooperative, and provides preparedness, response and intervention services anywhere in the world.	25(1)(d)	Relevant due to the immediate availability of support in recovering from an oil spill event.
Vocus Communications (based in WA)	Group 3	Relevant due to presence of North West Cable system in vicinity of Joseph Bonaparte Gulf	25(1)(d)	May provide information on subsea cables that may traverse the Operational Area.
Northern Territory Businesses				
Amateur Fishermans Association of the Northern Territory (AFANT)	Group 3	AFANT represents recreational fishers in the Northern Territory through membership and input on a range of fisheries and natural resource management committees.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.

Anglers Choice Fishing Safaris	Group 3	Anglers Choice Fishing Safaris operates from Dundee Beach on the Cox Peninsula, providing offshore fishing experiences. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Arafura Bluewater Charters	Group 3	Arafura Bluewater Charters operates from Darwin, specialising in bluewater reef and game fishing charters. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Cannon Charters	Group 3	Cannon Charters operates from Darwin, offering multi-day fishing experiences along the Northern Territory and Kimberley coast. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Clearwater Fish (Clearwater Island Lodge Fishing charter)	Group 3	Clear Water Island Lodge is a small business providing sport-fishing lodge in NT. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Darwin Harbour Fishing Charters	Group 3	Darwin Harbour Fishing Charters operates from Darwin, providing offshore and onshore fishing. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Darwin Port	Group 2	Darwin Port is operated by Darwin Port Operations Pty Ltd which is part of the Landbridge Group. The Landbridge Group is a private company based in Rizhao city in Shandong Province in China, operating businesses in China and Australia. The Darwin Port operates commercial wharf facilities at East Arm Wharf and the cruise ship terminal at Fort Hill Wharf.	25(1)(d)	May provide a function (i.e., spill response activities) in the event of emergency conditions.
Dundee Beach Fishing Charters	Group 3	Dundee Beach Fishing Charters operates from Dundee Beach on the Cox Peninsula, providing offshore fishing experiences. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Equinox Fishing Charters	Group 3	Equinox Fishing Charters operates from Darwin, providing offshore fishing experiences. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Fish Darwin	Group 3	Fish Darwin operates from Darwin, providing offshore fishing experiences. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Melville Lodge	Group 3	Melville Island Lodge situated on the shores of Snake Bay. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Northern Territory Guided Fishing Industry Association (NTGFIA)	Group 3	NTGFIA is the industry body for guided fishing and recreational fishers. The Guided Fishing activity includes the use of mother ships moored offshore from which multi-day recreational fishing expeditions are based.	25(1)(d)	Represents recreational fishers which have the potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Offshore Boats Fishing Charters	Group 3	Offshore Boats Fishing Charters operates from Darwin, providing offshore fishing experiences. May have tourism activities that occur within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Darwin Red Devil Fishing Charters	Group 3	Red Devil Fishing Charters operates from Darwin, providing offshore fishing experiences. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Seafarms Group Ltd	Group 3	Developer of land-based prawn aquaculture project (Sea Dragon) in the Northern Territory. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Tiwi Island Adventures	Group 3	Tiwi Island Adventures operates from two remote locations on the Tiwi Islands - Melville Island Lodge situated on the shores of Snake Bay and Johnson River Camp situated in the upper reaches of the Johnson River on the east coast of Melville Island. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Yknot Fishing Charters	Group 3	Yknot Fishing Charters operates from Darwin, providing fishing charters to as far as the Tiwi Islands and as far West as the Peron Islands. May operate within the EMBA.	25(1)(d)	Potential to be affected in the case of an hydrocarbon spill as the EMBA extends into NT waters.
Western Australian Businesses				
Marine Tourism Association of Western Australia (MTWA)	Group 3	Represents the tourism industry in Western Australia (in the context of this project the fishing charter sector). Association currently has one Kimberley member. Relevant when the activity could impact on coastal waters and coastlines.	25(1)(d)	Tourism activities could be affected in the result of an hydrocarbon spill.
RecFish West (WA)	Group 3	Peak body representing recreational fisheries in Western Australia. May represents recreational fishers who may operate in the EMBA.	25(1)(d)	Represents recreational fishers who may operate in the EMBA
Oil & Gas				
EDG Resources Australia	Group 2	Titleholder and operator of permit WA-488-P.	25(1)(d)	Known oil and gas industry activities that overlaps with the ZPI.
Kulpec	Group 3	Operator of permit WA-538-P.	25(1)(d)	Known oil and gas industry activities that overlaps with the EMBA.
Inpex	Group 2	Relevant due to activities in the region	25(1)(d)	Known oil and gas industry activities that overlaps with the ZPI.
Melbana Energy	Group 2	Titleholder of NT/P87 & WA-544-P.	25(1)(d)	Known oil and gas industry activities that overlaps with the ZPI.
Neptune Energy	Group 2	Titleholder of WA-27-R. Neptune Energy Group was acquired by Eni in January 2024, including the Banaparte Basin assets.	25(1)(d)	Known oil and gas industry activities that overlaps with the ZPI.
Santos	Group 2	Titleholder of WA-454-P & WA-545-P	25(1)(d)	Known oil and gas industry activities that overlaps with the ZPI.
NGOs				
Conservation Council of Western Australia (CCWA)	Group 4	The CCWA is a non-government conservation and environment organisation which represents environmental groups from WA.	25(1)(e)	Has an interest in conservation in WA.
Environment Centre Northern Territory (ECNT)	Group 4	The ECNT is a not-for-profit, community sector environment organisation.	25(1)(e)	Has an interest in protecting biodiversity and ecosystems in the NT.
Self Identified Relevant Persons				
Self Identified Relevant Person	Group 4	Self - identified relevant person responded to newspaper advertisement	25(1)(e)	Self identified thorough broad capture efforts.

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APPENDIX C3:

CONSULTATOIN MATERIALS

Consultation Materials

2023-08-31 Blacktip EPs Community Engagement at Wadeye.....	2
2023-10-24 Blacktip EPs Community Engagement Presentation	3
2023-10-24 Blacktip EPs Community Engagement Presentation	4
2024-04-23 Stakeholder Information Slides - Wadeye	5
Wadeye Community Newsletter Advertisement for Consultation	6
Blacktip Operations Flyer July 2023	7
Newspaper and Radio Advertisements	8

2023-08-31 Blacktip EPs Community Engagement at Wadeye



Blacktip Environment Plan

Community consultation

Wadeye

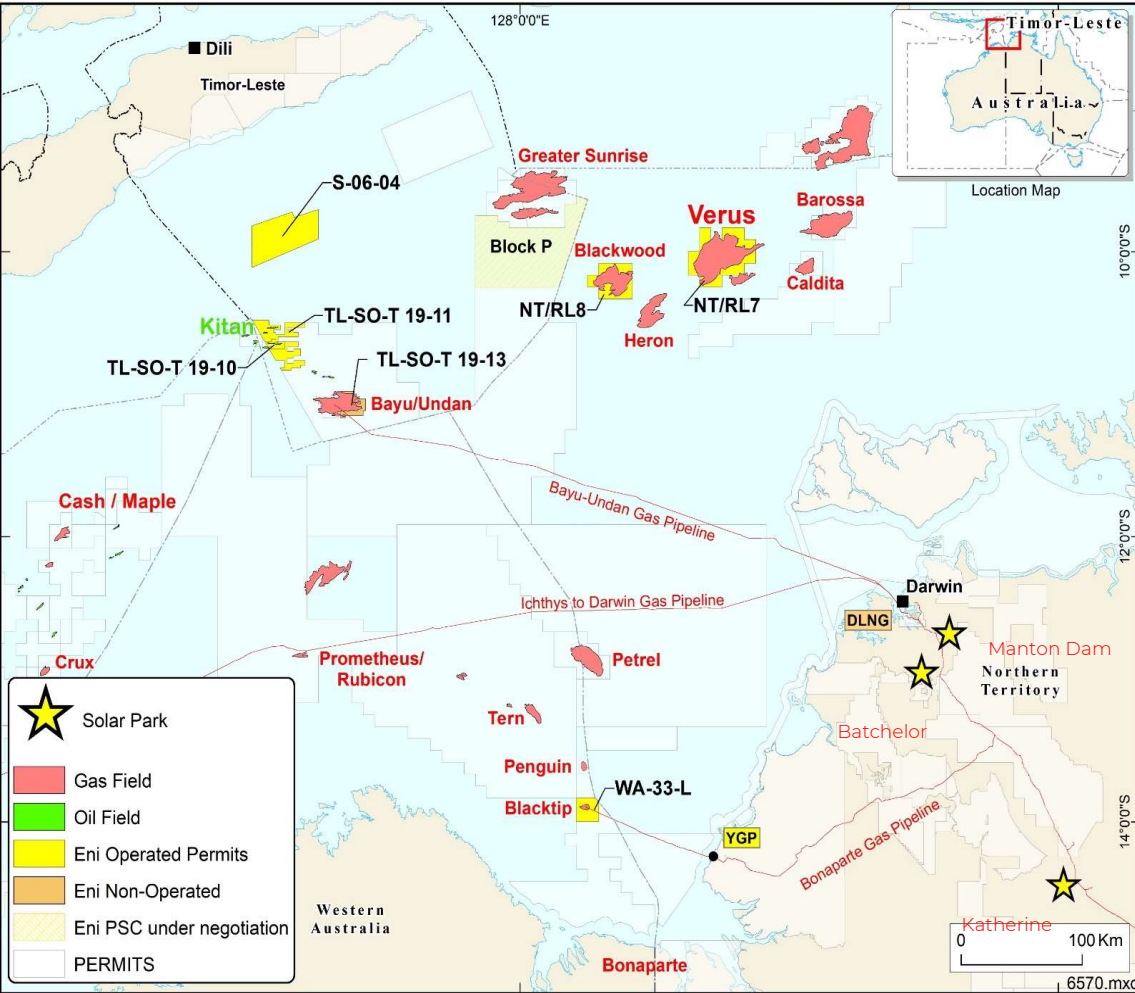
31 August 2023

Objective of the consultation



- Here to listen
- Eni's activities in Australia and Timor - Leste
- Consultation with the community in Wadeye, NT
- Updating activities in Blacktip
- Preparation to finalise Drilling Environment Plan and Operation Environment Plan
- Estimated timeline for submission of Environment Plans

Eni in Australia and Timor Leste



Key Facts

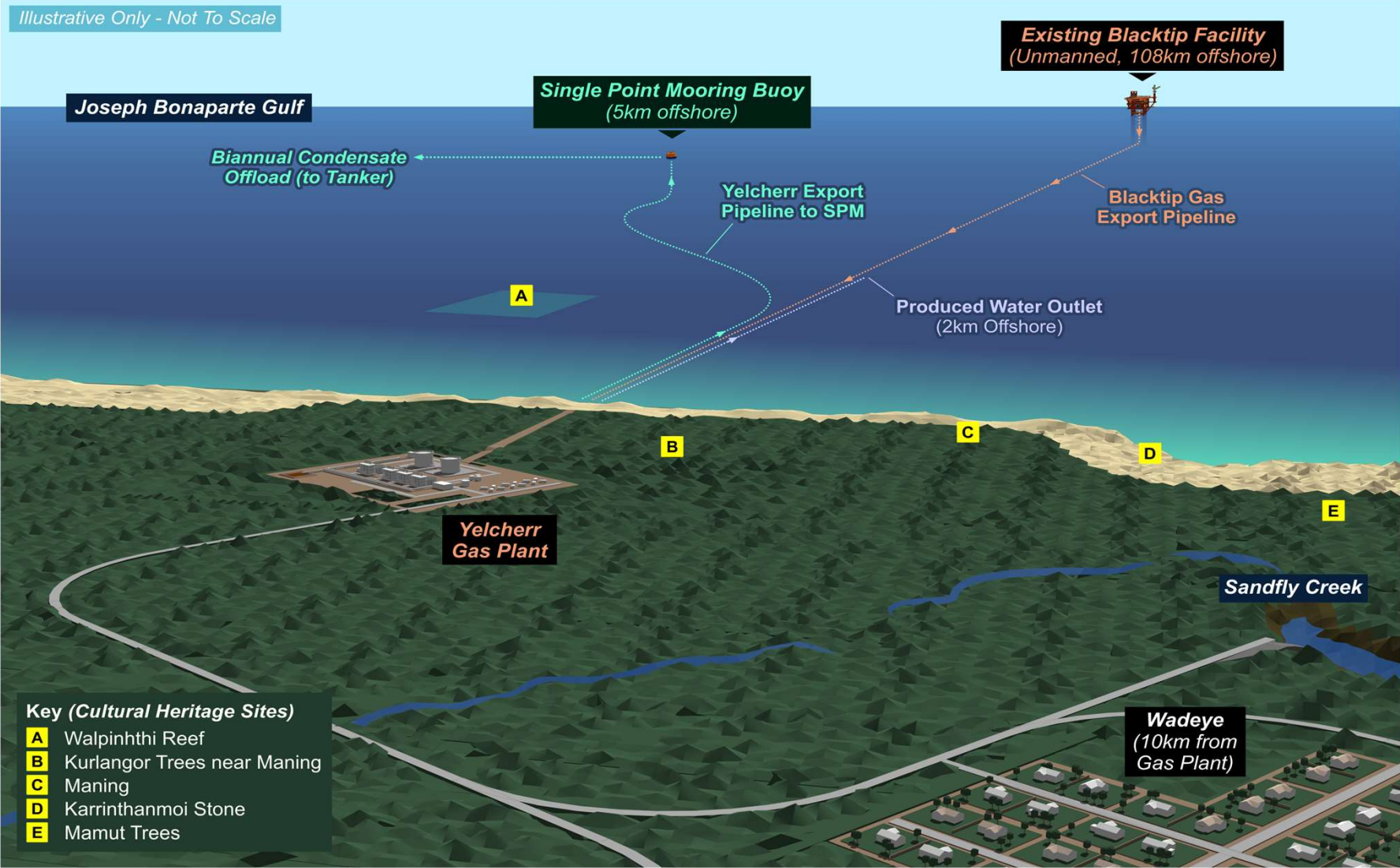
Gas Production

- 100% owned & operated Blacktip Gas Project
- Blacktip supplied 30.4 petajoules of gas to Territory and East Coast customers in 2021.
- Providing almost all of the Territory's gas needs to generate electricity for homes, industry and commerce.
- Bayu-Undan Gas Field and Darwin LNG Project (11% Eni)
- Blacktip provides 100% of the gas supply for Wadeye power generation.

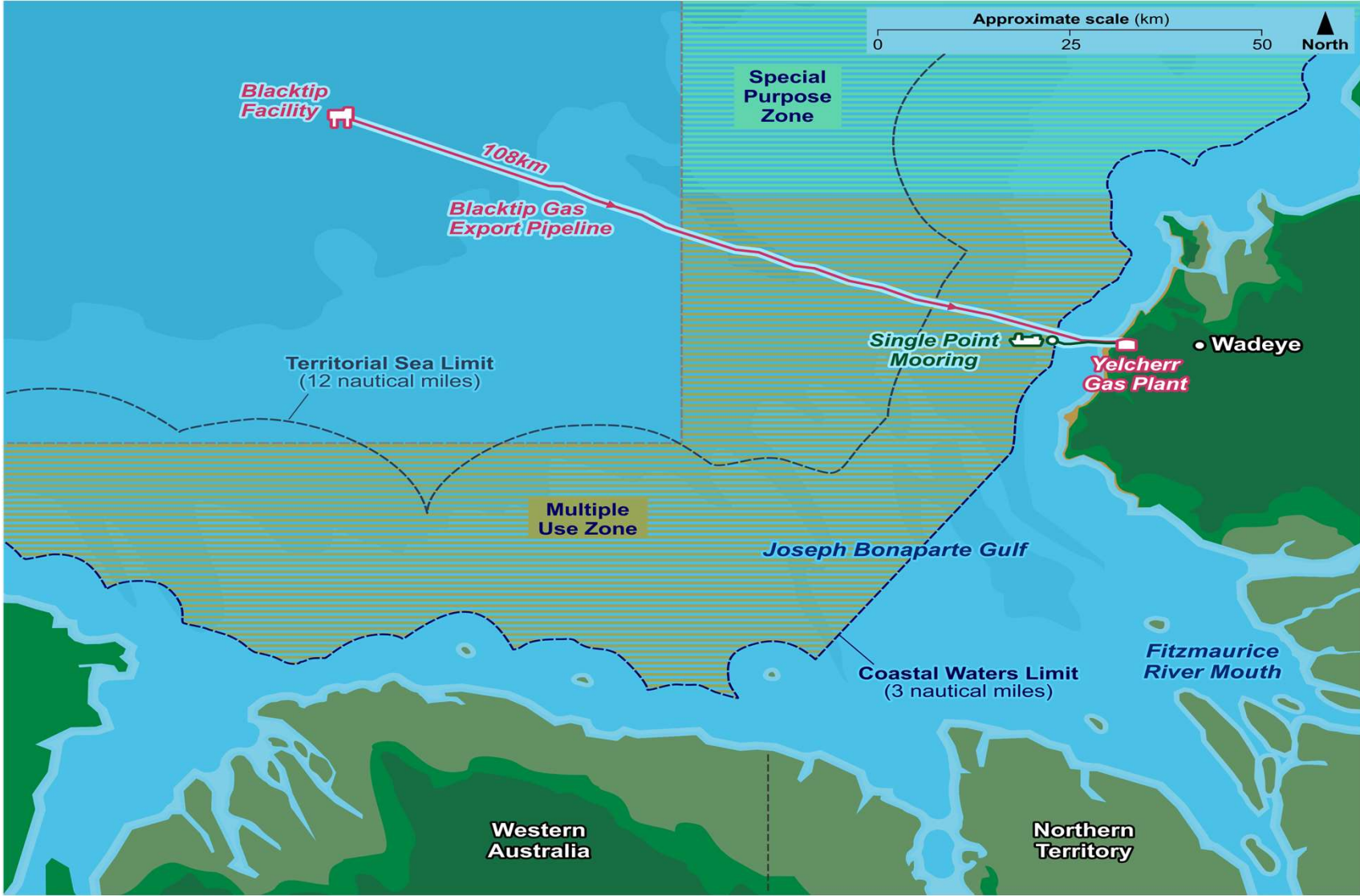
Renewables

- 3 Solar Plants in the NT (total capacity 59 Megawatts)

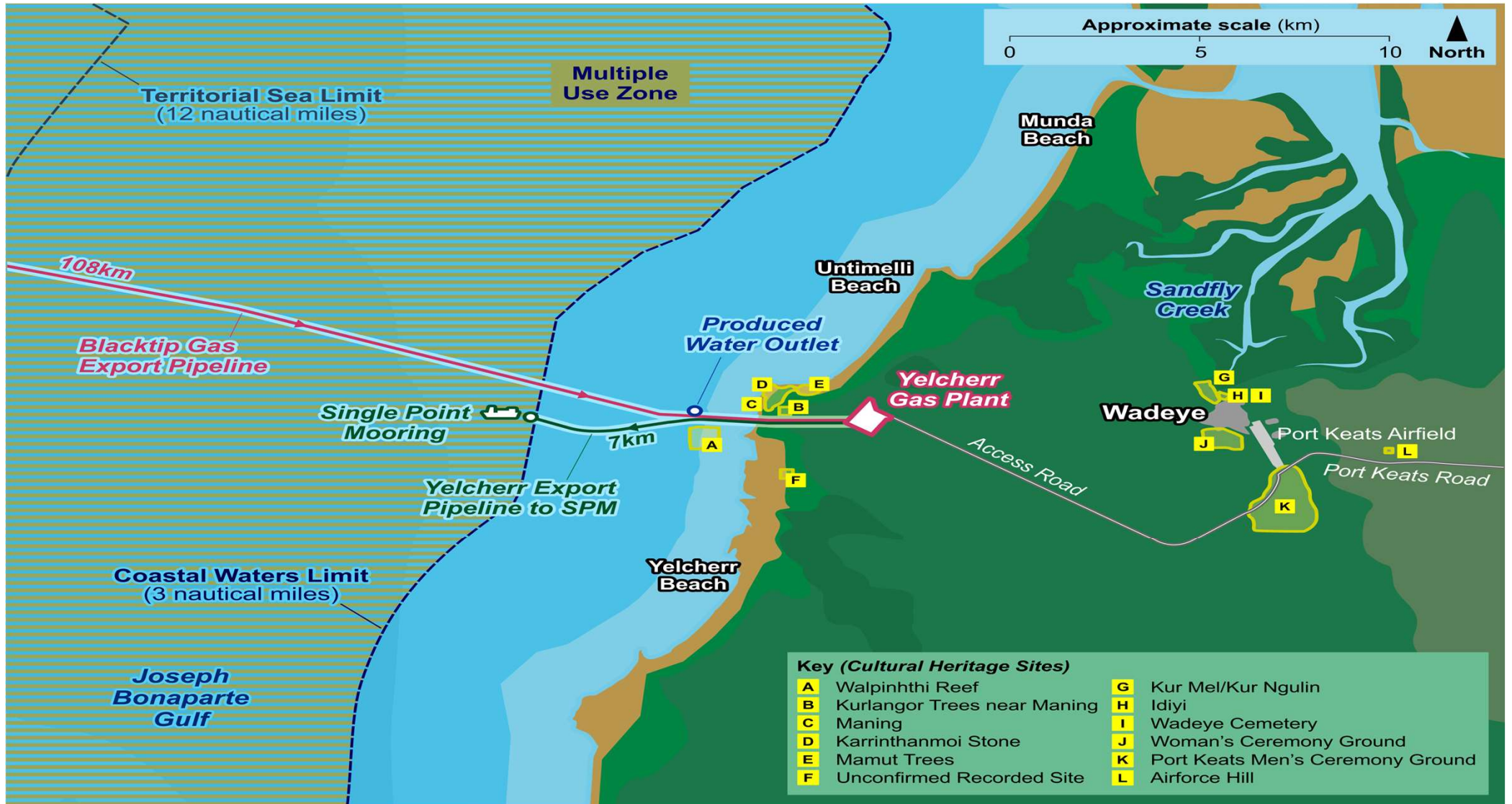
Blacktip Project location



Blacktip Project location



Blacktip Project location





Operations Activity Summary

Operations at the Blacktip Offshore Facility in Commonwealth waters include:

- wellhead platform and pipeline production operations
- surface and subsea infrastructure activities, inspections and maintenance (as required)
- tanker vessel off-takes of condensate from the single point mooring (twice per year)
- well intervention activities (as required)
- support vessel operations for the activities listed above.

Drilling Activity summary

The following activities will occur during drilling of the additional development well:

- site survey (if required)
- jack-up drilling rig placement
- drilling and cementing top hole section
- installation of the blowout preventer
- drilling intermediate and production hole sections
- cementing production casing
- well completion and clean-up, including flaring.

JU – drilling rig over Blacktip platform



Potential Environmental Impact & Mitigation Measure



Activity Description

- Noise emissions generated through the operation of the rig, (e.g. jack-up and drilling)
- Noise from support vessels and helicopters

Potential Impact

- Marine mammals and turtles are transitory and, given the low frequency and limited duration of the activities behavioral impacts are expected to be temporary and at the individual level only.
- Potential impacts are likely to be restricted to localised and temporary avoidance behavior.

Proposed Management/Mitigation

Compliance with administrative controls (such as EPBC Regulations Part 8) to reduce interactions with marine fauna

Marine fauna observations from vessel bridge watch during Inspection, Maintenance, Repair activities

Potential Environmental Impact & Mitigation Measure



Activity Description

Noise emissions generated through the operation survey instrumentation (e.g., boomer, multi-beam echo sounder and sidescan sonar).

(Such equipment is designed to characterize the seabed topography, bathymetry, potential geohazards, and other seafloor features prior to jack-up rig placement at the platform).

Potential Impact

- Elevated underwater noise can affect marine fauna including whales, fish, turtles, sharks and rays:
 - causing direct physical effects on hearing or other organs.
 - masking or interfering with other biologically important sounds, including vocal communication, echolocation, signals and sounds produced by predators or prey.
 - disturbance leading to behavioral changes or displacement from important areas.
- The sound generated by the various survey instruments may result in localised and temporary behavioral changes to marine fauna within tens or hundreds of metres.

Proposed Management/Mitigation

Compliance with administrative controls (such as EPBC Regulations Part 8) to reduce interactions with marine fauna

Potential Environmental Impact & Mitigation Measure



Activity Description

Potential for vessels to collide with marine fauna, including whales, fish, marine reptiles and seabirds.

The main collision risk is through vessel collision with large, slow moving whales potentially resulting in severe injury or mortality.

Potential Impact

Given the short duration of activities within the Operational Area, and the slow speeds at which vessels operate, collisions with marine fauna are considered highly unlikely.

Proposed Management/Mitigation

Compliance with administrative controls (such as EPBC Regulations Part 8) to reduce interactions with marine fauna

Eni will apply control measures to ensure the likelihood of the event occurring is reduced to ALARP and acceptable levels.

Potential Environmental Impact & Mitigation Measure



Activity Description

Accidental loss of hydrocarbons (Blacktip condensate and gas) to the marine environment due to well blowout may occur, caused by failure of technical well barriers (e.g., the Blowout Preventor).

Modelling of a loss of well containment was undertaken with the outcome within the spatial extent of the EMBA.

Potential Impact

A study on Blacktip condensate shows the rate of evaporation of Blacktip condensate is rapid, with 67% of the volume of the condensate lost within the first two hours and 89% by eight hours.

Potential impacts across the EMBA to plankton, fish, turtles, sea snakes, marine mammals, seabirds and migratory shorebirds, tourism, recreation, commercial fisheries, and cultural heritage.

Eni will apply control measures to ensure the likelihood of the event occurring is reduced to acceptable levels.

Proposed Management/Mitigation

Procedures to reduce the potential for uncontrolled hydrocarbon releases will be followed.

Wells to be drilled in compliance with the accepted WOMP including implementation of barriers to prevent a loss of well control

A blowout preventer will be installed and tested

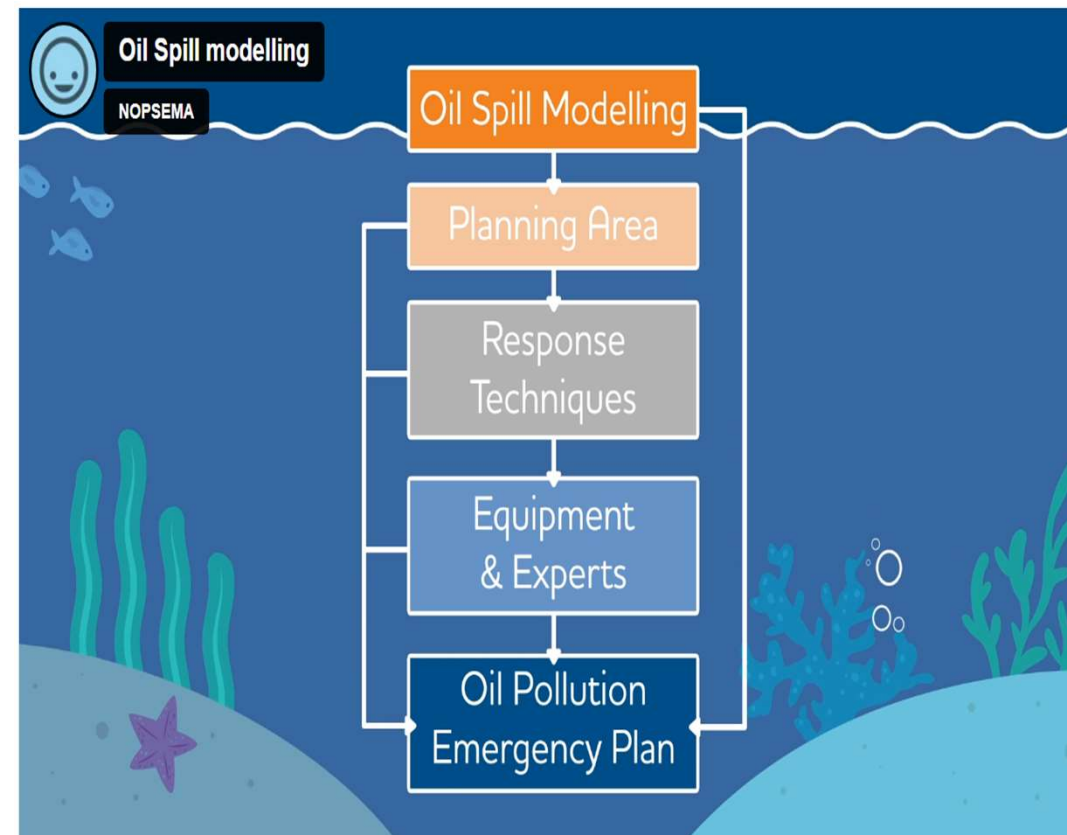
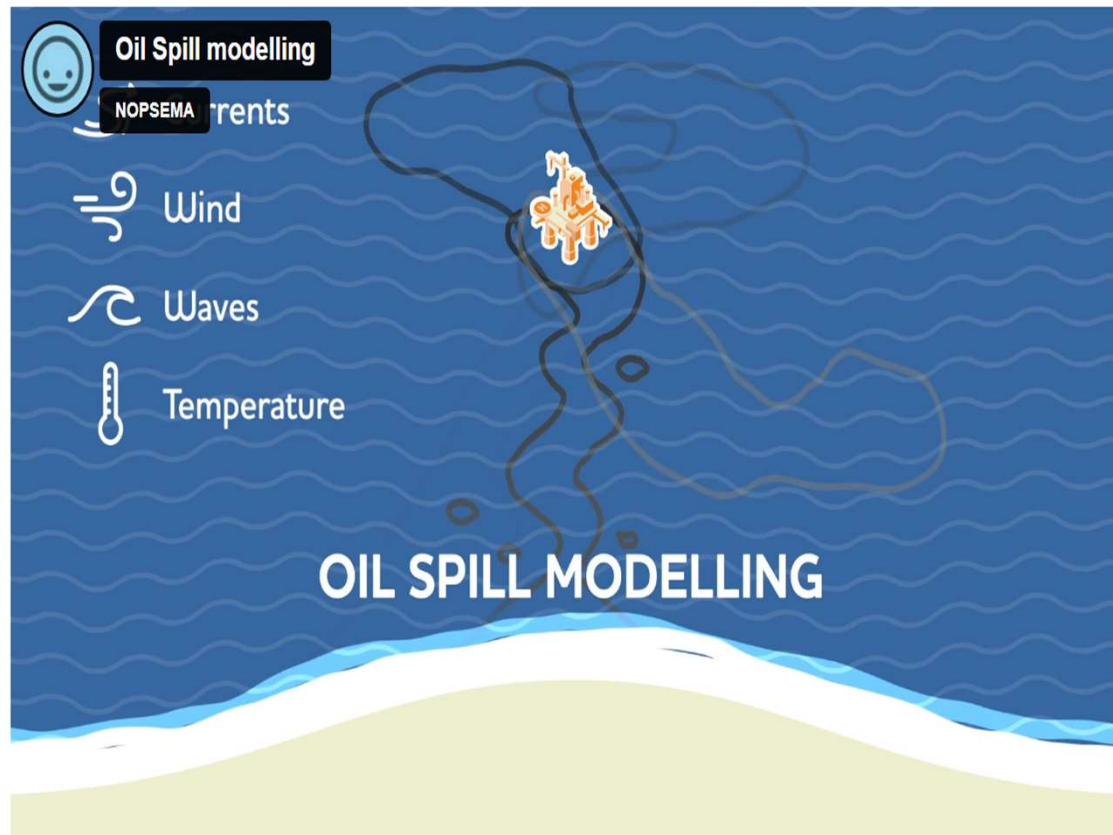
A Source Control Emergency Response Plan will be prepared including specifics drilling a relief well.

Response plans and equipment will be in place and maintained to manage spills to the environment (e.g., oil pollution emergency plans). Where required, operational and scientific monitoring undertaken in accordance with Eni's Operational and Scientific Monitoring Plan

Oil Spill Modelling

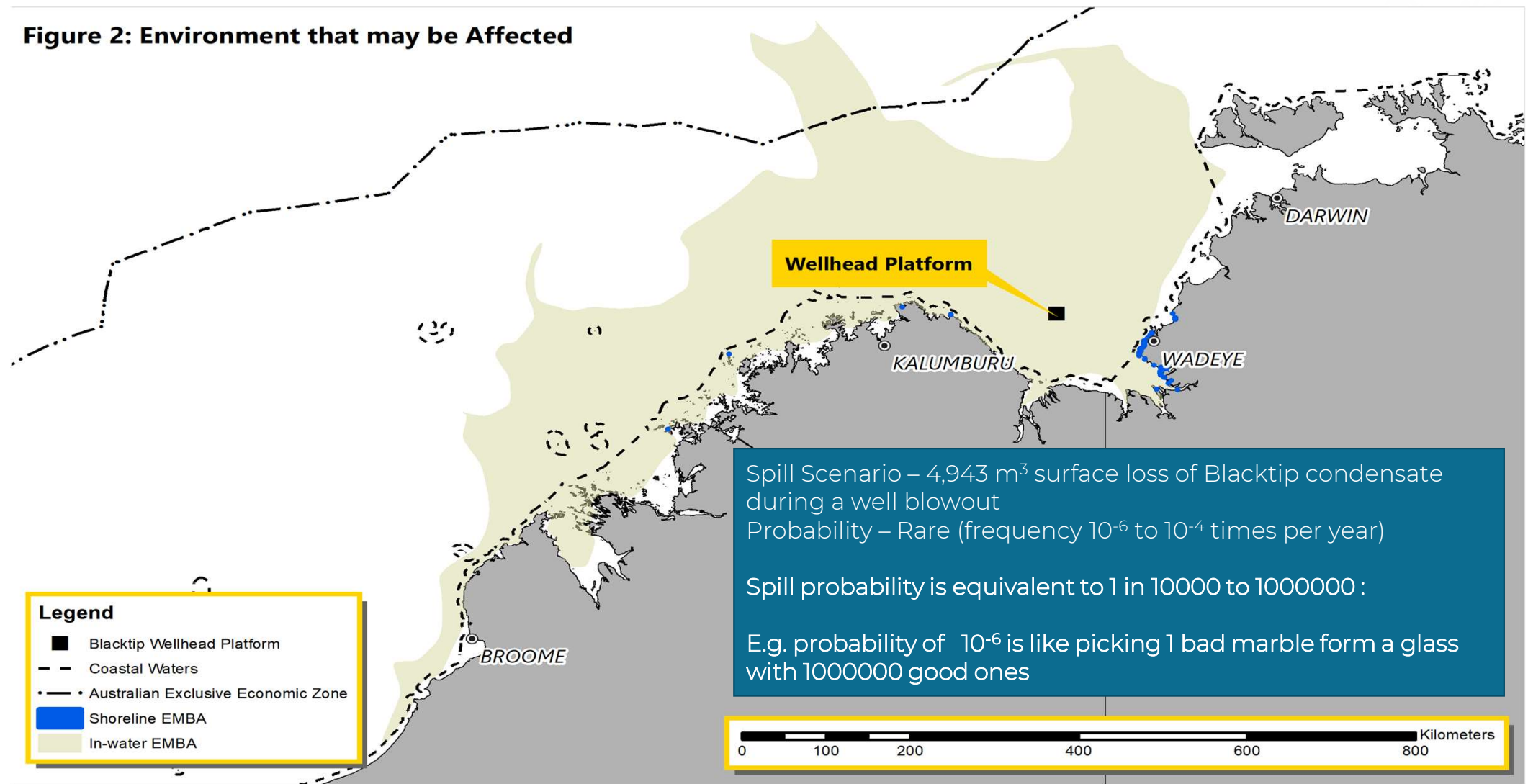


[Oil pollution risk management | NOPSEMA](#)



Environment that may be Affected (EMBA)

Figure 2: Environment that may be Affected



Eni's Local Contribution



Rangers Training



Water Sampling Training



Eni's Local Contribution

Water Sampling Training with AIMS



Summary



- Here to listen
- Informing community in Wadeye on activities to be undertaken in Blacktip

Next steps

- Collect community comments
- Environment Plan submission to NOPSEMA by end of September



Thank you



Back - Up

Activities – Drilling & Operations

The following activities will occur during drilling of the additional development well:

- site survey (if required),
- jack-up MODU placement,
- drilling and cementing top hole section,
- installation of the blowout preventer,
- drilling intermediate and production hole sections,
- cementing production casing,
- well completion and clean-up, including flaring.

Operations at the Blacktip Offshore Facility in Commonwealth waters include:

- wellhead platform and pipeline production operations,
- surface and subsea infrastructure activities, inspections, maintenance and repairs (as required),
- tanker vessel off-takes of condensate from the single point mooring (twice per year).
- well intervention activities (as required),
- support vessel operations for the activities listed above.

The Blacktip Offshore Environment Plan does not cover these operations in the Northern Territory:

- operation of the Yelcherr gas plant.
- operations of the gas (NT/PL2) and condensate export (NT/PL3) pipelines within NT waters.

Environmental Risks (Operations & Drilling)

Planned Operations

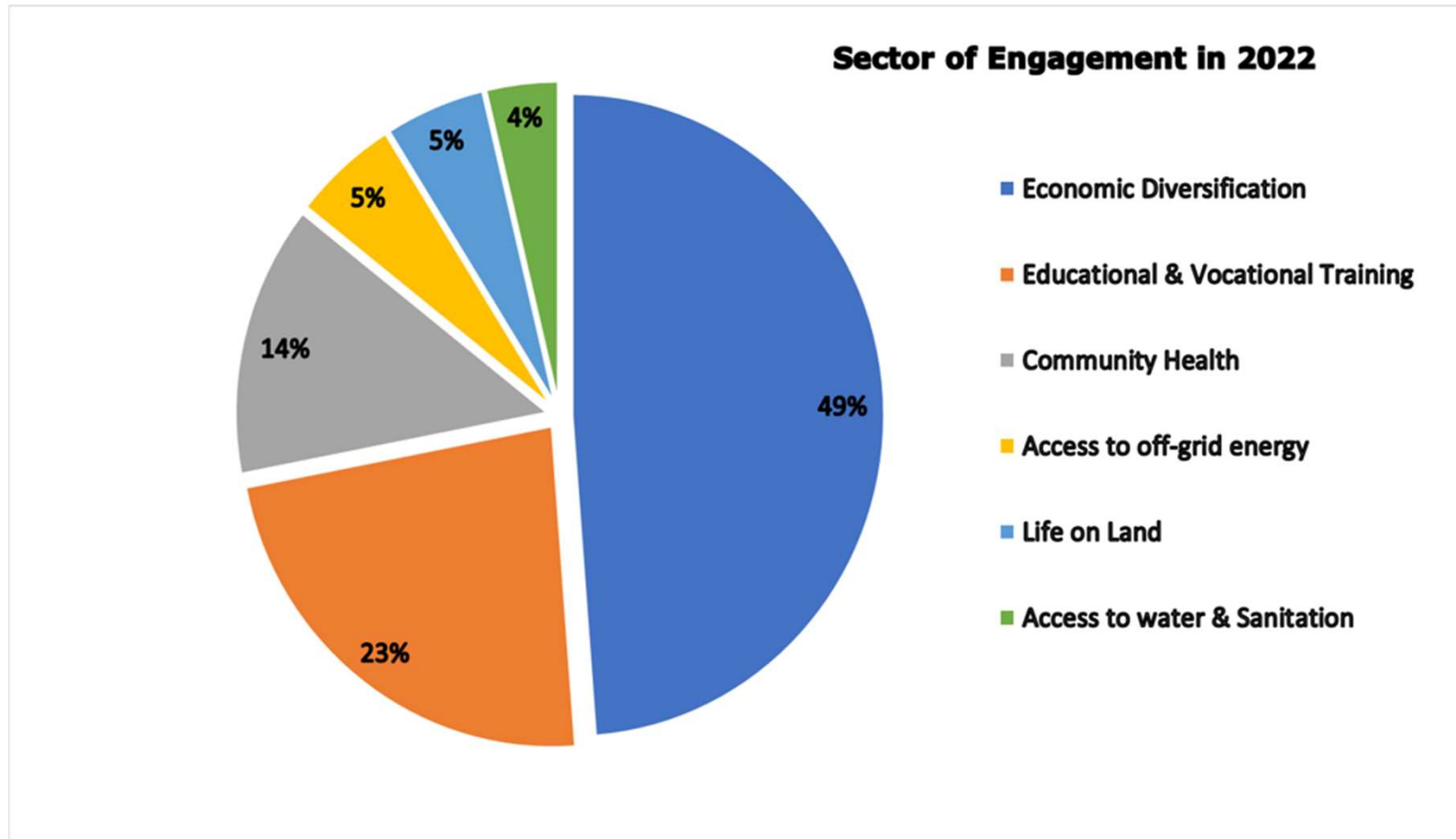
- Interaction with other Marine Users,
- Atmospheric Emissions,
- Routine Helicopter, Vessel and Mobile Offshore Drilling Unit Noise,
- Underwater Survey Equipment Noise,
- Light Emissions,
- Grey water, Sewage and Putrescible Waste Discharge,
- Discharge of Contaminated Water,
- Drilling Muds and Fluid Discharges,
- Seabed Disturbance

Unplanned Operations

- Non-Hazardous and Hazardous Waste,
- Vessel Collision with Marine Fauna,
- Introduction of Marine Pest Species,
- Loss of Hydrocarbons, Hydraulic Fluid and Bulk Chemicals and Fluids,
- Loss of Containment from Well Blowout,
- Marine Diesel Oil Spills to Sea,
- Loss of condensate at the SPM,
- Oil Spill Response Operations



Eni's global contribution through Sustainable Development Goals



2023-10-24 Blacktip EPs Community Engagement Presentation



Blacktip Environment Plan

Community Consultation

24 October 2023

Introduction to the Eni team



Angelina Branco – Stakeholder Engagement & CSR Manager

Cameron Hayes – Offshore Supervisor & Completion Engineer

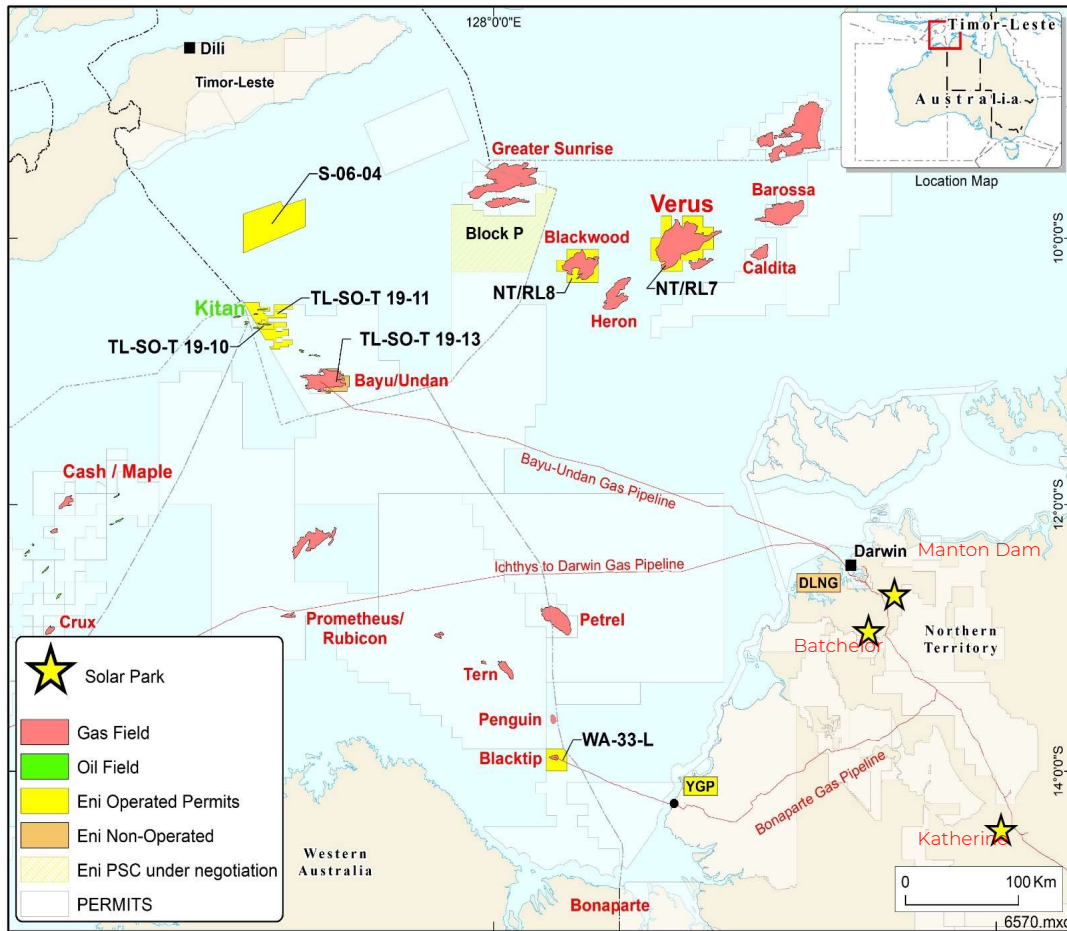
Mick Allen - Health, Safety Environment Advisor

Objective of the consultation



- 01 **Here to listen**
- 02 Eni's activities in Australia and Timor - Leste
- 03 Update of activities in Blacktip
- 04 **Preparation of Drilling Environment Plan & 5 yearly Environment Plan for Operation**
- 05 Drilling Activity summary
- 06 Summary of Potential Environmental Impact
- 07 Eni's Local Contribution at Wadeye

Eni in Australia and Timor Leste



Key Facts

Gas Production

- 100% owned & operated Blacktip Gas Project
- Blacktip supplied 30.4 petajoules of gas to Territory and East Coast customers in 2021.
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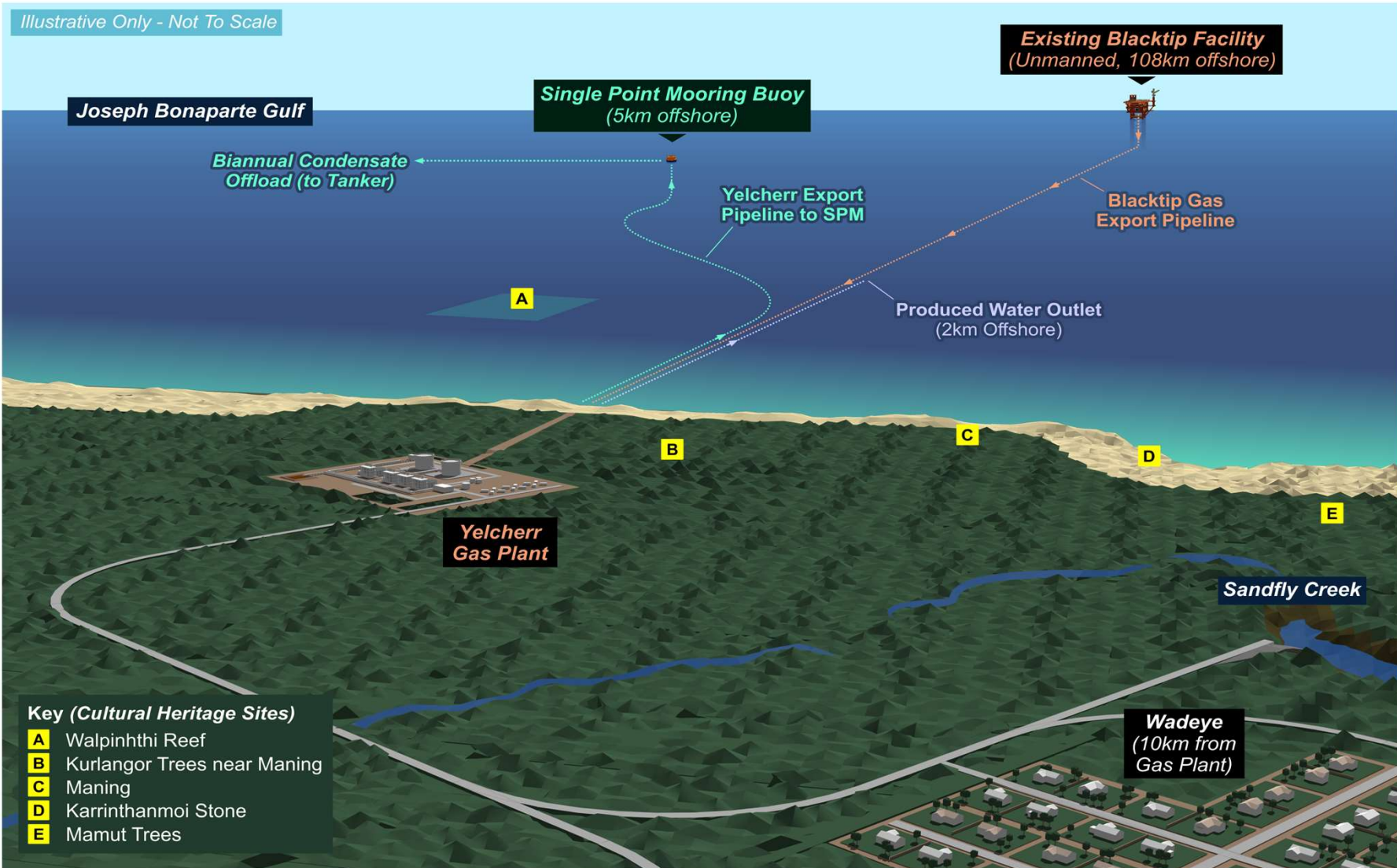
Other Projects

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Renewables

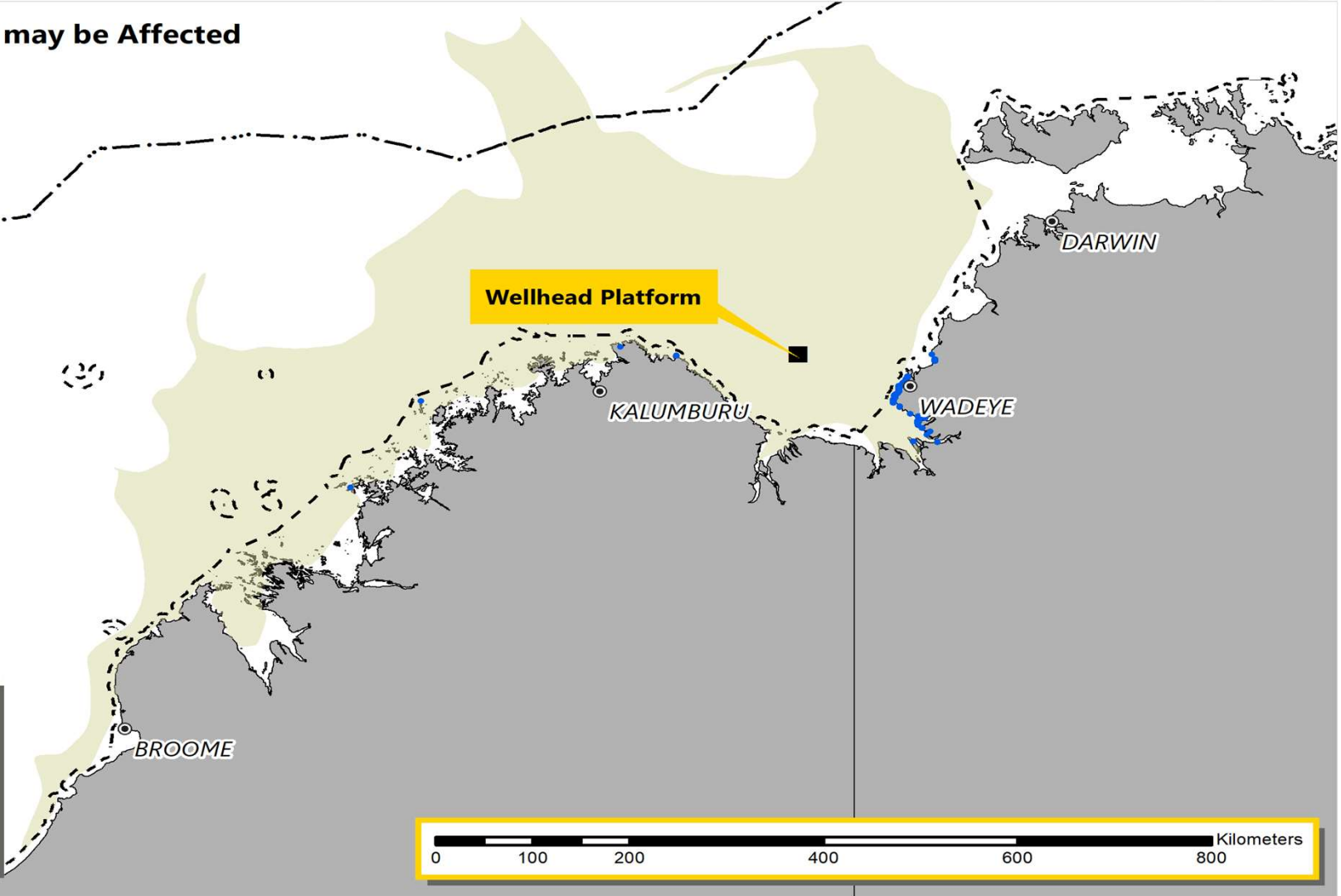
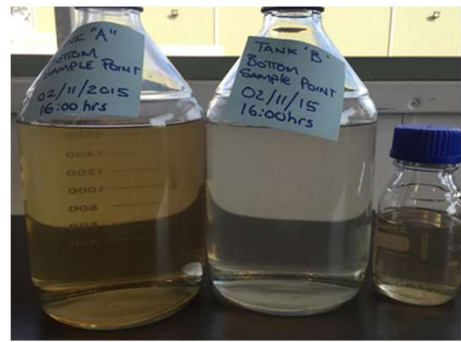
- 3 Solar Plants in the NT (total capacity 59 Megawatts)

Blacktip Project location



Environment that may be Affected (EMBA)

Figure 2: Environment that may be Affected





Key Objective : Environmental permitting process

Operations Environment Plan – Every 5 years

Not a new process, engagement has occurred on all previous Environment Plan

Current Operations Environment Plan expires March 2024

Process to renew Environment Plan requires stakeholder consultation

Drilling Environment Plan

Required for the purpose of drilling campaign

Ongoing planning for a drilling campaign

Process to submit requires stakeholder consultation

Blacktip Infrastructure



Wellhead Platform (WHP)

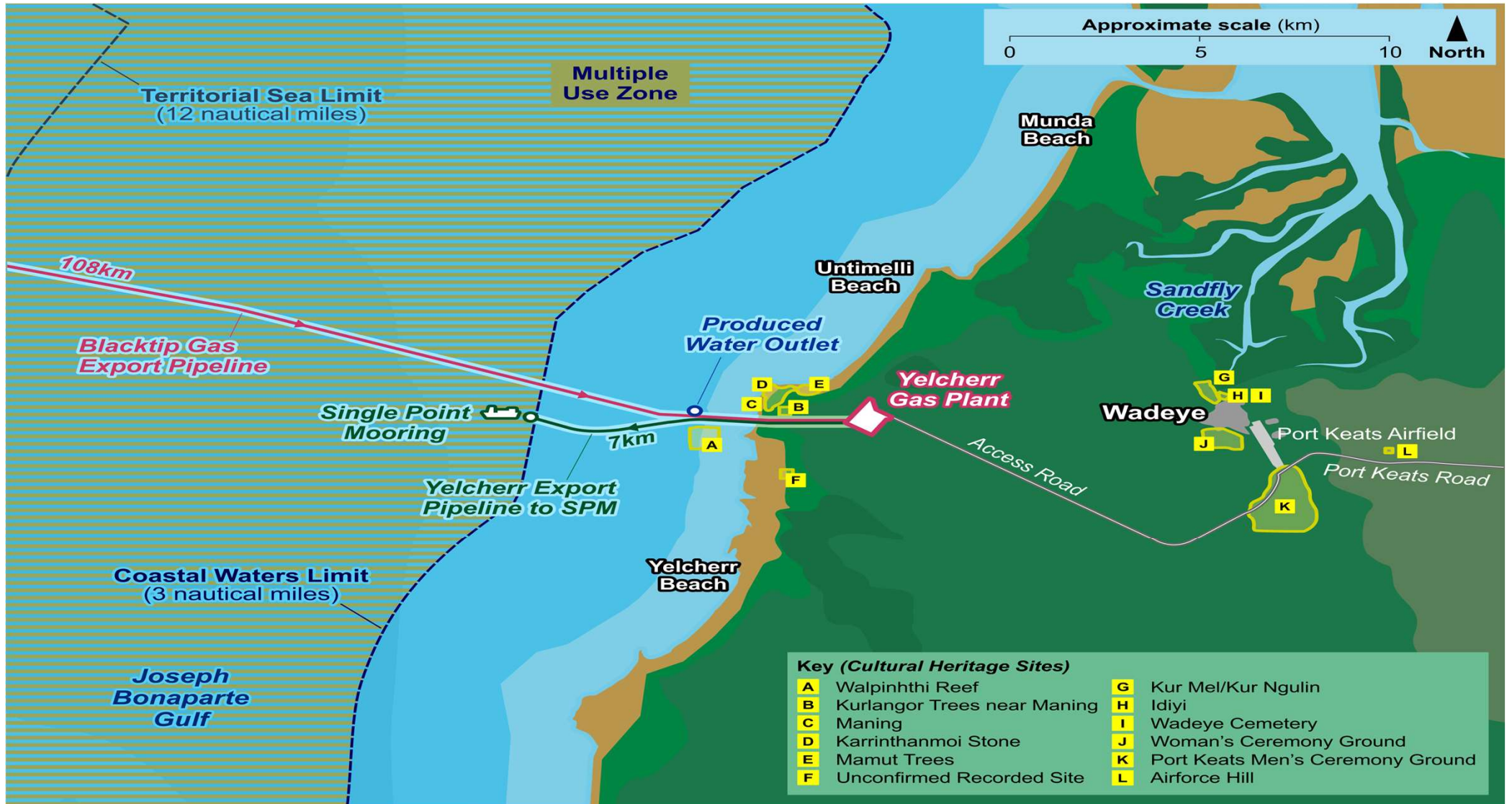


Yelcherr Gas Plant (YGP)

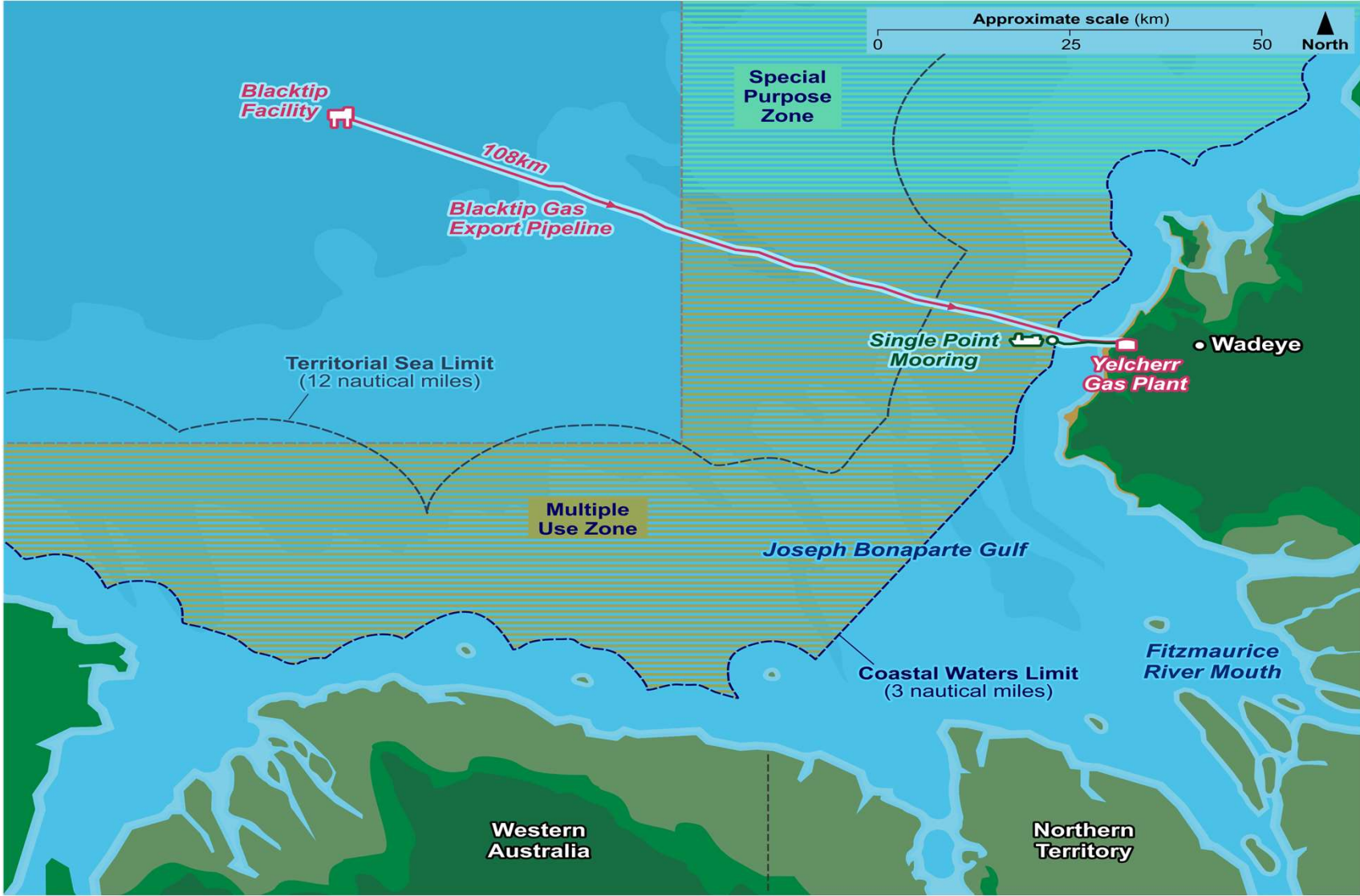


Single Point Mooring (SPM)

Blacktip Project location

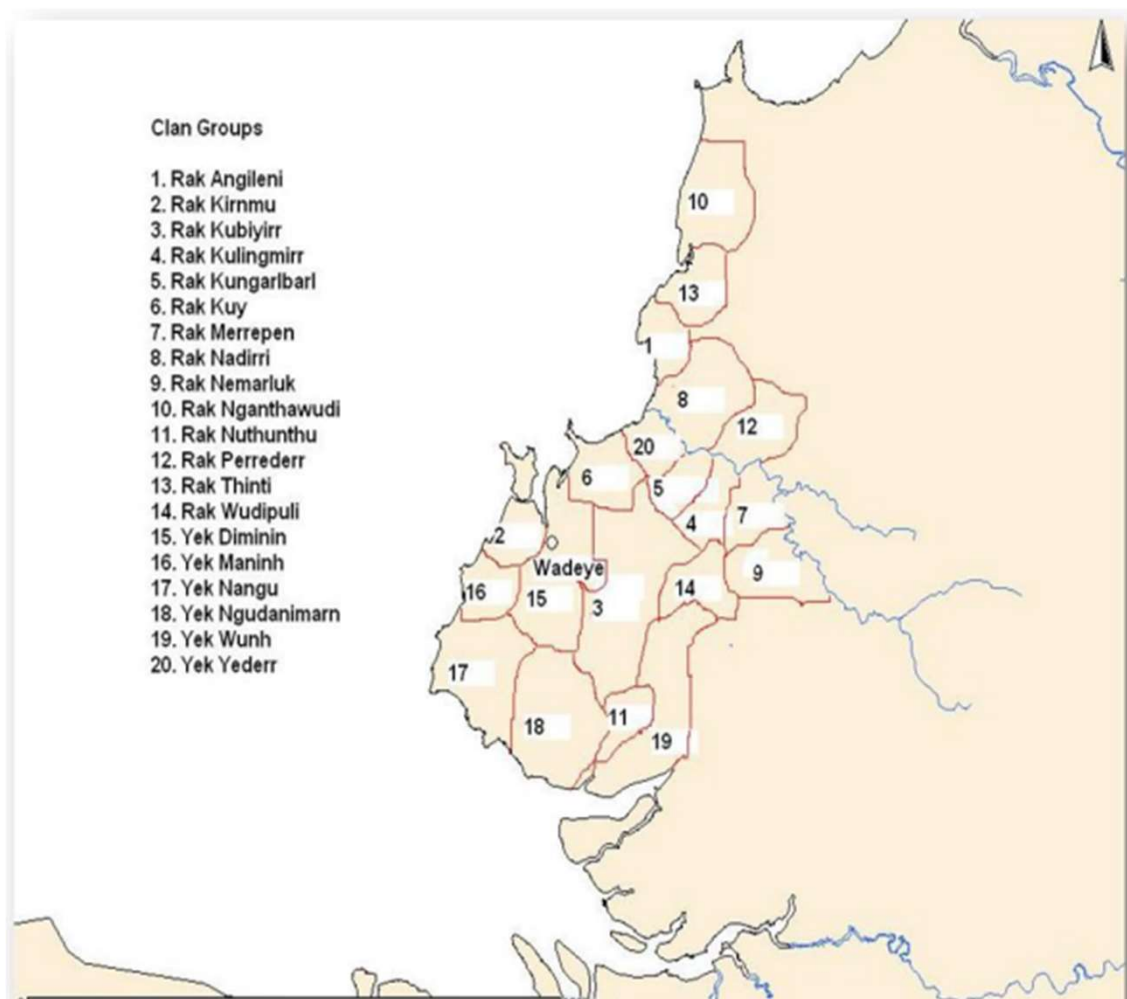


Blacktip Project location





Wadeye Community



Language groups

Emmi
Magati-ge
Marri Amu
Marri Ngarr
Marritjevin
Menhthe
Murrinh-patha
Ngan.gimerri
Ngan.gi-kurunggurr
Ngan.gi-tjemerri
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“Leon Melpi told me one day that he and his middle-aged generation are „anthropologists” and he is right. They are continually seeking information and knowledge about their own culture. At the same time, they are also willing teachers.” – Bill Ivory, 2009

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JU – drilling rig over Blacktip platform





Summary : Potential Environmental Impacts

Applicable to Operations & Drilling Activities



Potential Environmental Impact & Mitigation Measure

Activity Description

- **Noise** emissions generated through the operation of the rig, (e.g. jack-up and drilling)
- **Noise** from support vessels and helicopters

Potential Impact

- **Marine mammals and turtles** are transitory and, given the low frequency and limited duration of the activities behavioral impacts are expected to be temporary and at the individual level only.
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Proposed Management/Mitigation

Compliance with administrative controls (such as EPBC Regulations Part 8) to reduce interactions with marine fauna

Marine fauna observations from vessel bridge watch during Inspection, Maintenance, Repair activities

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Activity Description

Noise emissions generated through the operation survey instrumentation (e.g., boomer, multi-beam echo sounder and sidescan sonar).

(Such equipment is designed to characterize the seabed topography, bathymetry, potential geohazards, and other seafloor features prior to jack-up rig placement at the platform).

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Potential Environmental Impact & Mitigation Measure



Activity Description

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Given the short duration of activities within the Operational Area, and the slow speeds at which vessels operate, collisions with marine fauna are considered highly unlikely.

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Potential Environmental Impact & Mitigation Measure (Drilling only)



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Emergency Response Competency including TDC Ranger Training

2023-10-24 Blacktip EPs Community Engagement Presentation



Blacktip Environment Plan

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31 Oct. – 2 Nov. 2023

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Cameron Hayes – Offshore Supervisor & Completion Engineer

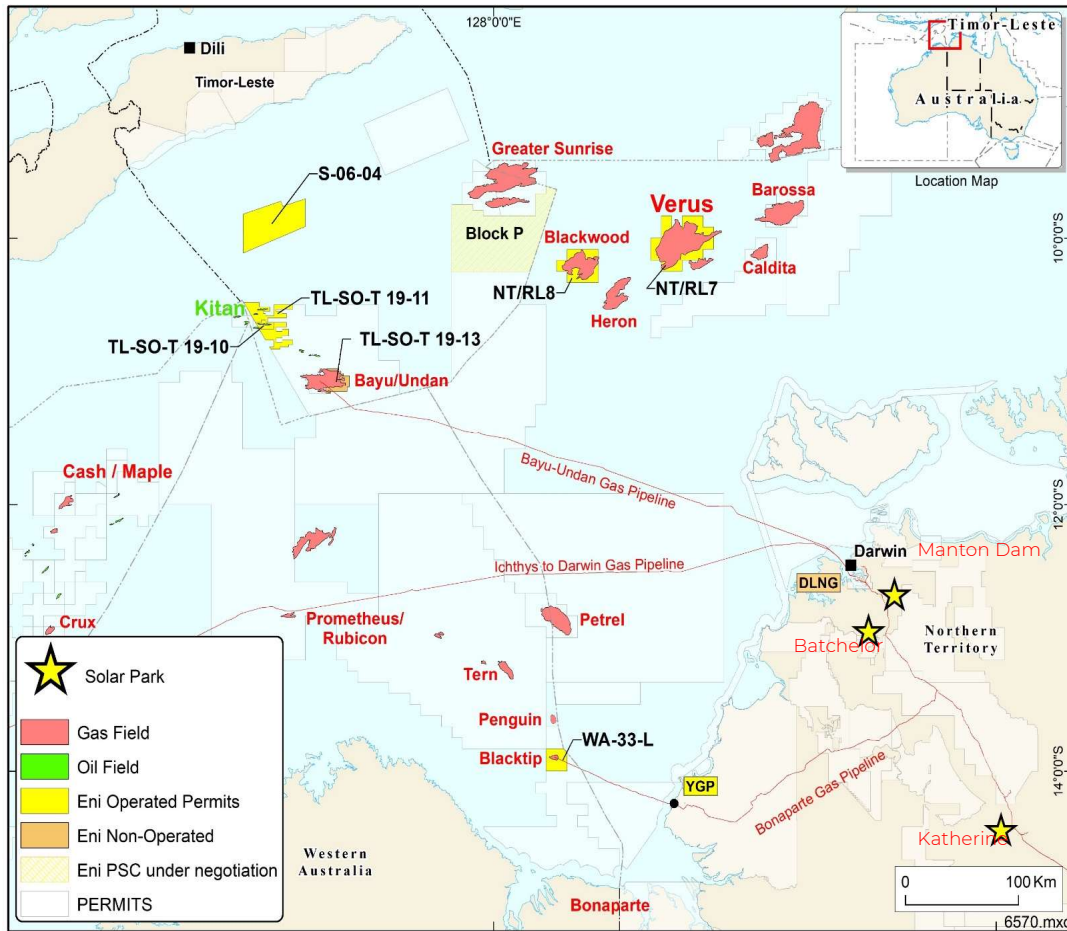
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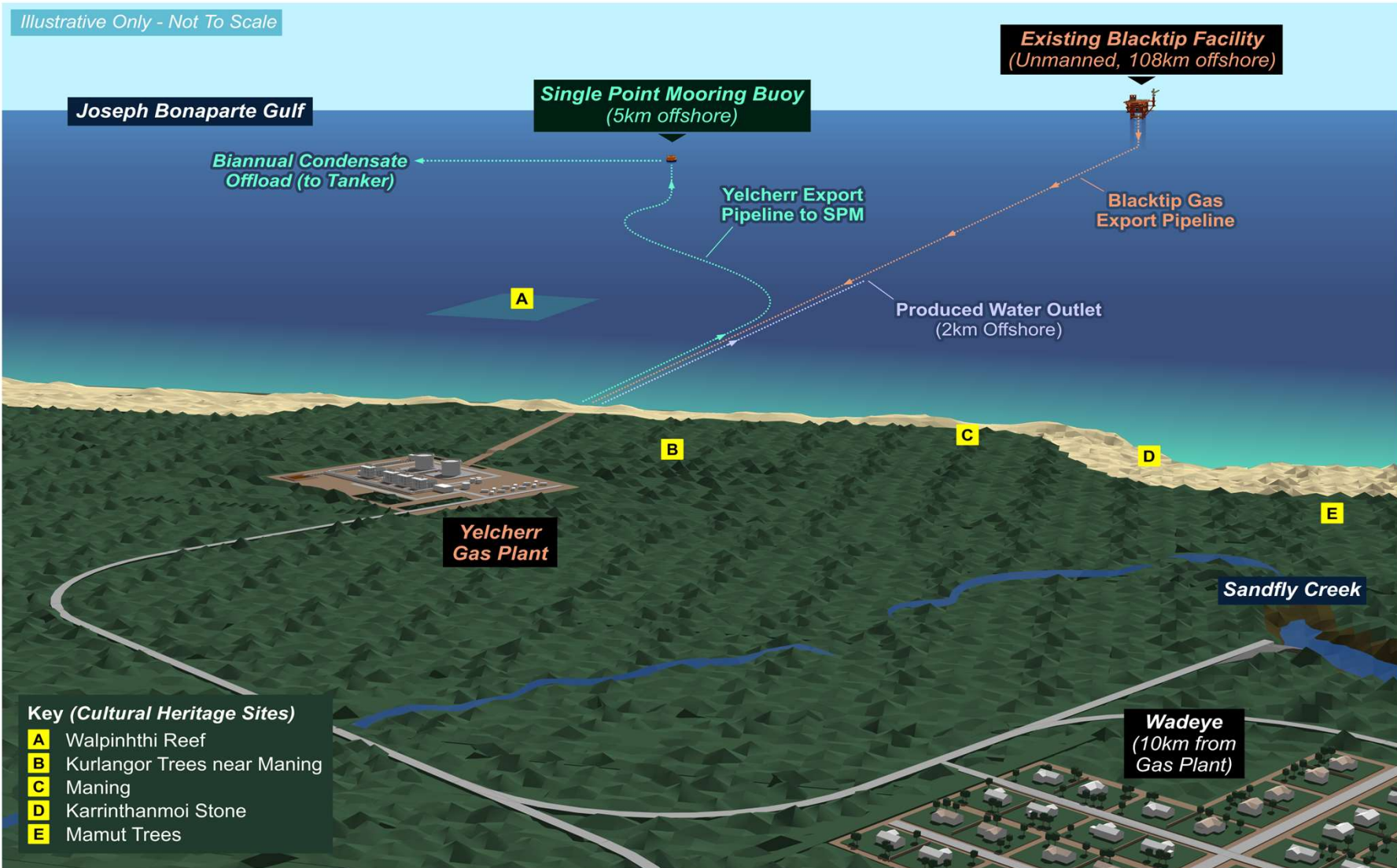
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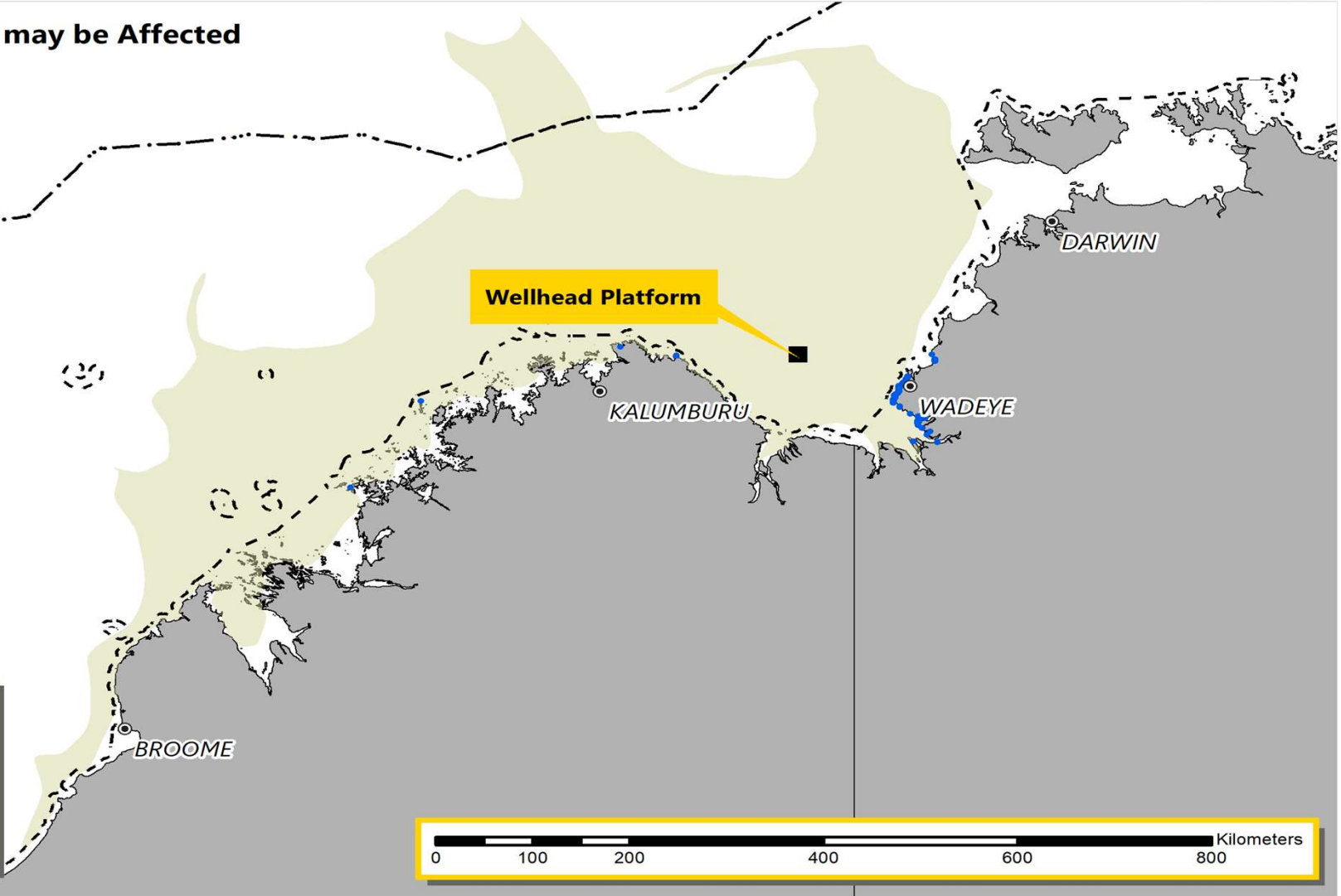
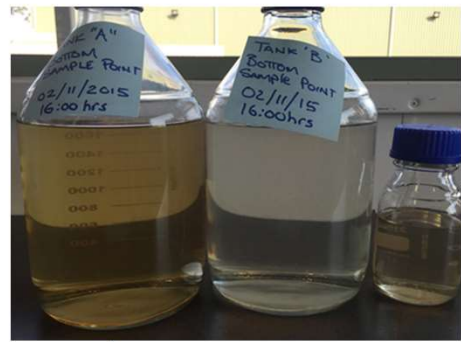
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Blacktip Project location



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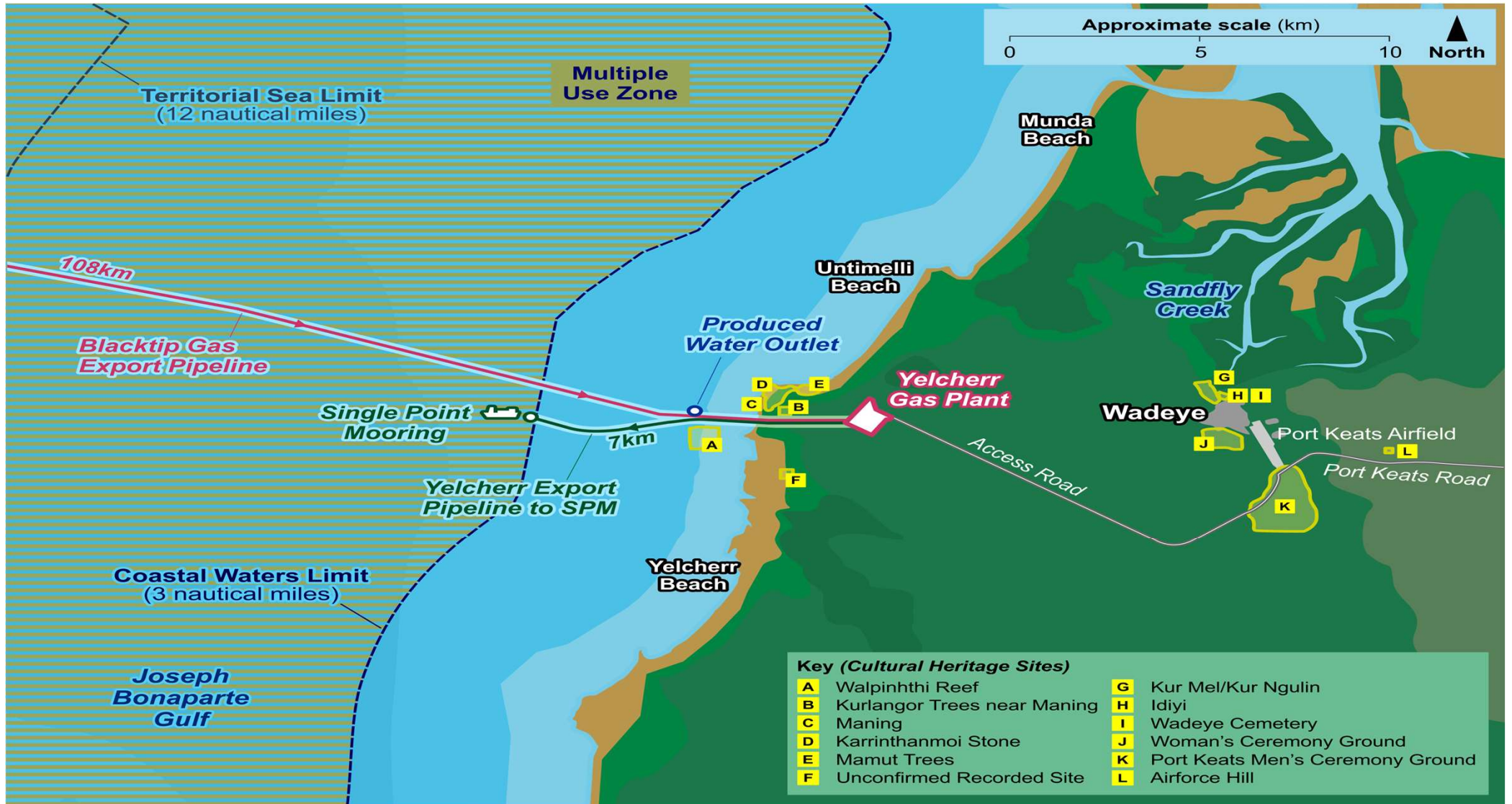


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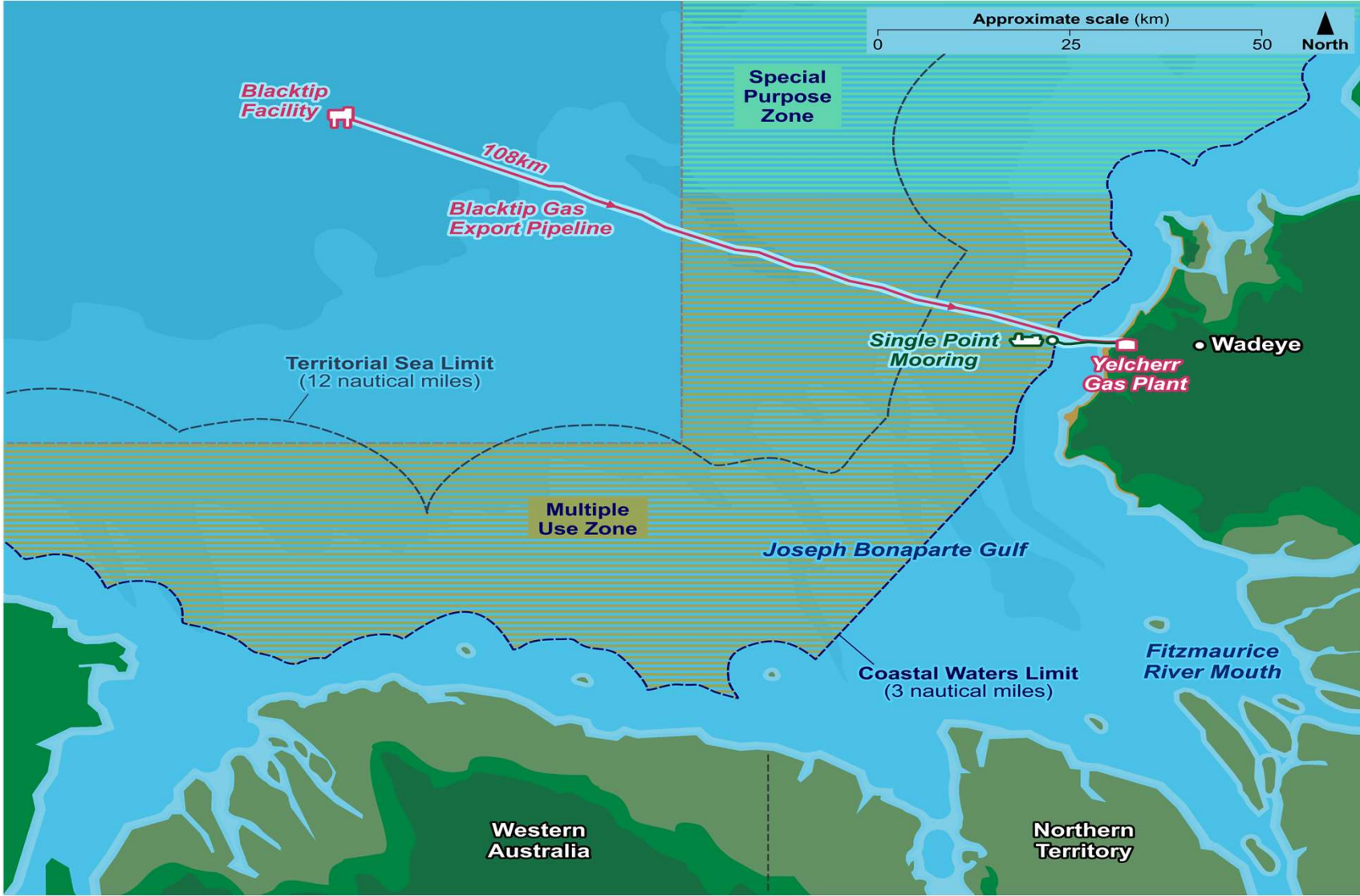


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Blacktip Project location

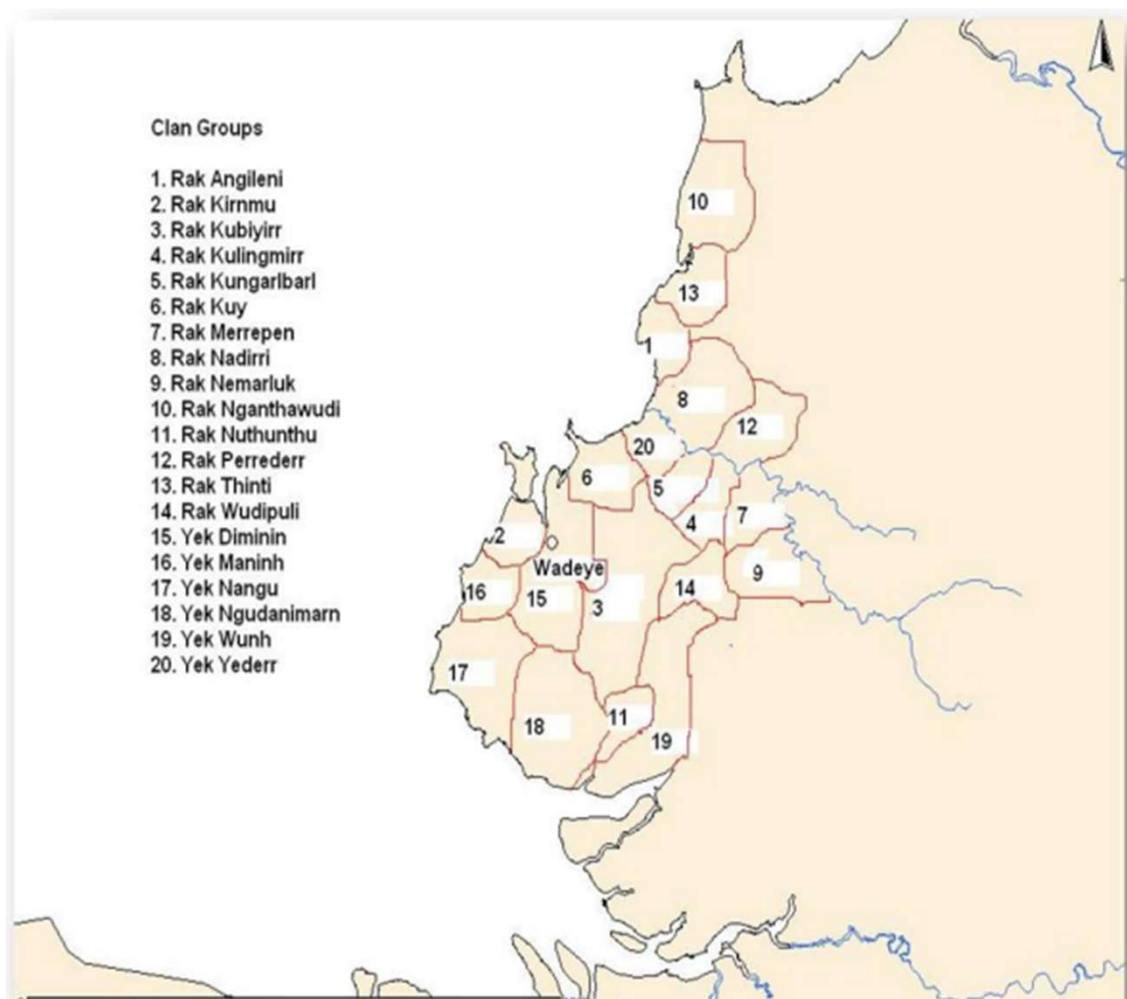


Blacktip Project location





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JU – drilling rig over Blacktip platform





Summary : Potential Environmental Impacts

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Eni's Local Contribution

Wadeye

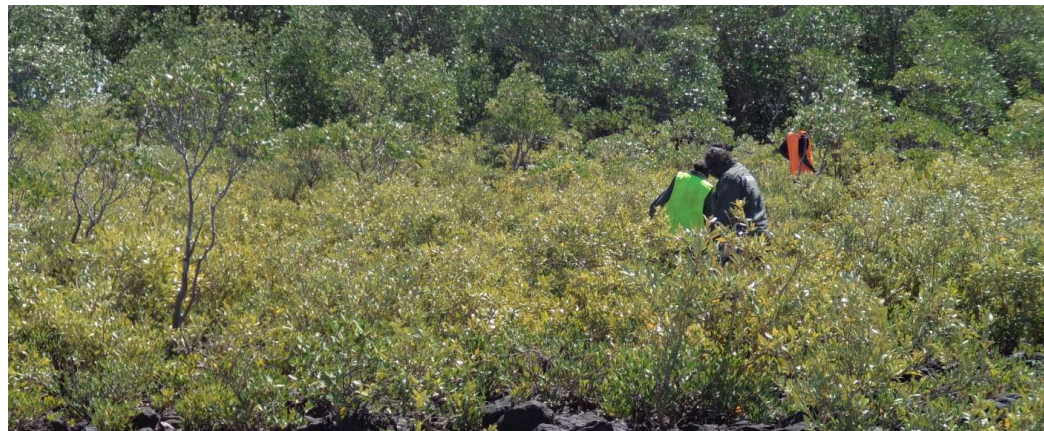
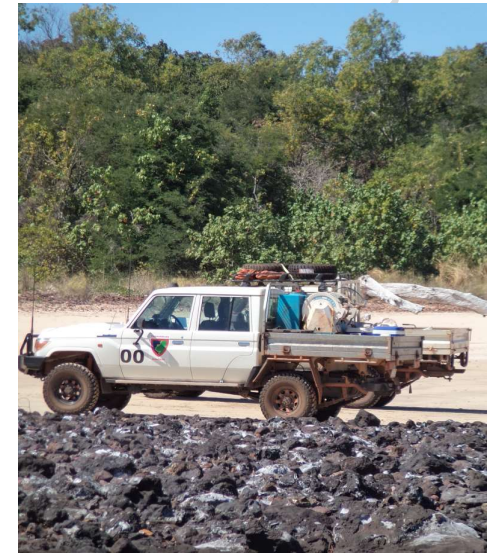
(Obtained permission to use pictures)

Rangers Training in 2023

Water Sampling Training with AIMS



Shellfish Monitoring - 2023



BRUVS Training - 2020



Water Sampling Training - 2023



Recycling Programme – Ongoing



Summary



- Here to listen
- Informing surrounding communities on activities to be undertaken in Blacktip

Next steps

- Collect comments made during discussions
- Aim for submission of Operations Environment Plan to NOPSEMA by end of November
- Aim for submission of Drilling Environment Plan to NOPSEMA by end of November

Contacts:

- email: eniaus.hsefeedback@eni.com
- phone number: (08) 9320 2623
- address: 226 Adelaide Terrace, Perth, WA, 6892



Thank you



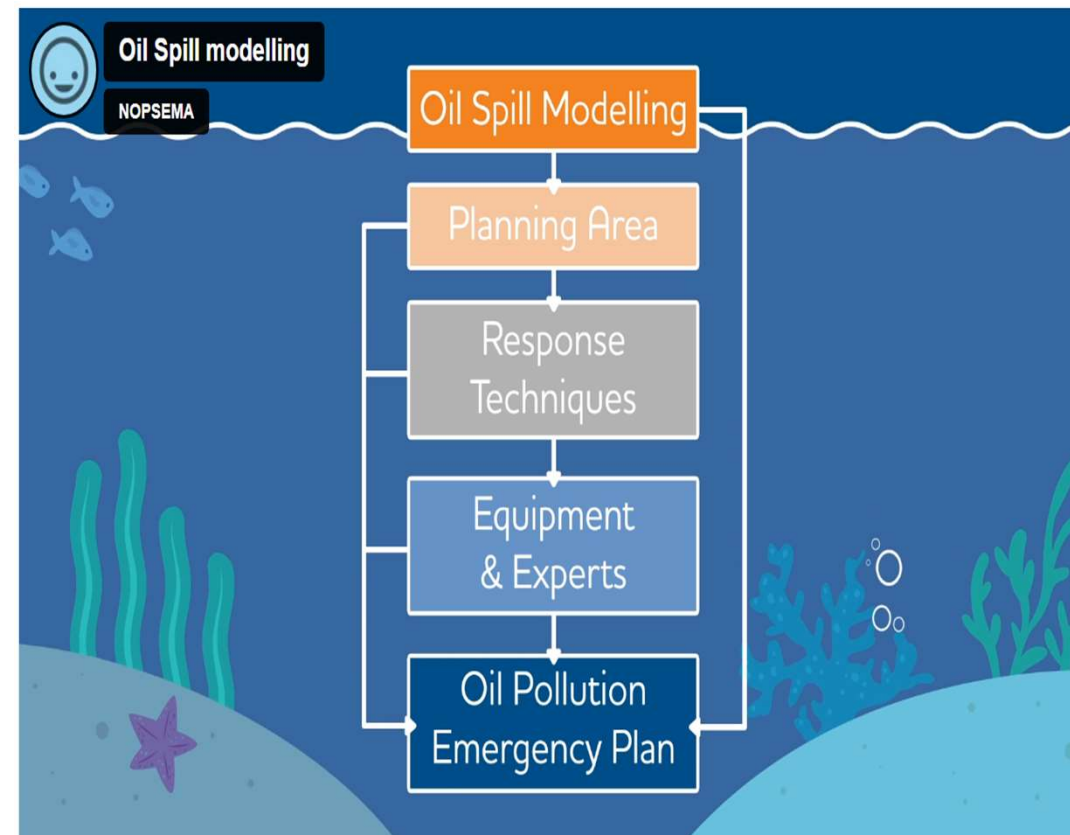
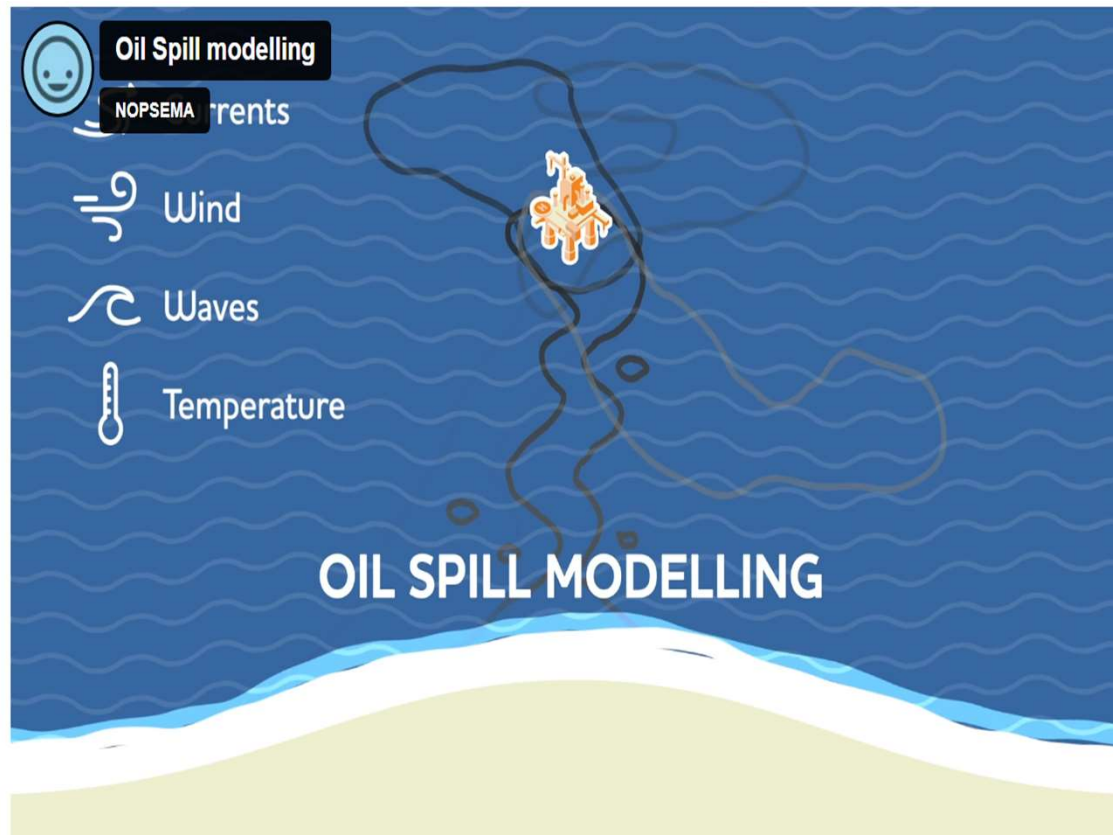
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- support vessel operations for the activities listed above.



Oil Spill Modelling

[Oil pollution risk management | NOPSEMA](#)



2024-04-23 Stakeholder Information Slides - Wadeye



Stakeholder Information Slides

Eni's activities in Australia and Timor-Leste

April 2024

Introduction to the Eni team



Angelina Branco – Stakeholder Engagement & CSR Manager

Joe Covic – Health, Safety, Environment & Quality

Mike Prime – Stakeholder Engagement Adviser

General Introduction

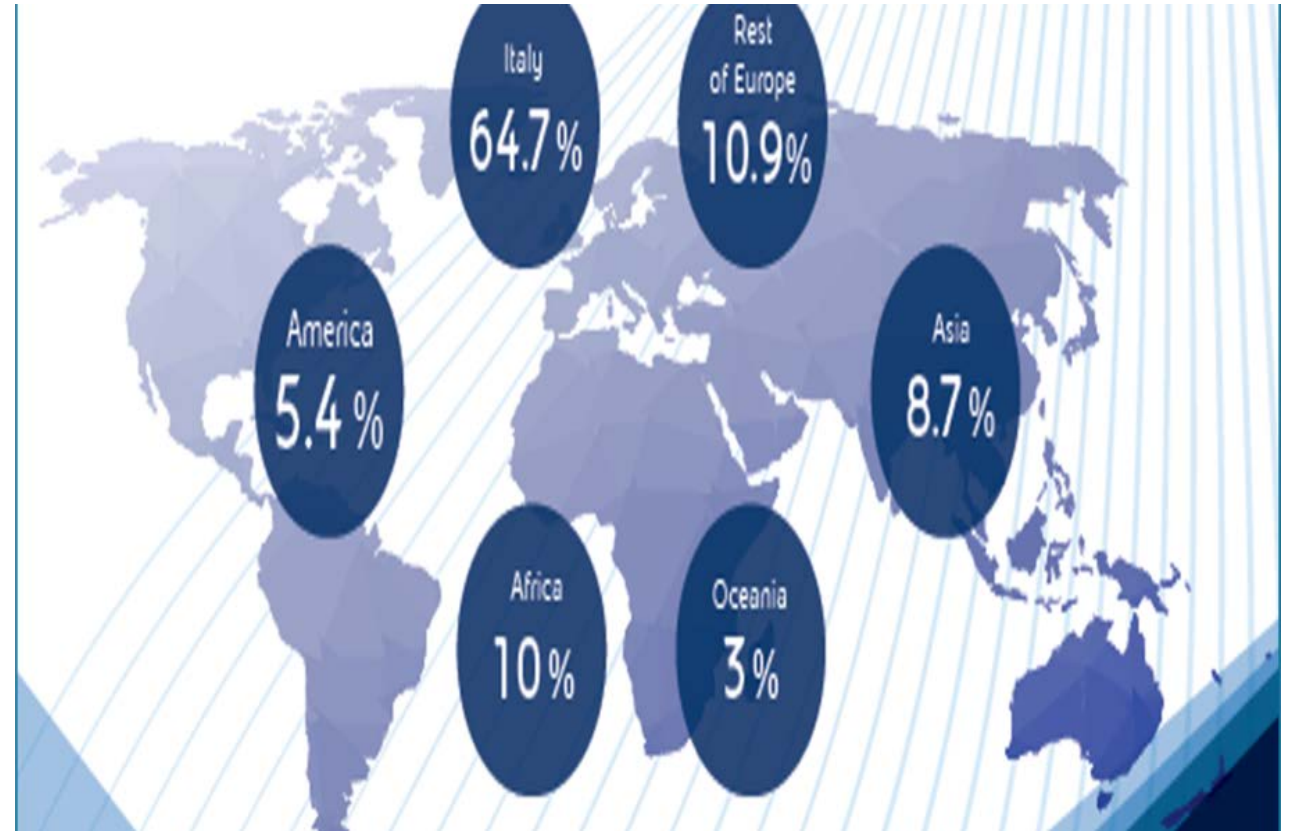


- **Why are we here?**
- **About Eni Australia**
- **About Blacktip & YGP**
- **How do we do our work...**
- **Collaborating with TDC**
- **Your questions & comments to us**
- **Moving forward**

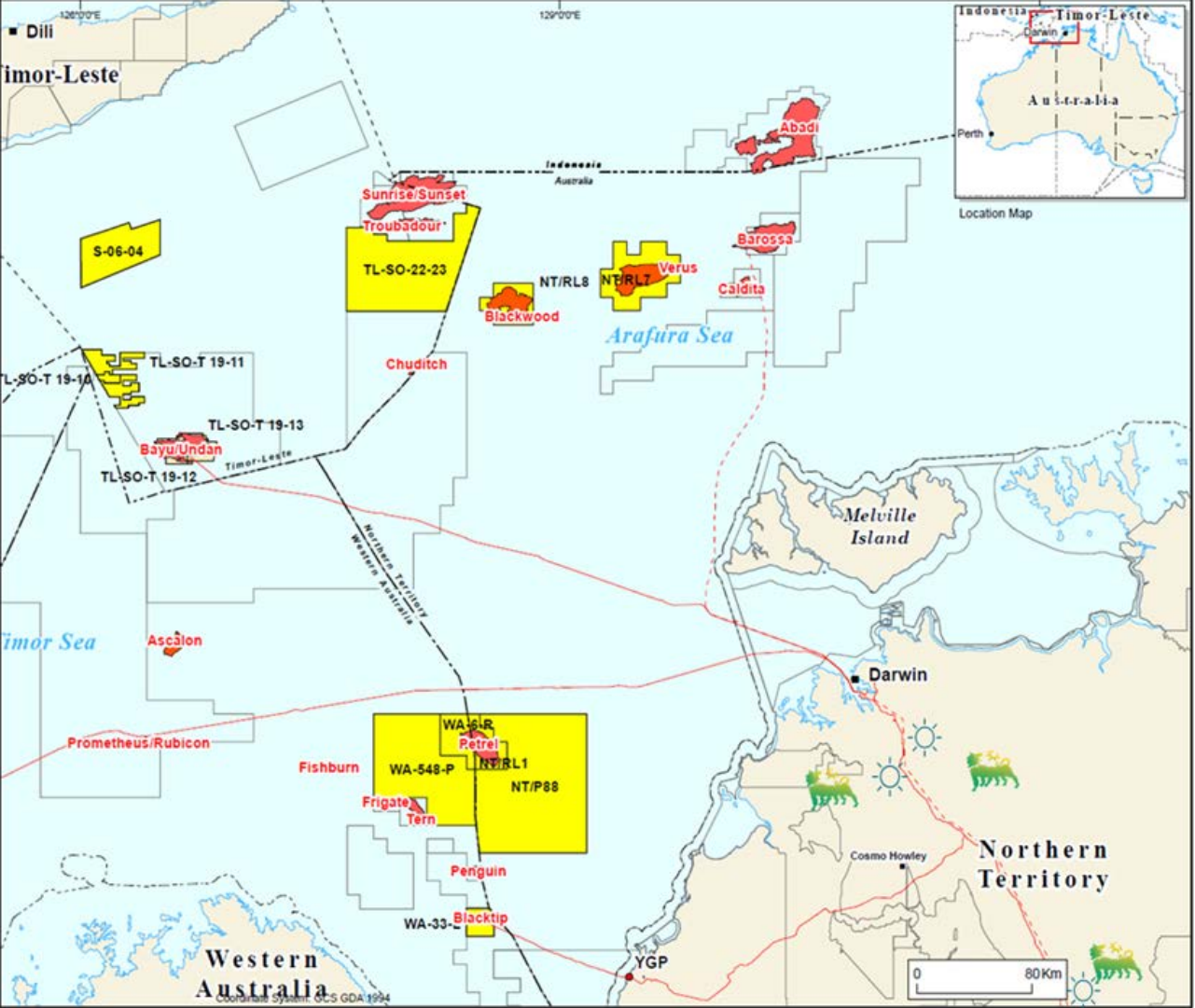
Introducing Eni



- Integrated international energy company
- Actively working in 62 countries & Employs 32,188 people
- Dual Flag with communities where we operate



Eni in Australia and Timor Leste



Key Facts

Blacktip Gas Production

- 100% owned & operated Blacktip Gas Project
- Blacktip supplied 30.4 petajoules of gas to Territory and East Coast customers in 2009.
- Providing almost all of the Territory's gas needs to generate electricity for homes, industry and business.
- Blacktip provides 100% of the gas supply for Wadeye power generation (since 2021).
- New drilling activity to occur in Q3 2024

Other projects

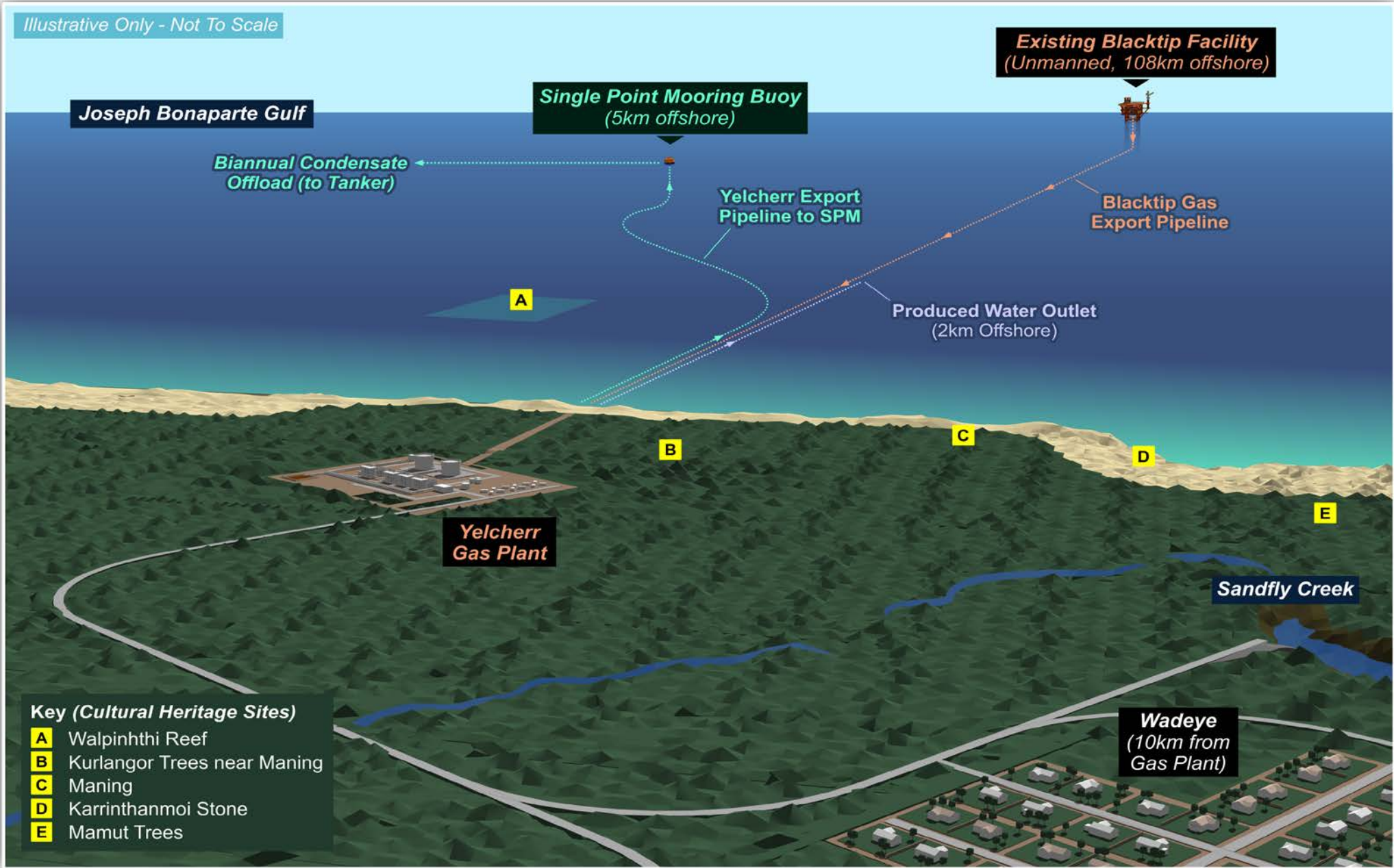
- Petrel
- Verus

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101 people in Australia and Timor Leste
 Located in Perth (HQ), Darwin, Yelcherr Gas Plant (YGP) and Dili

Blacktip Operational Area



Blacktip Infrastructure



Wellhead Platform (WHP)



Single Point Mooring (SPM)



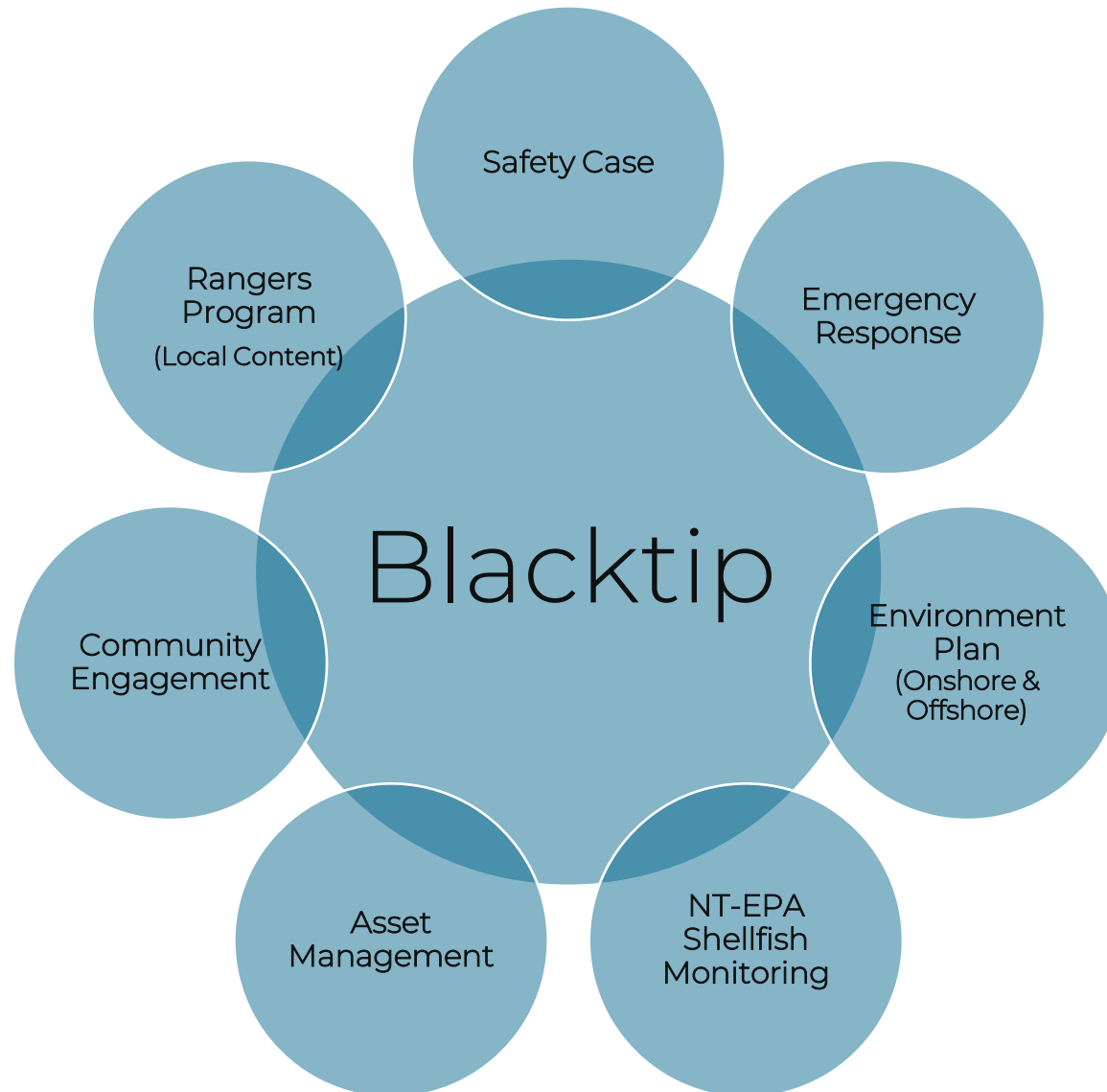
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- wellhead platform and pipeline production operations
- surface and subsea infrastructure activities, inspections and maintenance (as required)
- tanker vessel off-takes of condensate from the single point mooring (twice per year)
- well intervention activities (as required)
- support vessel operations for the activities listed above.

Sustainability at Blacktip





Environmental Planning – Protect Environment

Operations Environment Plan – Every 5 years

- Not a new process, engagement has occurred on all previous Environment Plan since 2009
- Current Operations Environment Plan expires soon
- Process to renew Environment Plan has required stakeholder consultation

Petrel

- Preparation for future projects EP

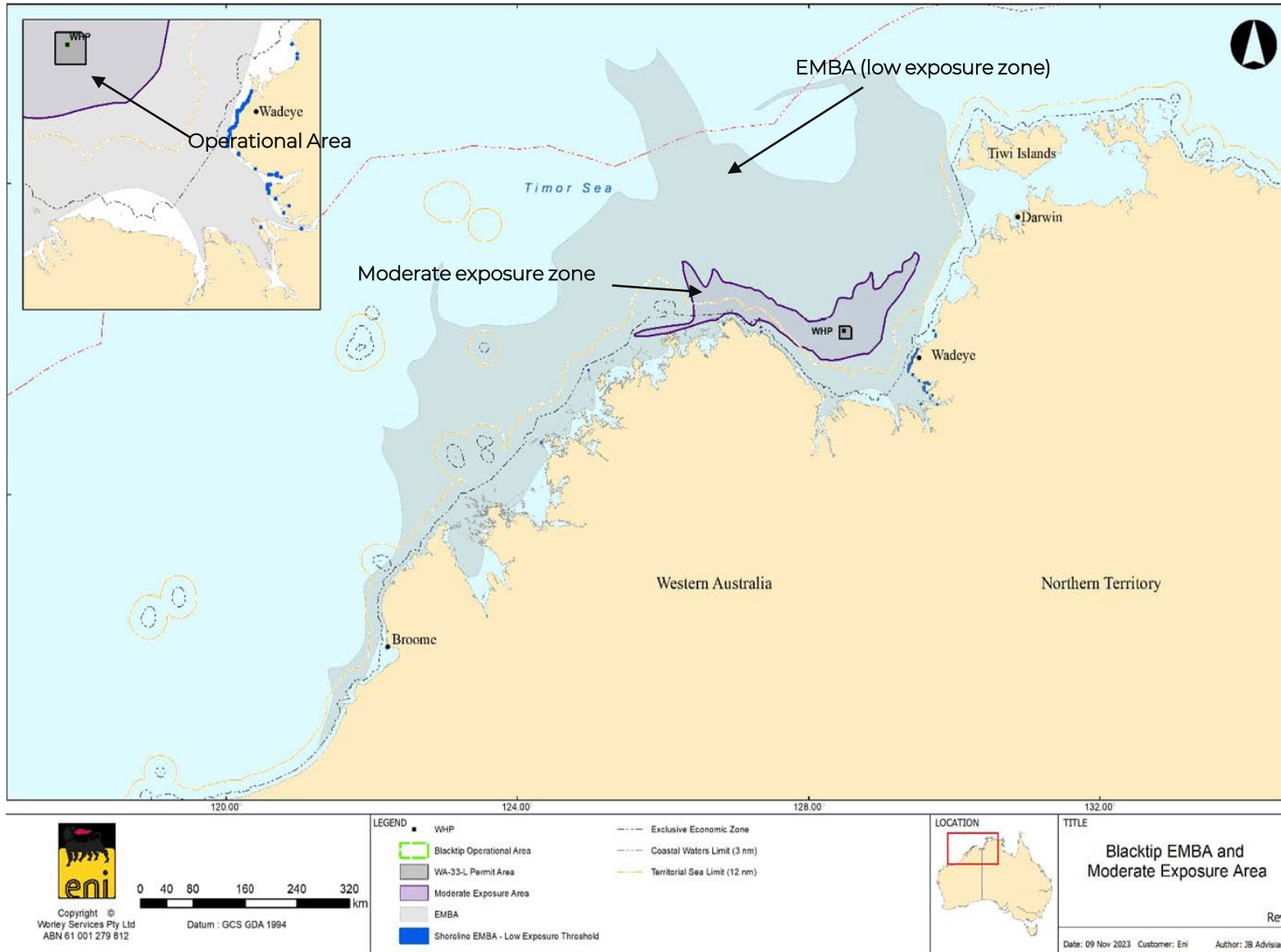
Drilling Environment Plan

- Was required for the purpose of the upcoming drilling campaign
- Preparation for a drilling campaign
- Process to submit Environment Plan has required stakeholder consultation

Verus

- Preparation for future projects EP

Blacktip EMBA & Moderate Zone



- Operational Area (500m safety zone)
- Moderate exposure zone only for unplanned activity
- EMBA is low exposure zone for unplanned activity



Q3 Drilling Activity Summary

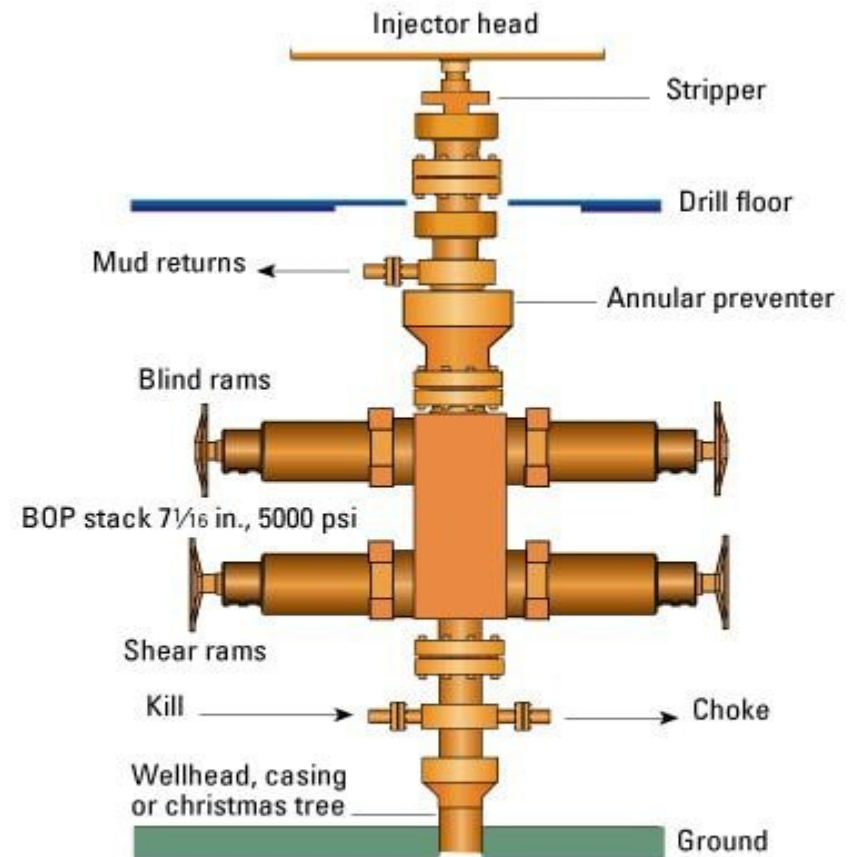
JU – drilling rig over Blacktip platform



The following activities will occur during drilling of the additional development well:

- site survey (if required)
- jack-up drilling rig placement
- drilling and cementing top hole section
- **installation of the blowout preventer**
- drilling intermediate and production hole sections
- cementing production casing
- well completion and clean-up, including flaring.

BOP (Blow Out Preventor)



Blowout preventer. This BOP configuration is typical for a well drilled with a hole size greater than 4-in. diameter.



Eni's Local Contribution

Wadeye (Thamarrurr Development Corporation)

(Obtained permission to use pictures)

Global Community Programs



SECTORS OF ENGAGEMENT

ACCESS TO ENERGY	LIFE ON LAND	ECONOMIC DIVERSIFICATION & GOOD FARMING	ACCESS TO WATER & SANITATION	EDUCATION & VOCATIONAL TRAINING	HEALTH
					

Supporting National Development Plans also through **Public Private Partnerships**

Promoting the Respect of Human Rights and Transparency along the business lifecycle



Adopting **International Organizations' standards, methodologies and tools**

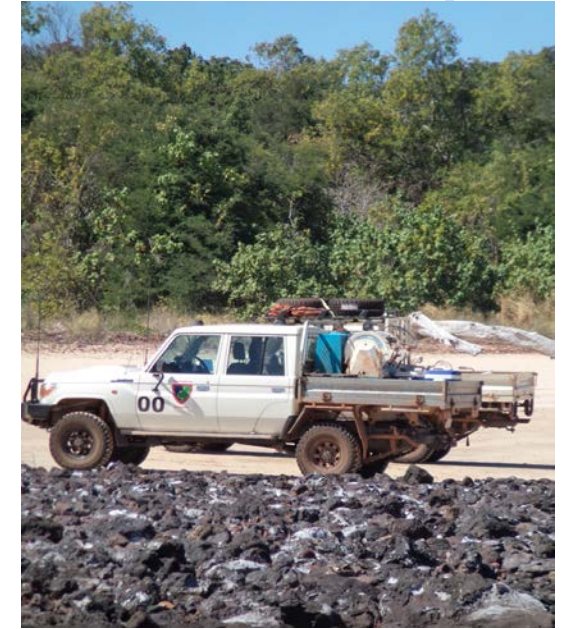
Rangers Training in 2023



Water Sampling Training with AIMS



Shellfish Monitoring - 2023



Baited Remote Underwater Video Training - 2020



Water Sampling Training - 2023



Recycling Programme – Ongoing





Any questions ?



Where to from here

- Continue what we're doing
- Build a stronger partnership
- Exploring new opportunities together



Contact

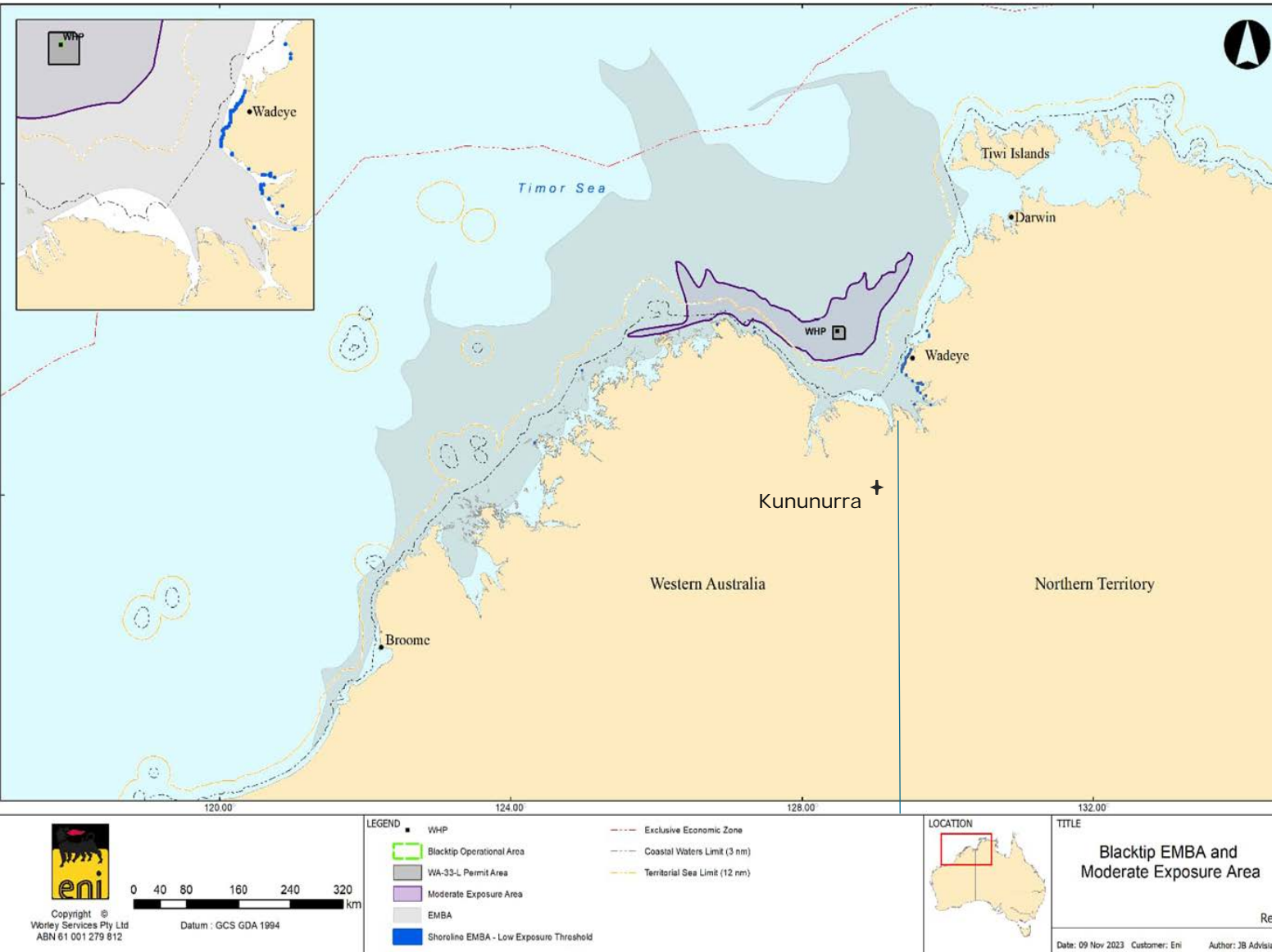
email: angelina.branco@eni.com

joe.covic@eni.com

Perth Office : 226 Adelaide Terrace, Perth, WA, 6892

Darwin Office: Level 16/19 Smith St, Darwin City NT 0800

EMBA (low exposure zone) & Moderate Exposure Zone



- Primary Measure for control
 - BOP
- Time for shoreline contact
 - Possibly 6 weeks (1% probability)
- Moderate exposure zone only for unplanned activity
- EMBA is low exposure zone for unplanned activity

Worst Case Scenario (Drilling only)



Before Drilling

Well Operation Management Plan
BOP will be installed and tested
A Source Control Emergency Response Plan in place
Response plans and equipment will be on standby to manage spills

Worst Case Scenario

Failure of Blowout Preventor (BOP)

What might happen?

Hydrocarbon release to environment

Control

the rate of evaporation of Blacktip condensate is rapid, with 67% of the volume of the condensate lost within the first two hours and 89% by eight hours.

Activate Emergency Response Plan (equipment & personnels)

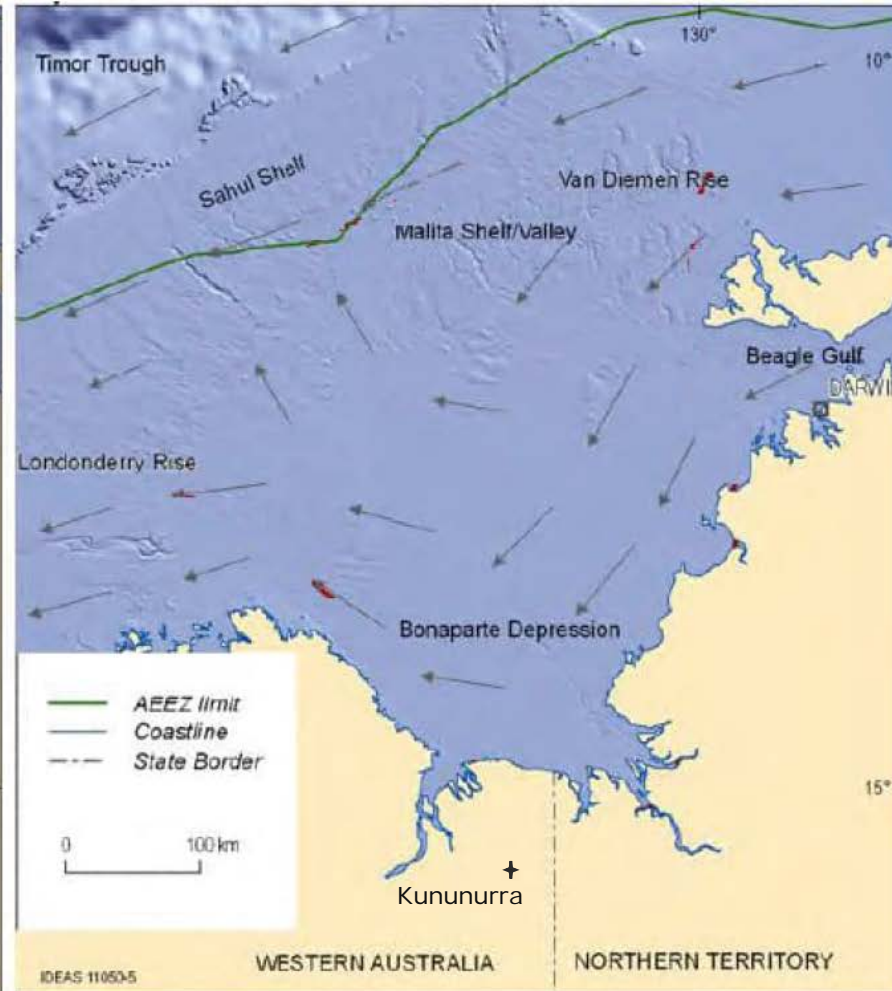
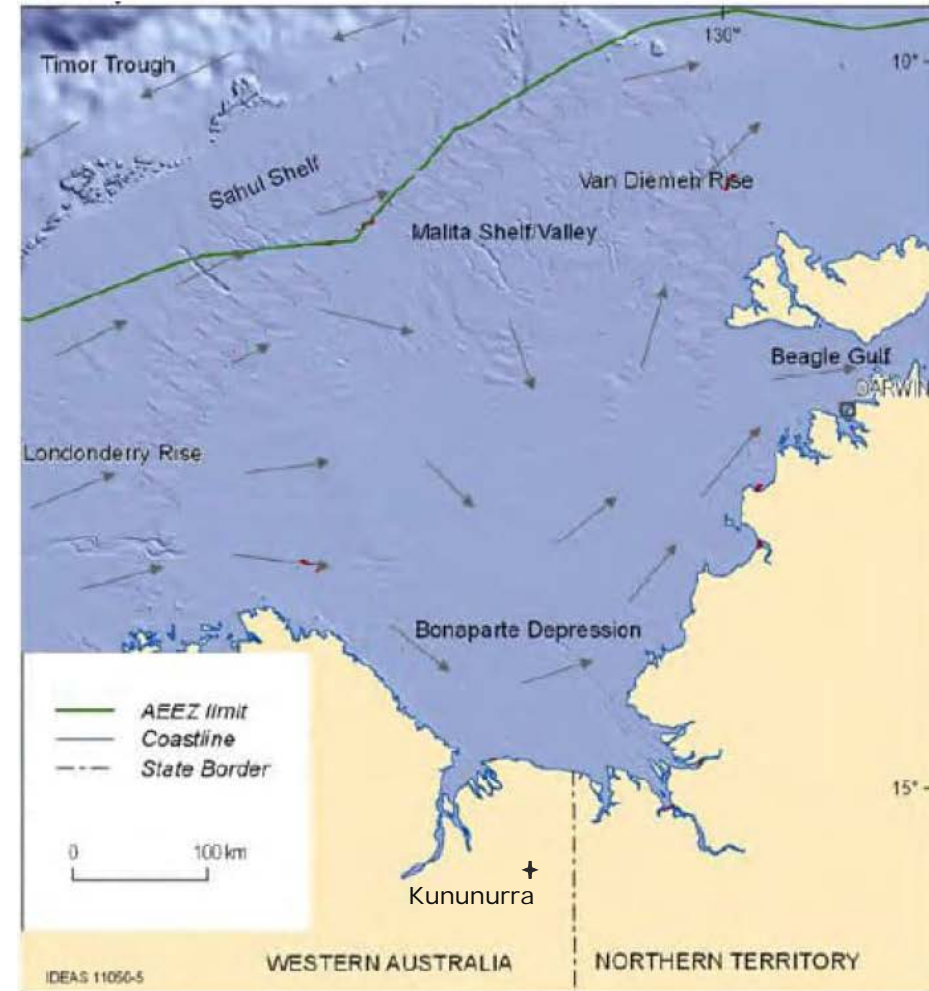
Moderate exposure zone only for unplanned activity
EMBA is low exposure zone for unplanned activity

Blacktip – Oceanography Wind driven currents



January

July



Wind Currents Comments

- Summer – main direction towards the south-east driven by the monsoon winds
- Winter – main directions towards the north-west driven by the trade winds
- Towards nearshore currents become a more longshore direction. Westerly in winter and easterly direction in summer.
- Very nearshore currents are heavily influenced by local topography. Local clockwise and anti-clockwise on ebb and flood.

Wadeye Community Newsletter Advertisement for Consultation

Publication - Community Consultation



eni

Eni Australia Limited (Eni) Community Consultation for Blacktip

Since 2009, Eni has been supplying natural gas for electrical power generation to the largest part of the Northern Territory (NT) from the Blacktip field.

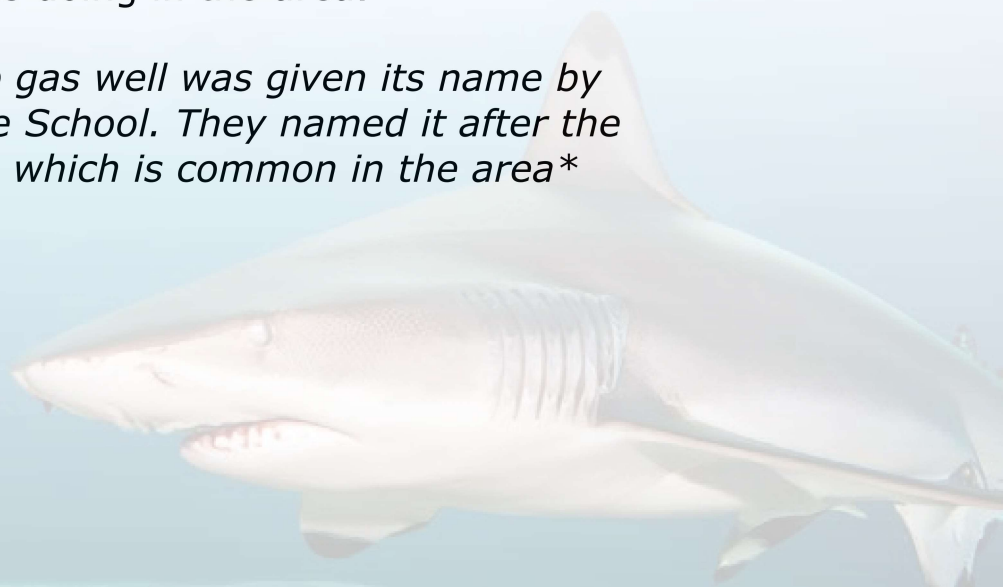
This field is located more than 100km off the coast of Wadeye. The gas is produced from three deep wells that feed it into a pipeline, which directly reaches the processing facility at Yelcherr Beach on Yek Maninh Country. At the Yelcherr Gas plant, the gas is cleaned for electricity generation and then pumped into another pipeline that supplies most of the power stations in the NT, including Wadeye and Darwin.

To ensure a continuous gas supply for electric power generation in the NT, Eni is planning to drill a new well from the Wellhead platform, similar to the third well that was completed in at the end of May this year.

The Eni Blacktip team propose to meet and discuss the planned operations with the community on the 31st August 2023.

Everyone in the community is welcome to come along and find out more about what Eni is doing in the area.

***Fun fact** – *the Black Tip gas well was given its name by students from the Wadeye School. They named it after the Black Tip shark – Yenge – which is common in the area**



Blacktip Operations Flyer July 2023



Blacktip Offshore Environment Plan: 5-yearly Revision

Eni Australia Limited (Eni) operates the Blacktip Offshore Facility in the Joseph Bonaparte Gulf in production license WA-33-L and pipeline licence WA-15-PL. Gas production from the facility commenced in 2009, providing a reliable source of domestic gas for the Northern Territory. The Blacktip Offshore Facility compromises (**Figure 1**):

- a well head platform in WA-33-L, which can accommodate up to six production wells
- a gas export pipeline within WA-15-PL, which brings gas, condensate and water to the onshore Yelcherr Gas Plant for processing and separation
- a single point mooring from which condensate is exported.

Eni operates the Blacktip Offshore Facility in accordance with the Blacktip Offshore Environment Plan. Eni is currently preparing the Blacktip Offshore Environment Plan for 5-yearly re-submission to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

As required by NOPSEMA, Eni must consult with people whose functions, interests and activities may be affected by the operation of the Blacktip Offshore Facility—Eni refers to such people as relevant persons.

This fact sheet provides you with information to determine if you are a relevant person for the operation of the Blacktip Offshore Facility.

You may be a relevant person if the operations of the Blacktip Offshore Facility may affect:

- your spiritual or cultural connection to the land and sea country
- your business and recreational activities, such as fishing and tourism
- the functions or responsibilities of your organisation.

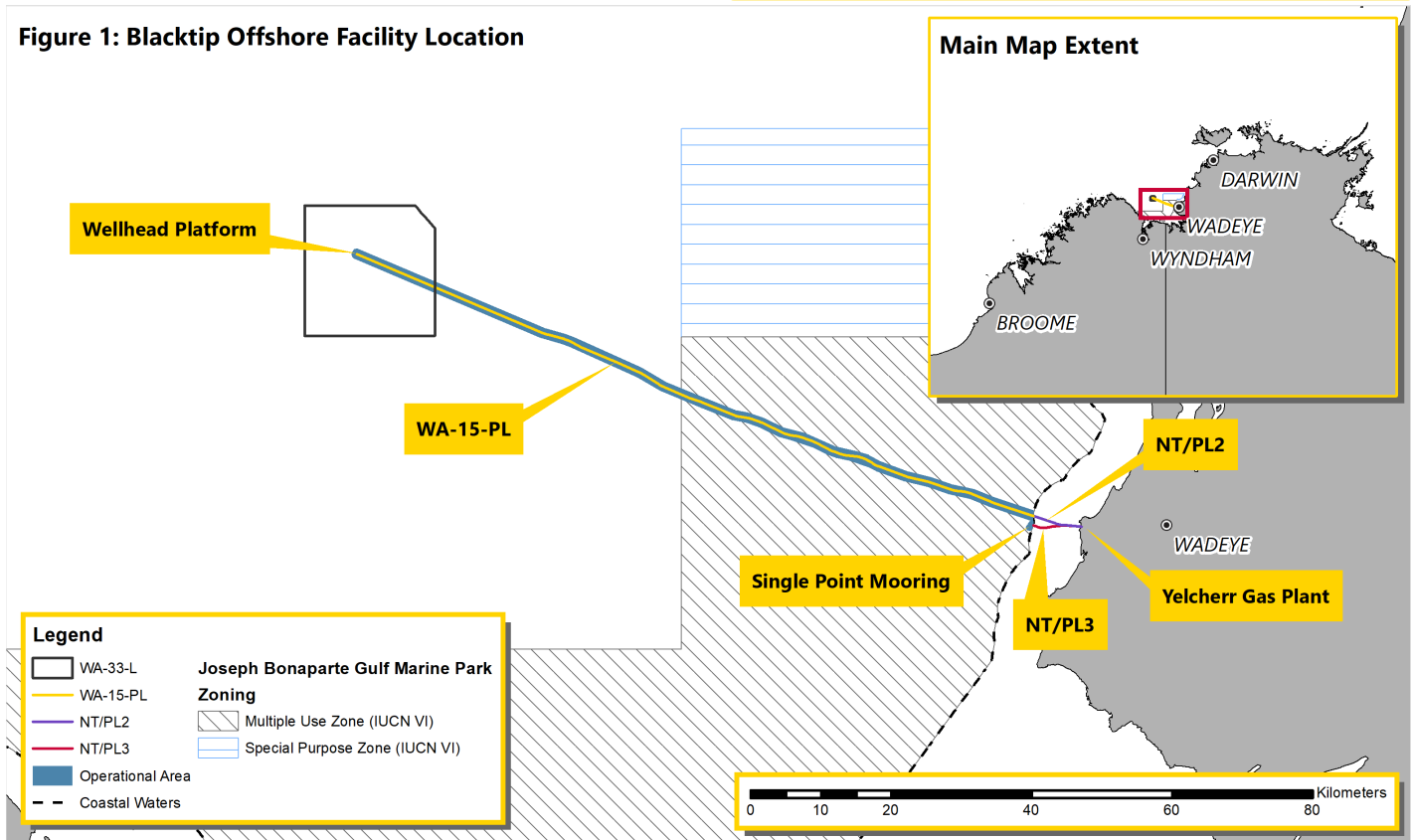
If you think you may be a relevant person, please review this information and provide any feedback to Eni. You are invited to submit your advice on control measures to mitigate potential impact (if any) that the operation of the Blacktip Offshore Facility may have on you.

Contact Eni

Email: info@eniaustralia.com.au

Post: PO Box 6862
East Perth WA 6892

Figure 1: Blacktip Offshore Facility Location





Location

The Blacktip wellhead platform is in Commonwealth waters approximately 300 km south-west of Darwin and approximately 90 km north of the Western Australia coastline. The wellhead platform stands in a water depth of approximately 51 m. The gas export pipeline extends 108 km south-east from the wellhead platform to the onshore Yelcherr gas plant near Wadeye in the Northern Territory. Condensate is stored on-site at the gas plant before being exported via subsea condensate export pipeline to a single point mooring, located in Commonwealth waters approximately 7 km offshore.

A portion of the gas export pipeline and single point mooring overlap the Joseph Bonaparte Gulf Marine Park. The park was established after the construction of the Blacktip Offshore Facility.

An operational area extends to an area of 1,500 m radius around the wellhead platform, 1,500 m on either side of gas and condensate export pipelines in Commonwealth waters, and a 500 m radius around the single point mooring. All planned activities permitted by the Blacktip Offshore Environment Plan occur in the operational area.

Location details are summarised in **Table 1**. A location map is provided in **Figure 1**.

Activities

The Blacktip Offshore Facility typically operates 24 hours a day, 365 days a year.

Operations at the Blacktip Offshore Facility in Commonwealth waters include:

- wellhead platform and pipeline production operations
- surface and subsea infrastructure activities, such as inspections, maintenance and repairs as required (approximately two times per year)
- tanker vessel off-takes of condensate from the single point mooring (approximately two times per year)
- well intervention activities as required
- support vessel operations for the activities listed above.

The Blacktip Offshore Environment Plan does not cover operations in the Northern Territory, such as

- the operation of the Yelcherr gas plant
- the operations of the gas (NT/PL2) and condensate export (NT/PL3) pipelines within Northern Territory waters.

Table 1: Location Details

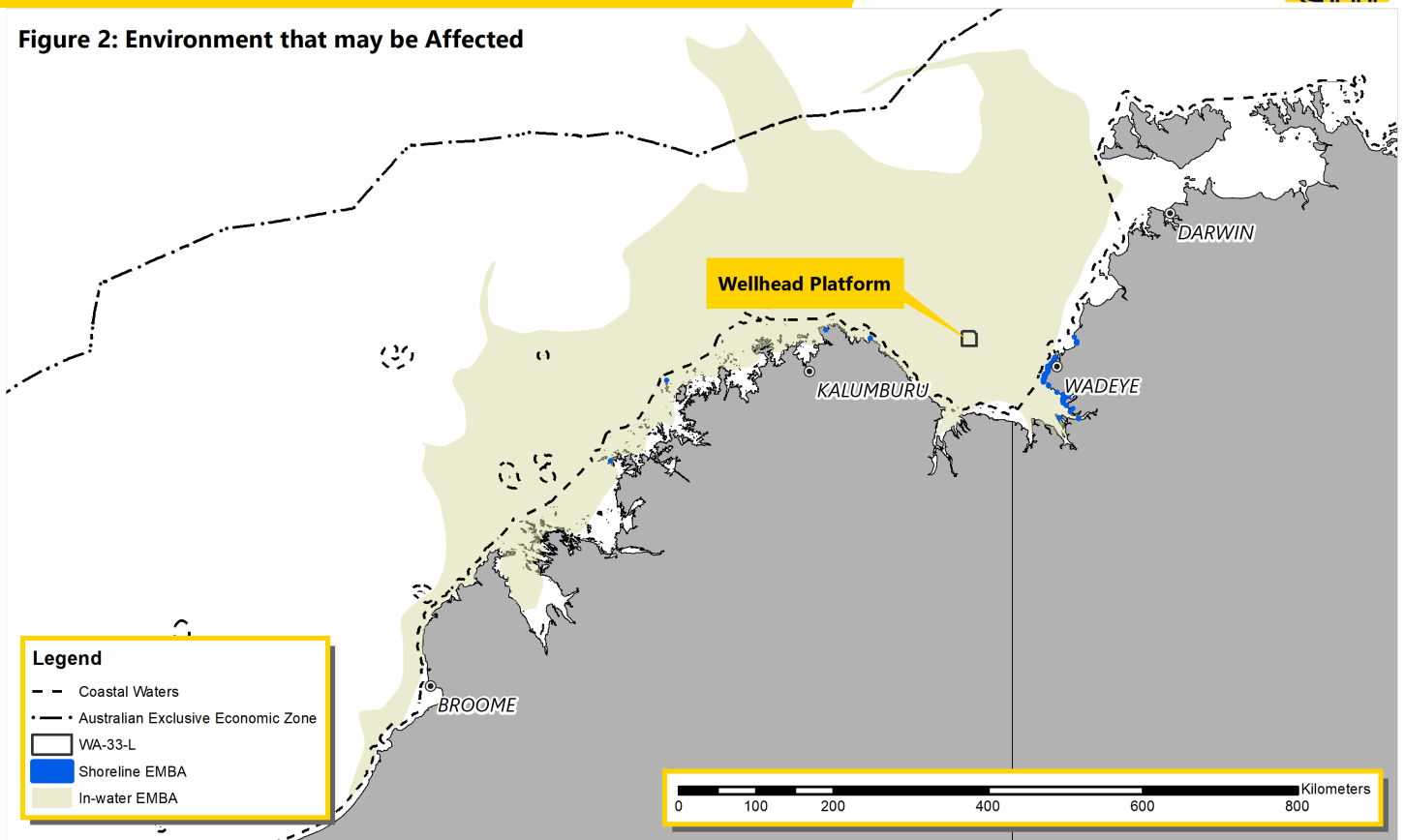
Item	Description
Petroleum titles	WA-33-L, WA-15-PL
Coordinates (GDA94)	Wellhead platform: <ul style="list-style-type: none"> • 13° 53' 41" S, 128° 29' 3" E Single point mooring: <ul style="list-style-type: none"> • 14° 14' 28.3" S, 129° 21' 1.6" E
Operational area	All activities will occur within an operational area, defined as: <ul style="list-style-type: none"> • 1,500 m radius around the wellhead platform • 1,500 m on either side of gas export pipeline • 500 m radius around the single point mooring • 1,500 m on either side of the condensate export pipeline from the Territory water boundary to the single point mooring.
Petroleum Safety Zones	500 m radius petroleum safety zones extends around the wellhead platform and single point mooring.

Environment that may be Affected

The environment that may be affected (EMBA) encompasses the spatial extent within which the operations activities could have an environmental impact. The environmental impacts from planned activities will mostly be limited to within the operational area. The outermost boundary of the EMBA is based on an accidental release of hydrocarbons to the environment as a result of a loss of well integrity. This event is highly unlikely to occur and Eni implements a range of measures to prevent it. The EMBA is shown in **Figure 2**.

Stochastic modelling is used to determine the EMBA by a hydrocarbon spill and involves combining hundreds of modelling simulations during a range of wind and current conditions. The extent of an actual spill event is more accurately represented by only one of the simulations from the stochastic model, which results in a much smaller spatial extent. Refer to [NOPSEMA's website](#) for information oil spill modelling.

Figure 2: Environment that may be Affected



Environmental Management

Eni has assessed the environmental impacts and risks for the petroleum activities within the scope of the Blacktip Offshore EP 5-yearly revision. A summary of the assessment and the proposed management measures to reduce the impacts and risks to as low as reasonably practicable and to an acceptable level are provided in **Table 2**. Further details will be provided in the Blacktip Offshore Environment Plan 5-yearly revision, which NOPSEMA will publish on their website once the plan is submitted.

Stakeholder Comment and Feedback

Your comment is sought in relation to any potential impact that the proposed activities, covered by the Blacktip Offshore Operations EP revision, may have on your functions, interests or activities. If you wish to provide any comment or feedback on these activities, please do so by 31 July 2023 to the contact details provided below.

If you know anyone who may be a relevant person, we ask that you make them aware of our consultation.

Eni treats all information provided by you as confidential, with the exception of providing information to NOPSEMA. Eni is required to provide NOPSEMA with details of all correspondence with relevant persons, including copies of written correspondence. NOPSEMA routinely publish environment plans under assessment or accepted on their website. Personal information

(other than name and contact details) is sensitive information and will not be published in the EP. You can request that any material provided to Eni, including your name and contact details, be treated as sensitive information not to be published in the Blacktip Offshore Environment Plan.

All comments provided will be considered in the Blacktip Offshore Environment Plan revision to be submitted to NOPSEMA, in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009. Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA in order for this information to remain confidential to NOPSEMA.

If you wish to opt out of our consultation process after reviewing the information in this letter, please let us know via email.

Please consider NOPSEMA's advice in *Consultation on Offshore Petroleum Environment Plans – Information for the Community* when providing feedback to Eni, which is available on [NOPSEMA's website](#).

Contact Eni

Email: info@eniaustralia.com.au

Post: PO Box 6862
East Perth WA 6892



Table 2: Summary of Potential Key Environmental Impact/Risks and Management Measures

Aspect	Description	Potential Impact / Risk	Proposed Management
Planned Impacts			
Interaction with other marine users	<p>The physical presence of surface and subsea infrastructure.</p> <p>The 500 m Petroleum Safety Zone (PSZ) around the wellhead platform (WHP) and single point mooring (SPM).</p> <p>Movement of vessels within the operational area.</p>	<p>The presence of the 500 m PSZ, which extends around the Blacktip WHP and SPM, potentially restricts access of other marine users, such as shipping and fisheries.</p> <p>Several Northern Territory, Western Australian and Commonwealth managed fisheries overlap or are close to the operational area; however, given the long-term establishment of infrastructure and the 500 m PSZ zones over the last 10 years, minimal to no interaction is anticipated.</p> <p>The nearest shipping route is 100 km from the operational area and therefore the presence of Blacktip operations vessels is unlikely to cause significant disturbance or displacement of shipping traffic.</p> <p>Given that chartered fishing and tourism operators target areas of high scenic value and/or offshore coral reef areas, the lack of these attributes in the offshore area of the Joseph Bonaparte Gulf suggests that minimal interaction will occur.</p>	<ul style="list-style-type: none"> Navigation equipment and procedures, in accordance with legislative requirements. Infrastructure shown on nautical charts. Maritime notices as required. Activity notifications (note, notifications may be made, as requested by stakeholders). Use of 500 m PSZ around WHP and SPM.
Atmospheric and greenhouse gas emissions	<p>Direct (Scope 1) and indirect (Scope 2 and 3) greenhouse gas (GHG) emissions:</p> <ul style="list-style-type: none"> Scope 1 emissions released by power generation required for the operation of the WHP, and intermittent venting from the WHP during IMR activities. Scope 2 emissions are not expected. Scope 3 emissions such as those from vessels. 	<p>Hydrocarbon combustion may result in a temporary, localised reduction of air quality in the environment immediately surrounding the release point.</p> <p>Non-GHG emissions, such as NO_x and SO_x, and GHG emissions can lead to a reduction in local air quality.</p> <p>GHG emissions from the activities will contribute to the overall global GHG emissions, however given the scale of the generated atmospheric emissions from the activities, the contribution of atmospheric emissions to the total annual Australian GHG annual emissions is expected to be minor.</p>	<ul style="list-style-type: none"> Use low sulphur fuel on the vessels, in accordance with legislative requirements (e.g., Marine Orders) Compliance with regulatory requirements for marine air pollution and GHG emissions reporting
Routine helicopter and vessel noise	Noise emissions generated through the operation of vessels and helicopters.	<p>Marine mammals and turtles are transitory and, given the low frequency and limited duration of vessel activities behavioural impacts are expected to be temporary and at the individual level only.</p> <p>Potential impacts are likely to be restricted to localised and temporary avoidance behaviour.</p>	<ul style="list-style-type: none"> Compliance with administrative controls (such as EPBC Regulations Part 8) to reduce interactions with marine fauna Marine fauna observations from vessel bridge watch during IMR activities



Aspect	Description	Potential Impact / Risk	Proposed Management
Underwater survey equipment noise	Noise emissions generated through the operation survey instrumentation (e.g., boomer, multi-beam echo sounder and sidescan sonar) used during IMR activities.	The sound generated by the various survey instruments may result in localised and temporary behavioural changes to marine fauna within tens or hundreds of metres.	<ul style="list-style-type: none"> Compliance with administrative controls (such as EPBC Regulations Part 8) to reduce interactions with marine fauna
Light emissions	Lights on the WHP and SPM will be required on a 24-hour basis during the activities for safety and navigational purposes, in accordance with navigational requirements. Vessel activity is not constant within operational area and therefore light emissions from vessel sources will be intermittent.	The WHP is more than 95 km north of the nearest known marine turtle nesting sites at Cape Domett and Lacrosse Island in the Cambridge Gulf. Light is not anticipated to be visible from the nearest turtle nesting sites. The SPM is located 10 km to the east of potential turtle nesting sites at Yelcherr Beach.	<ul style="list-style-type: none"> Light spill to the sea surface will be reduced where practicable.
Routine marine discharges	Vessels will discharge water, cooling water and sewage/grey water to the marine environment. Vessel activity is not constant within operational area.	No significant impacts are expected to water quality from routine discharges due to the relatively minor quantities involved, the expected localised mixing zone and the high level of dilution into the open water marine environment of the operational area.	<ul style="list-style-type: none"> All routine marine discharges will be managed according to legislative requirements
Unplanned Risks			
Loss of non-hazardous and hazardous waste	There is the potential for wastes to be lost overboard to the marine environment from WHP operations and vessels. Waste may be overboard if windblown, particularly during periods of adverse weather.	Potential impacts of hazardous and non-hazardous wastes accidentally released to the marine environment include the potential physical harm to marine fauna resulting from ingestion or entanglement with solid waste (garbage). If accidentally lost overboard, hazardous waste liquids would result in a temporary and highly localised impact on water quality. Eni will apply control measures to ensure the likelihood of the event occurring is reduced to as low as reasonably practicable (ALARP) and acceptable levels.	<ul style="list-style-type: none"> Procedures to reduce the potential for loss of non-hazardous and hazardous waste will be followed.
Marine fauna interaction	There is the potential for vessels to collide with marine fauna, including cetaceans, fish, marine reptiles and seabirds. The main collision risk is through vessel collision with large, slow-moving cetaceans, potentially resulting in severe injury or mortality.	Given the low frequency of vessel use within the operational area, and the slow speeds at which vessels operate, collisions with marine fauna are considered highly unlikely. Eni will apply control measures to ensure the likelihood of the event occurring is reduced to ALARP and acceptable levels.	<ul style="list-style-type: none"> Compliance with administrative controls (such as EPBC Regulations Part 8) to reduce interactions with marine fauna



Aspect	Description	Potential Impact / Risk	Proposed Management
Introduction of marine species (IMS)	There is the potential for the introduction and establishment of IMS to the operational area via vessels' ballast water or biofouling on vessel hulls.	The risk of introducing IMS is limited by the depth of the operational area and the low frequency of vessel use. Eni will apply control measures to ensure the likelihood of the event occurring is reduced to ALARP and acceptable levels.	<ul style="list-style-type: none"> All vessels will be assessed and managed as appropriate to prevent the introduction of marine pests. Vessels will comply with biosecurity requirements.
Minor spills and leaks	Causes for accidental minor spill and leaks, typically less than 1 m ³ .	In the event of minor spills and leaks, impacts will be localised and temporary due to the low spill volume and rapid dilution in the marine environment. Eni will apply control measures to ensure the likelihood of the event occurring is reduced to ALARP and acceptable levels.	<ul style="list-style-type: none"> Vessel spill response plan (Shipboard Oil Pollution Emergency Plan (SOPEP)) On-board spill response kits
Condensate spills	<p>Accidental loss of condensate (and gas) to the marine environment due to:</p> <ul style="list-style-type: none"> A well leak, caused by failure of technical well barriers. A loss of well control caused by a catastrophic event leading to loss of well control. Integrity failure of the SPM hose during offtake <p>Note, further spill scenarios may be defined in the Blacktip Offshore Operations EP 5-yearly revision.</p>	<p>Preliminary modelling of a loss of well containment was undertaken with the outcome within the spatial extent of the EMBA.</p> <p>A weathering study on Blacktip condensate showed the rate of evaporation of Blacktip condensate is rapid, with 67% of the volume of the condensate lost within the first two hours and 89% by eight hours.</p> <p>Potential impacts across the EMBA include to plankton, fish, turtles, sea snakes, marine mammals, seabirds and migratory shorebirds, tourism, recreation, commercial fisheries, and cultural heritage.</p> <p>Eni will apply control measures to ensure the likelihood of the event occurring is reduced to ALARP and acceptable levels.</p>	<ul style="list-style-type: none"> Procedures to reduce the potential for uncontrolled hydrocarbon releases will be followed. Wells to be drilled in compliance with the accepted well operations management plan (WOMP) including implementation of barriers to prevent a loss of well control Asset integrity management Response plans and equipment will be in place and maintained to manage spills to the environment (e.g., oil pollution emergency plans). Where required, operational and scientific monitoring will be undertaken in accordance with Eni's Operational and Scientific Monitoring Plan. Offtake operations must comply with the terminal handbook



Aspect	Description	Potential Impact / Risk	Proposed Management
Marine diesel oil spills	<p>Marine diesel oil (MDO) will be used by all vessels.</p> <p>There are two causes of loss of MDO:</p> <ul style="list-style-type: none"> • Refuelling/bunkering incident when refuelling WHP cranes • Collision with another vessel 	<p>Potential impacts include those to plankton, fish, turtles, sea snakes, marine mammals, seabirds and migratory shorebirds, tourism, recreation, commercial fisheries, and cultural heritage.</p> <p>Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with rapid evaporation on the sea surface.</p> <p>Eni will apply control measures to ensure the likelihood of the event occurring is reduced to ALARP and acceptable levels.</p>	<ul style="list-style-type: none"> • Regulatory requirements for the prevention of vessel collisions and safety and emergency arrangements • Use of MDO rather than Heavy Fuel Oil (HFO) on vessels (MDO is lighter than HFO and will evaporate faster and persist less in the marine environment) • Response plans and equipment will be in place and maintained to manage spills to the environment (e.g., oil pollution emergency plans). • Administrative control, such as bunkering / bulk refuelling procedures. • Where required, operational and scientific monitoring will be undertaken in accordance with Eni’s Operational and Scientific Monitoring Plan.
Marine fauna interaction	<p>There is the potential for vessels to collide with marine fauna, including cetaceans, fish, marine reptiles and seabirds.</p> <p>The main collision risk is through vessel collision with large, slow-moving cetaceans, potentially resulting in severe injury or mortality.</p>	<p>Given the low frequency of vessel use within the operational area, and the slow speeds at which vessels operate, collisions with marine fauna are considered highly unlikely.</p> <p>Eni will apply control measures to ensure the likelihood of the event occurring is reduced to ALARP and acceptable levels.</p>	<ul style="list-style-type: none"> • Compliance with administrative controls (such as EPBC Regulations Part 8) to reduce interactions with marine fauna

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RELEVANT PERSONS FOR BLACKTIP ENVIRONMENTAL PLAN



📅 27/12/2023



Enquire Now

Send Message

Contact details

Ian Noonan

(08) 9450 ...

Call

Eni is an international energy company committed to sustainable and responsible energy transition.

Since 2009, Eni has been operating and supplying domestic gas from its offshore Blacktip facility located in the Bonaparte Basin. Domestic gas supply from the Blacktip facility has contributed to the majority share of gas production for the Northern Territory's power generation needs over the past 10 years.

To support Blacktip's ongoing operations, Eni plans to undertake offshore activities to add a further gas production well at its offshore facility. Located wholly within Commonwealth waters, at the closest point the area of the planned activities is located approximately 300km Southwest of Darwin and 108km from the Northern Territory coastline.

We wish to hear from relevant persons or organisations whose functions, activities, or interests may be affected by the proposed offshore activities. These may include people and communities, social, cultural and heritage, commercial or recreational, tourism and local interests which may be affected by the proposed activities.

For more information on the proposed activities, to raise a relevant matter or provide feedback please access the QR Code below. Your feedback and consultation as a relevant person is very important to us.



← Scan here for further information on the Blacktip Drilling EP

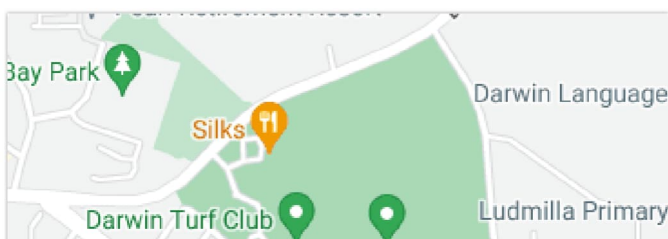


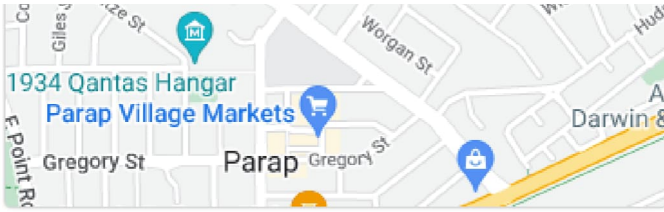
← Scan here for further information on the Blacktip Operations EP

Contact If you have any questions, please contact the consultation team directly at

Eniaus.hsefeedback@eni.com

📍 Darwin 0820





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PUBLIC NOTICES



Relevant Persons for Blacktip Environmental Plan

Eni is an international energy company committed to sustainable and responsible energy transition.

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← Scan here for further information on the Blacktip Drilling EP



← Scan here for further information on the Blacktip Operations EP

Contact

If you have any questions, please contact the consultation team directly at Eniaus.hsefeedback@eni.com

Public Notice

Lake Kununurra to be lowered for dam works

Water Corporation plans to lower the level of Lake Kununurra for up to two weeks between **8 and 22 January 2024** for seasonal inspection works.

If you have pumping or other ancillary equipment in the vicinity of the Ord River, please consider the risks and preventative measures that may need to be taken. Boats and barges on Lake Kununurra, Packsaddle and Crossing Falls will need to be removed from the water as securing them will not be sufficient. Boats in Lilly Creek Lagoon may remain in the lagoon provided they are properly secured as once the water recedes they will sit on the river bed.

If you would like to be notified prior to significant change in Lake Kununurra water levels, please contact us on (08) 9168 0736 or email your contact details to kununurrapot@watercorporation.com.au.

For further information, please visit watercorporation.com.au/kununurra

We thank the community in advance for their cooperation.

watercorporation.com.au



KING'S CHURCH KUNUNURRA

A Christian Pentecostal Church
SUNDAYS at 10.00AM

ARGYLE ROOM @THE KIMBERLEY GRANDE RESORT
VICTORIA H'WY KUNUNURRA

Sunday school class for 3-11 yo
Enquiries Ph 0407 937 507
Pastors Bruce & Terri Connell

King's Church is a member of the INC - International Network of Churches (formerly called Christian Outreach Centre) worldwide. Miracles, healings, changed lives and restored relationships are a part of the way God works through this church.

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EMPLOYMENT

Retail Supervisor Full Time Position

Required for small busy Supermarket
Will include weekend shifts

*Are you a customer service superstar?
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You will need to be able to:

- Manage, supervise & train junior staff as required
- Work independently
- Ensure customers receive prompt service & quality goods
- Deal appropriately with any goods returned
- Open & close premises ensuring safety & security procedures are followed
- Order for and manage stock control of our main department
- Prepare meat orders & supervise staff preparing orders, ensure goods are priced, packed & displayed correctly

Must have 1 year minimum experience in Retail Supermarket or Butchery in supervisory role. Has approved Food Safety Supervisor training. Have excellent cash handling skills.

Salary \$63,000. Please send resume with references to admin@wyndhamsupermarket.com.au

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WARATAH FOOTBALL CLUB WOULD LIKE TO THANK EVERYONE WHO SUPPORTED OUR SUPPORTERS RAFFLE THIS YEAR

The official draw was held at 4:30pm on Sunday 17th December 2023, in the Gardens Oval Clubhouse, Gilruth Avenue, The Gardens NT 0820

All 300 tickets were included in the draw.

We would like to announce the following winning tickets:

- 1st Prize - Ticket No 050, Purchased by Chris Eddy
- 2nd prize - Ticket No 032, Purchased by Meagan Walker
- 3rd Prize - Ticket No 045, Purchased by Lyall McDermott

Congratulations to you all!

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Public Notices



Relevant Persons for Blacktip Environmental Plan

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Contact

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Notices

General Notices	Legal Notices	Public Notices
<p>2023/24 AMENDED BUDGET</p> <p>Pursuant to Section 203(4)(c) of the Local Government Act 2019, Council at its meeting of 19th December 2023 adopted the First Amended Budget 2023/24. Copies are available from the Council office at 22 Cameron Road, Batchelor NT 0845, by calling (08) 8976 0058 or on Council's website: www.coomalie.nt.gov.au</p> <p>Sharon Hillen Chief Executive Officer</p>  <p>FIREWORKS DISPLAYS</p> <p>Darwin Waterfront Precinct 31/12/23 at 9pm & 12midnight Contact: Andrew Howard - 0419 270 535</p>	<p>Default</p> <p>Notice is here by given That Todd Waters TA TBR Mechanical 10 Nebo Rd East Arm has defaulted payments for lease agreements for rents, outgoings and cost for loses due to the non warranty repairs of two quad bikes that have never worked properly since purchase from TBR Mechanical and failed repairs conducted on my Isuzu Truck that TBR was paid 26K for and is still not working, despite several notices and offers to resolve amicably. We have now implemented an Affidavit Commercial Lien recorded on Todd Waters TA TBR Mechanical which they have failed to reply to and Todd Waters TA TBR Mechanical has entered into a tacit agreement by acquiescence consent.</p> <p>As Todd Waters TA TBR Mechanical have failed to pay this dept they are trading Insolvent</p> <p>Lawful processes has been followed to create legal entitlement</p> <p>Without Prejudice</p> <p>Ambassador :Craig-Richard:</p> 	<p>NEW YEAR'S EVE FIREWORKS - TEMPORARY CLOSURE NOTICE</p> <p>31 Dec 2023 - 1 Jan 2024 New Year's Eve fireworks displays will occur on the Sea Wall on 31 December 2023 at 9pm and midnight The public are advised the below areas will be temporarily closed:</p> <p>Sea Wall closed from 8am - 3am Inner recreation lagoon closed from 7pm - 1am Outer recreation lagoon closed from 1.30pm - 3am Kitchener Bay by order of Harbourmaster, 75 metres from the Sea Wall will be closed waters from 4pm - 1am</p>  <p>Welcome to our curious world</p> 


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Legal Notices

NOTICE IS HEREBY GIVEN that pursuant to **Section 110A** of the *Administration and Probate Act*, the Public Trustee for the Northern Territory intends to administer the estate of the late **LIONEL BROWN** of 150 Baker Road, Howard Springs in the Northern Territory, Retired who died on 9 September 2023, intestate.

All persons having claims against the estate are requested to submit their claims in writing to the Public Trustee at Nichols Place Cnr Cavenagh & Bennett Streets Darwin, GPO Box 470 Darwin NT 0801, within two calendar months from publication hereto, after which date the Public Trustee will distribute the estate having regard to claims of which it then has notice.

Leonie Smith
Deputy Public Trustee

Coroners Act

An Inquest into the death of Glen Dooley who died at the Royal Darwin Hospital on 22 October 2022, will commence at 10am on 16 January 2024 (3 days) at the Darwin Local Court.

NOTICE OF INTENDED ELECTION TO ADMINISTER ESTATE

Under Section 110B of the Administration and Probate Act.

In the Supreme Court of the Northern Territory of Australia.

After 14 days from publication of this notice the Public Trustee for the Northern Territory intends to file in the Court an Election to Administer the estate of **FREDERICK CHARLES TAYLOR**, late of Katherine Hostel, 31 Harrod Street, Katherine in the Northern Territory, Pensioner, who died on 14 November 2020, Intestate.

Creditors are required to send particulars of their claims upon this estate to the Public Trustee at Nichols Place Cnr Cavenagh & Bennett Sts Darwin, GPO Box 470 DARWIN NT 0801.

Leonie Smith
Deputy Public Trustee

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NOTICE OF INTENDED DISTRIBUTION OF ESTATE

Any person having a claim upon the estate of **MICHAEL JAMES LEWIS MOLONEY** late of Pearl Supported Care, 27 Moil Crescent, Moil in the Northern Territory, Retired Lecturer, who died on 16 April 2023, must send particulars of their claim to the Public Trustee for the Northern Territory at Nichols Place Cnr Cavenagh & Bennett Streets, Darwin, GPO Box 470 DARWIN NT 0801, within two (2) calendar months from publication of this notice. After that time the Public Trustee may distribute the assets of the estate having regard only to the claims of which at the time of distribution it has notice. Probate was granted in the Territory on 27 October 2023.

Leonie Smith
Deputy Public Trustee

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Department of INFRASTRUCTURE, PLANNING AND LOGISTICS

Alice Springs and Darwin Taxi Licence Ballots

The Department of Infrastructure, Planning and Logistics is releasing taxi licences in Alice Springs and Darwin. The below licences will be available for allocation to eligible successful applicants in the specified regions. All licences will be allocated through the 2023 Alice Springs and Darwin taxi licence ballot process.

Alice Springs

- Four multiple purpose taxi licences
- Three standard taxi licences

Darwin

- Eight multiple purpose taxi licences
- 11 standard taxi licences

The 2023 Alice Springs and Darwin taxi licence ballots will be conducted in a two tiered structure, with priority being given to persons who have been active in the taxi industry for three or more years.

Applications to enter a ballot will be open to eligible persons from Tuesday, 2 January 2024. Applications will close at 4pm CST, Wednesday, 31 January 2024.

The Alice Springs and Darwin taxi licence ballot draws will be held separately on the same day in Alice Springs.

Information on eligibility requirements, entry information, tier structure, and how to obtain an application form is available at nt.gov.au/taxi-ballots

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NEW CERTIFICATE OF TITLE

Would anyone holding or knowing the whereabouts of the duplicate certificate as to title Volume 611 Folio: 165 for Lot: Section 3023 Town of: HUNDRED OF CLYDE

In the name of: KENNETH ROYCE BROWNE please contact: Rebecca / repaidslpcsydney@cba.com.au

A reward will be offered.

NEW YEAR'S EVE FIREWORKS - TEMPORARY CLOSURE NOTICE

31 Dec 2023 - 1 Jan 2024 New Year's Eve fireworks displays will occur on the Sea Wall on 31 December 2023 at 9pm and midnight. The public are advised the below areas will be temporarily closed:
Sea Wall closed from 8am - 3am
Inner recreation lagoon closed from 7pm - 1am
Outer recreation lagoon closed from 1.30pm - 3am
Kitchener Bay by order of Harbourmaster, 75 metres from the Sea Wall will be closed waters from 4pm - 1am



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Tributes

Deaths

JONES, Bob

11 Jun 1927
23 Dec 2023

Bob passed away peacefully surrounded by family, aged 96. He was Dad, Uncle, Pop, Nanna Bob and Big Pop to his large extended family who all love him dearly. In our hearts forever.

Celebrate local heroes

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Independent Director Nominations

Larrakia Nation Aboriginal Corporation is seeking nominations from interested individuals to fill two casual vacancies on its Board.

To be considered, you need to:

- Demonstrate skills and experience relevant to the role of Director of the Corporation
- Describe your vision for the Corporation
- Provide any additional information to support your nomination

Please email ceo@larrakia.com to request the nomination documentation.

Nominations close at 4pm, Friday 5 January 2024.

Nominations can be submitted by hand at the Larrakia Nation Head Office (76 Dick Ward Drive, Coconut Grove) between 8.30-4.30pm or email to ceo@larrakia.com.

All candidates applying for a position on the Board as a Director will require a Directors Identification Number (DIN).

For any further queries, please contact ceo@larrakia.com or 0400 984 875.



Member Director Nominations

Larrakia Nation Aboriginal Corporation is seeking nominations from interested Larrakia Nation Members to fill one casual vacancy on its Board.

1x Member Director

To be considered you need to:

- Be a member of the Corporation
- Demonstrate skills and experience relevant to the role of Director of the Corporation
- Describe your vision for the Corporation
- Provide any additional information to support your nomination

Please email ceo@larrakia.com to request the nomination documentation.

Nominations close at 4pm, Friday 5 January 2024.

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All candidates applying for a position on the Board as a Director will require a Directors Identification Number (DIN).

www.abns.gov.au/director-identification-number/apply-director-identification-number

For any further queries, please contact ceo@larrakia.com or 0400 984 875.

Seeking CARLY EMMA SHAW

TO: Carly Shaw of last known address 40 Ragonesi Rd Ross NT. 1) by initiating application dated 17th October 2023 Drops Lewis Properties Pty Ltd has commenced a proceeding against you in the Northern Territory Civil and Administrative Tribunal (NTCAT); 2) NTCAT has ordered that publication of this notice shall be sufficient service on you of the initiating application; 3) a copy of the initiating application may be obtained by contacting Heritage Caravan Park Alice Springs 5) if you do not take part in the NTCAT proceeding, orders may be made against you in your absence.

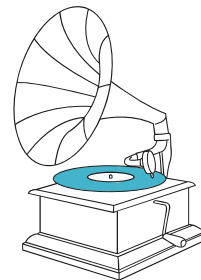
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VI-NTNEU2019A

PUBLIC NOTICES



Department of
**Primary Industries and
Regional Development**

FISH RESOURCES MANAGEMENT ACT 1994

Notice Before Giving Effect to Decision to Grant, Vary or Transfer Authorisation(s)

Section 148(1)(b) – Notice of Decision to –

• Vary Fish Processors Licence Sea Based No. 1293 held by the Live Seafood Company Pty Ltd, to change the authorised processing establishment from 2/21 Emplacement Crescent, HAMILTON HILL to 2/14 Sphinx Way, BIBRA LAKE and include the processing of prawns and scallops and authorise the export of Rock Lobster.

In accordance with the provisions of Section 149 of the Act affected persons in relation to a decision referred to in Section 148(1)(a) or (b), being any persons who:

- i. hold a fish processor's licence; and
- ii. are likely to be significantly affected by the decision,

may, under section 149, apply for a review of the decision. Information about how to apply for a review of the decision is set out at the end of this advertisement.

Notice Before Giving Effect to Decision to Grant, Vary or Transfer Authorisation(s)

Section 148(1)(c) – Notice of Decision to –

• Transfer Aquaculture Licence No. 1426 to David Fry & Jane Watkins.

In accordance with the provisions of Section 149 of the Act affected persons, being any persons who:

- i. hold an aquaculture licence; and
- ii. are likely to be significantly affected by the decision,

may, under section 149, apply for a review of the decision. Information about how to apply for a review of the decision is set out at the end of this advertisement.

Affected persons may apply to the State Administrative Tribunal (SAT) for review of the decision. Application forms can be obtained from the SAT located at Level 6, 565 Hay Street, Perth, WA or from the SAT's website at www.sat.justice.wa.gov.au. The application together with any supporting documents and the prescribed fee should be lodged with the SAT within 28 days of publication of this Notice. The applicant must give a copy of the application to the Chief Executive Officer, Department of Primary Industries and Regional Development, Level 3, 1 Nash Street, Perth, WA on the same day that the application is lodged with the SAT.

For further information on any of the above matters, please contact the Department of Primary Industries and Regional Development on 1300 374 731.

Heather Brayford
Chief Executive Officer

DPIRD_19390

RAFFLE RESULTS

A WINNER HAS BEEN DRAWN!
The competition winner for Leap Start Early Learning Childcare Southern River is **Fana Abraha**. Congratulations!

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Government of Western Australia
Department of Planning, Lands and Heritage

CLASS 'A' RESERVE 883 – Claremont Park, Town of Claremont

LAND ADMINISTRATION ACT 1997 (LAA)

I, Anthony Kannis, Director General, Department of Planning, Lands and Heritage under delegation of the Minister for Lands, give notice pursuant to section 42(5) of the *Land Administration Act 1997*, that it is intended to act in relation to Class 'A' Reserve 883, known as Claremont Park.

It is proposed to amend the boundaries of Class 'A' Reserve 883 by excising a 243 square metre portion to include into adjacent Class 'C' Reserve 21710.

Reserve 883 is set aside for 'Recreation', while Reserve 21710 is set aside for 'Community Purposes' and is the site of a kindergarten and a community centre. This proposed excision will align the land tenure properly with regards to the fenced area of the kindergarten.

Prior to proceeding with this action, you have the opportunity to provide comments on the proposal within 30 days of the publication of this notice. To enable your comments to be taken into account or to arrange a viewing of the relevant plans, please contact Mr Kyle Tuck by email Kyle.Tuck@dplh.wa.gov.au or the Department of Planning, Lands and Heritage, Locked Bag 2506 Perth WA 6001 or telephone (08) 6552 4796, quoting the following reference numbers:

File No. 02602-1892

Case No. 2201035

DIRECTOR GENERAL
DEPARTMENT OF PLANNING, LANDS AND HERITAGE

DOPH_19377



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To support Blacktip's ongoing operations, Eni plans to undertake offshore activities to add a further gas production well at its offshore facility. Located wholly within Commonwealth waters, at the closest point the area of the planned activities is located approximately 300km Southwest of Darwin and 108km from the Northern Territory coastline.

We wish to hear from relevant persons or organisations whose functions, activities, or interests may be affected by the proposed offshore activities. These may include people and communities, social, cultural and heritage, commercial or recreational, tourism and local interests which may be affected by the proposed activities.

For more information on the proposed activities, to raise a relevant matter or provide feedback please access the QR Code below. Your feedback and consultation as a relevant person is very important to us.



Scan here for further information on the Blacktip Drilling EP



Scan here for further information on the Blacktip Operations EP

Contact

If you have any questions, please contact the consultation team directly at Eniaus.hsefeedback@eni.com

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 eni australia	Company document identification	Owner document identification	Rev. index.	
	000036_DV_PR.HSE.0677.000		Validity Status	Rev. No.
			PR-OP	16

APPENDIX C4:

2023-24 RELEVANT PERSON CONSULTATION RECORDS

 eni australia	Company document identification	Owner document identification	Rev. index.	
	000036_DV_PR.HSE.0677.000		Validity Status	Rev. No.
			PR-OP	16

APPENDIX C4a: CONSULTATION LOG

Organisation	Target Group	Correspondence type	Outgoing or Incoming	Date	Summary of correspondence	Relevant matter or claim	Consultation status as per Section 25
<i>Department/Agency/Ministry</i>							
Australian Communications & Media Authority (ACMA) within the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDC) (Cth)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult ACMA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow ACMA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for ACMA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	Enquiry was directed to the relevant line for an expert response.	-	
		Email	Incoming	14/07/2023	ACMA reviewed the information relating to the EMBA by Eni's activities and note that there is no overlap with existing protection zones declared by ACMA. ACMA advised that the AHO and VOCUS should be consulted. ACMA states that they do not require further engagement with Eni regarding the Blacktip activities at this time.	Y	
		Email	Outgoing	13/11/2023	Eni thanked ACMA for the information provided and advised that VOCUS and AHO had been contacted.	-	
Australian Fisheries Management Authority (AFMA) (Cth)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult AFMA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow AFMA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for AFMA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	13/07/2023	Automated reply stating AFMA representative would not be in the office until 14/07/2023.	-	
		Email	Incoming	18/07/2023	AFMA representative informs Eni that the flyers were not attached to the previous email.	-	
		Email	Outgoing	18/07/2023	Email sent by Eni with flyers attached.	-	
		Email	Incoming	18/07/2023	AFMA representative thanks Eni and says they will have a look over the flyers.	-	
		Email	Incoming	19/07/2023	AFMA stated they have no specific comment regarding the Blacktip operations but encourage Eni to contact the Northern Prawn Fishery.	Y	
		Email	Outgoing	18/08/2023	Follow up email on consultation initiation issued 22/06/2023. ENI noted that no response had been received.	-	
		Email	Incoming	18/08/2023	AFMA states they did respond to the initial email and will resend their response	-	
		Email	Incoming	18/08/2023	Resent original email stating that AFMA have no specific comment but encourage Eni to contact the Northern Prawn Fishery.	-	
		Email	Outgoing	18/08/2023	Eni thank AFMA for their response and inform AFMA that the NPF has been attempted to contact however the message was undeliverable and asks for an alternate email address for the NPF.	-	
		Email	Outgoing	14/03/2024	Initial outgoing consultation email to relevant persons was recirculated. Noted that no response had been received.	-	
		Phone Call	Outgoing	14/03/2024	Eni called (02) 6225 5555 however number is not connected.	-	
		Email	Incoming	14/03/2024	AFMA representative forwards previous email chain between Eni and AFMA with response to consultation efforts.	-	
		Email	Outgoing	14/03/2024	Eni requests advice from AFMA on best person to contact at the Northern Prawn Fishery Industry association.	-	
Email	Incoming	14/03/2024	AFMA provides contact details of Northern Prawn Fishery Industry representative.	-			
Australian Hydrographic Office (AHO) (Cth)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult AHO since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow AHO to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for AHO to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	AHO acknowledged they had received the email from Eni. AHO indicates that the data received will be registered, assessed, prioritised and validated in preparation for updating their Navigational Charting products. Indicated that these standards result in some data generalisation or filtering due to the scale of existing charts, proximity to other features, and the level of risk a reported feature presents to mariners.	-	
Australian Maritime Safety Authority (AMSA) (Cth)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult AMSA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow AMSA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for AMSA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	

		Email	Incoming	17/07/2023	AMSA requested that Eni: <ul style="list-style-type: none"> Contact the Australian Hydrographic Office at datacentre@hydro.gov.au no less than four weeks before operations, with details relevant to the operations. The AHO will promulgate the appropriate Notice to Mariners (NTM), which will ensure other vessels receive information of your activities. Notify AMSA's Joint Rescue Coordination Centre (JRCC) by e-mail to rccaus@amsa.gov.au (Phone: 1800 641 792 or +61 2 6230 6811) for promulgation of radio-navigation warnings at least 24-48 hours before operations commence. Include vessel details (including name, callsign and Maritime Mobile Service Identity (MMSI)), satellite communications details (including INMARSAT-C and satellite telephone numbers), area of operation, requested clearance from other vessels and any other information that may contribute to safety at sea and operations start and end ENI should plan to provide updates to both the Australian Hydrographic Office and the JRCC on progress and, importantly, any changes to the intended operations. It is also requested that appropriate lights and shapes are exhibited that are appropriate to reflect the nature of operations.	Y	Appendix C1. Eni has provided sufficient information to allow AMSA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for AMSA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Phone Call	Outgoing	26/09/2023	Eni spoke to AMSA representative who advised the Quality Assurance Support Officer is not available and will call back.	-	
		Phone Call	Outgoing	8/11/2023	Eni called AMSA Quality Assurance Officer, they were without issue regarding the Blacktip Operations but advised Eni to contact the nautical advice team.	-	
		Email	Outgoing	15/11/2023	Eni responded to email with overview of spill modelling and the related EMBA including references to the OSMP and OPEP developed for the proposed activities	-	
		Email	Outgoing	16/11/2023	Eni reply to AMSA's Email from the 17/07/2023 informing AMSA that the information and advice provided in their email has been noted and these items will be addressed in the project planning process. Eni also ask if they have any concerns or if this matter can be closed.	-	
		Email	Outgoing	28/11/2023	Eni retracted email sent the 15/11/2023 as it was meant for a different stakeholder.	-	
		Email	Outgoing	20/03/2024	Eni followed up with AMSA regarding the email sent 16/11/2023 which did not receive a response.	-	
		Email	Outgoing	25/03/2024	Email requesting for response by 28 March 2024 should they view themselves a Relevant Person.	-	
Clean Energy Regulator (CER) (Cth)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult CER since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow CER to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for CER to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation. Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Incoming	8/09/2023	CER have referred ENI's enquiry to the appropriate section for a response.	-	
		Email	Outgoing	14/11/2023	Email to CER to follow up on previous response (08/09/2023) and whether or not they have referred ENI's enquiry to the appropriate section.	-	
		Email	Incoming	17/11/2023	CER thank Eni for the enquiry. CER confirm they have been in touch with the appropriate section referred to in previous their email. CER states the appropriate section has received it and will provide a response directly.	-	
Department of Agriculture, Fisheries & Forestry (DAFF) (Cth)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DAFF since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DAFF to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DAFF to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	Automated response indicating their email address has changed to conveyance.maritime@aff.gov.au	-	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Incoming	6/09/2023	Automated response indicating that they will endeavour to get back to ENI as soon as possible	-	
		Email	Incoming	8/09/2023	DAFF suggest that that the intended operating practices may expose domestic conveyances (support vessels and aircraft) to interactions with the Installation/PIV/MODU which may pose an unacceptable level of biosecurity risk. The DAFF outline a number of guidelines that must be followed to be eligible for an exception from biosecurity control. DAFF further requested access to a Biosecurity Management Plan and Sail Away Reports to further assess the application	Y	
		Email	Outgoing	20/11/2023	Eni informs the DAFF that the information and advice provided in their email has been noted and these items will be addressed in the planning process. Eni asks if the DAFF has any concerns with this approach and if they could please advise if this matter is closed.	-	
		Email	Incoming	20/11/2023	Automated response indicating that they will endeavour to get back to ENI as soon as possible.	-	
Department of Foreign Affairs and Trade (DFAT)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DFAT since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DFAT to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DFAT to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (06/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Email	Incoming	20/11/2023	Response informing Eni that DFAT persons is on leave.	-	
		Email	Outgoing	22/11/2023	Resent initial outgoing consult emails and flyers to alternate email addresses dfat.wa@dfat.gov.au and dfat.Darwin@dfat.gov.au	-	
		Email	Incoming	22/11/2023	Automated response informing Eni DFAT WA had received the email	-	
		Email	Incoming	22/11/2023	Automated response informing Eni DFAT Darwin had received the email	-	
Department of Industry, Science & Resources (DISR) (Cth)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DISR since it issued information regarding this EP in June 2023. Eni has made subsequent consultation

		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DISR to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DISR to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (06/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
Department of Defence (DOD) (Cth)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DOD since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DOD to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DOD to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Incoming	7/09/2023	Requested that all correspondence be directed to the offshore Petroleum enquiry inbox.	-	
		Email	Incoming	8/09/2023	Offshore Petroleum inbox overtaken by different representative. Indicated they will have a response from Defence Stakeholders.	-	
		Email	Incoming	21/09/2023	DOD advise that the wellhead is located in a restricted area R264G and that NOTAM could be activated depending on the activity. DOD also advise there may be risk to the drilling companies aviation operation in support of the well if the ADF were to conduct a large scale exercises such as Pitch Black, Talisman Sabre or Kakadu and that there may be times when access will not be permitted to the restricted area. DOD further advised that there may be unexploded ordnance in the area. Requested continued liaison with the Australian Hydrographic Service for Noticers to Mariners to ensure the AHS is notified three weeks before commencement of activities.	Y	
		Email	Outgoing	6/11/2023	Follow up email detailing that ENI will comply with all DOD directives.	-	
Director of National Parks (DNP), Parks Australia, part of the Department of Climate Change, Energy, the Environment and Water (DCCEEW)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DNP since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DNP to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DNP to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Incoming	7/12/2023	DNP notes that the planned activities do not overlap with any Australian Marine Parks, therefore there are no authorisation requirements from the DNP. DNP confirms that they do not require further notifications of progress made in relation to this activity unless an overlap with or new impact to a marine park, or for emergency responses. DNP have requested to be made aware of oil/gas pollution incidences which occur within a marine park or are likely to impact on a marine park. Notification should be provided to the 24 hour Marine Compliance Duty Officer at (04)19293465 and include: titleholder details, time and location of the incident (including name of marine park likely to be effected), proposed response arrangements as per the OPEP, confirmation of access to relevant monitoring and evaluation reports when available; and contact details for the response coordinator.	Y	
Maritime Border Command (MBC), part of Australian Border Force (ABF), part of the Department of Home Affairs (DHA)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult MBC since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow MBC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for MBC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (06/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/03/2024	Initial outgoing consultation email to relevant persons was recirculated.	-	
National Offshore Petroleum Titles Administrator (NOPTA) (Cth)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult NOPTA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow NOPTA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for NOPTA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 20nd September should they view themselves a Relevant Person.	-	
		Email	Incoming	14/09/2023	NOPTA acknowledges the notification but does not provide comment on these matters.	-	
Office of Northern Australia (ONA), within the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDC) (Cth)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult ONA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow ONA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	13/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 20nd September should they view themselves a Relevant Person.	-	

		Email	Outgoing	20/11/2023	Follow up email on previous consultation (13/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for ONA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
Aboriginal Areas Protection Authority (AAPA) (NT)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult AAPA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow AAPA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for AAPA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	Request for spatial data of project boundaries received from AAPA.	Y	
		Email	Incoming	24/07/2023	AAPA considers informs Eni that it views itself an interested person under NOPSEMA guideline. AAPA express concern that a spill may damage sacred sites within the EMBA. AAPA has been in consultation with the Territory Emergency Management Council (TEMC) on how to manage a spill to the coastline in a culturally sensitive way to protect sacred sites. The APPEA Oil Spill Working Group met with TEMC where Authority Certificates and the certificate process were discussed. Recommendation was for Eni to contact APPEA for an update and details of the meeting.	Y	
		Email	Outgoing	6/11/2023	Eni provided the shapefiles of the EMBA and Operational Area asked for by the AAPA on the 14/07/2023.	-	
		Email	Incoming	6/11/2023	AAPA confirmed that the shapefiles were received.	-	
		Email	Outgoing	13/11/2023	Eni replied to email from the 24/07/2023 thanking AAPA for their advice and informed them that Eni participates in the APPEA Oil Spill Working Group and will monitor the process of culturally sensitive spill protection closely.	-	
Department of Environment, Parks and Water Security (DEPWS) (NT) Pollution NT	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DEPWS since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DEPWS to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DEPWS to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons sent to pollution NT email address.	-	
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	25/07/2023	Initial outgoing consultation email to relevant persons was resent to pollution NT email address.	-	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Outgoing	7/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person to pollution NT email address.	-	
		Email	Outgoing	14/11/2023	Eni noted that the guidelines set by the NT government have been viewed and that Eni will contact the NTEPA in the event of a hydrocarbon spill.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (06/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (06/09/2023) Sent to alternate email address for DEPWS. Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Phone Call	Outgoing	20/11/2023	Phone call to (08) 8999 5511 answered and responded that they will check with their environment team and see if they have provided a response on behalf of the department.	-	
		Email	Outgoing	20/03/2024	Initial outgoing consultation email to relevant persons was recirculated. Noted that no response had been received.	-	
		Email	Outgoing	21/03/2024	Eni sends through Blacktip OPEP for review by DEPWS and requests confirmation of NT DEPWS arrangements/responsibilities in the event of a spill entering this jurisdiction (Sections 1.1, 1.2.3, 1.3, 2.3, 4.1, 4.2.5 and 5 are stated as relevant to this request). Eni request any further comments in relation to the arrangements/responsibilities described in the document. Email further includes the initial consultation information and factsheets.	-	
		Email	Incoming	21/03/2024	Email forwarded internally within DEPWS	-	
		Email	Incoming	21/03/2024	Email forwarded internally within DEPWS including attachments	-	
		Email	Incoming	21/03/2024	DEPWS representative stated they had responded to this email in July 2023 and received feedback shortly after. Concerns were as follows: · Whether there was additional information relating to impacts and risk mitigation relevant to NT jurisdiction. · Whether the works would result in changes / amendments to the Environment Protection Licence. Eni confirms that no amendments to the licence were foreseen. DEPWS have requested to maintain a watching brief over offshore activities that are connected to regulated onshore activities.	Y	
Email	Incoming	22/03/2024	Relevant persons advised Eni that they have forwarded the initial outgoing consultation within DEPWS.	-			
Email	Outgoing	2/04/2024	Eni requested relevant person to advise if the description of the response arrangements referenced in the OPE are correct.	-			
Email	Outgoing	12/04/2024	Eni informed DEPWS that potential impacts to NT would only occur as a result of an unplanned hydrocarbon spill. As per NOPSEMA guidance the EPs include stochastic spill modelling for worst-case scenarios to inform the spill risk assessments which showed a maximum of 46 cubic meters of hydrocarbon accumulation on the NT coastline in the event of a vessel collision at the Blackpoint single point mooring. Eni further informed DEPWS that spill response arrangements can be found in the Blacktip Oil Pollution Emergency Plan (OPEP), including the jurisdictional and notification requirements to relevant NT authorities.	-			
Email	Outgoing	16/06/2024	Eni requests confirmation as soon as possible of the response arrangements/responsibilities of DEPWS (NT) in the event of a spill reaching NT waters.	-			

		Email	Incoming	17/04/2024	DEPWS representative apologises for late response and informs Eni that their response will be complete by the end of the week.	-	
		Email	Outgoing	17/04/2024	Eni thanks representative for response and requests response by 18/04 or 19/04 2024.	-	
		Email	Incoming	18/04/2024	Representative provides Eni will comments on the document in an attachment and has additionally included the latest OSCP.	-	
		Email	Outgoing	18/04/2024	Eni requests confirmation that the NT Government is planning to utilise the Northern Territory Oiled Wildlife Response Plan (AMOSC 2019) as the basis for their determination of protection priorities and shoreline response planning.	-	
		Email	Incoming	18/04/2024	Representative confirms the use of the Northern Territory Oiled Wildlife Response Plan and informed Eni that they are also in the process of updating the database of high value ecological areas, however that it will take time.	-	
		Email	Outgoing	18/04/2024	Eni thanks representative for clarifying and states that they look forward to seeing any updates to mapping of ecological areas.	-	
Northern Territory Regional Harbourmaster, part of the Department of Infrastructure, Planning and Logistics (DIPL) (NT)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DIPL since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DIPL to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DIPL to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Incoming	6/09/2023	Advised that DIPL representative out of office and to direct all queries to a separate representative.	-	
		Email	Outgoing	14/11/2023	Initial outgoing consultation email sent to separate DIPL representative.	-	
		Email	Outgoing	20/03/2024	Initial outgoing consultation email to relevant persons was recirculated. Noted that no response had been received.	-	
Department of Industry Tourism and Trade (DITT) (NT)	Group 2	Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	Eni has been seeking to consult DITT since it issued information regarding this EP in July 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DITT to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DITT to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Incoming	14/07/2023	Confirmation of email being received and DITT will attend to it as soon as possible.	-	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Incoming	6/09/2023	Confirmation of email being received and DITT will attend to it as soon as possible.	-	
		Email	Incoming	7/09/2023	Initial consultation email was forwarded internally.	-	
		Email	Incoming	7/09/2023	DITT representative responded stated that they will review and provide feedback if necessary.	-	
		Email	Incoming	8/09/2023	DITT recognise that as the operational area is contained wholly within WA waters, there will be no NT commercial fisheries operating in the area. Concern regarding the stock structure of many commercially and recreationally important fish species is expressed as it is not well understood. Therefore any potential impact on aquatic life in the OA as a result of this work may have negative impacts on fish stocks across the NT or shared stocks that straddle the WA border. NT fisheries are comfortable with the EP and proposed management measures provided. However, where possible, work undertaken does not occur within the warmer months which coincide with fish spawning. NT fisheries suggest that significant work should be conducted after the wet season ends i.e. from March/April onwards. Conducting the work from September to March could also lead to negative impacts on fish stocks. In regards to consultation with NT commercial fisheries that operate within the EMBA and could be potentially impacted by any fuel spill, the Northern Territory Seafood Council would be the appropriate body to contact on this matter.	Y	
		Email	Outgoing	14/11/2023	Follow up email sent by Eni requesting feedback from DITT if deemed necessary	-	
		Email	Outgoing	15/03/2024	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Sent directly to NT fisheries email in attempt to broaden consultation efforts.	-	
		Email	Incoming	15/03/2024	Automatic response from NT Fisheries confirming that email was received.	-	
		Email	Outgoing	18/03/2024	Followed up with NT Fisheries and requested that feedback was provided on the proposed activities.	-	
		Phone Call	Outgoing	18/03/2024	Eni called NT Fisheries to follow up on email. Representative confirmed that email was received and forwarded to relevant individuals. Representative suggests waiting for a response.	-	
		Email	Outgoing	20/03/2024	Initial outgoing consultation email to DITT was recirculated. Noted that no response had been received.	-	
		Email	Outgoing	10/04/2024	Eni acknowledge the request that where possible work is not undertaken in the warmer months of the year. During EP development process Eni investigated options to avoid activities during sensitive periods, however considering the nature of the proposed activities it is not possible to limit work to specific periods of the year. Eni references the range of controls and mitigation measures within the EP which manage the risk to the fishing industry to ALARP and acceptable levels. Adverse impacts to the fish stocks across the NT are not anticipated from planned activities, however in the event of an unplanned spill it is recognised that fish stocks may be adversely impacted.	-	
Northern Territory Environment Protection Authority (NTEPA)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult NTEPA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow NTEPA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for NTEPA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	Correspondence that the email was received and referred for consideration by the Environment Division of the Department of Environment, Parks and Water Security, acting on behalf of the NT EPA.	-	
		Email	Incoming	18/07/2023	Relevant persons notes that the stakeholder engagement e-mail has been received and communicated across Environmental Operations. Further information on potential impacts to areas within their jurisdiction is requested. Also queries if there are any expected changes in licensed activity.	Y	

		Email	Outgoing	13/11/2023	Eni informed NTEPA that potential impacts to NT would only occur as a result of an unplanned hydrocarbon spill. As per NOPSEMA guidance the EPs include stochastic spill modelling for worst-case scenarios to inform the spill risk assessments which showed a maximum of 46 cubic meters of hydrocarbon accumulation on the NT coastline in the event of a vessel collision at the Blacktip SPM. Eni further informed NTEPA that spill response arrangements can be found in the Blacktip Oil Pollution Emergency Plan (OPEP), including the jurisdictional and notification requirements to relevant NT authorities.	-	
		Email	Outgoing	23/11/2023	Follow up email from previous consultation, requesting NTEPA to respond with any concerns regarding the approach.	-	
		Email	Incoming	23/11/2023	NTEPA reports no queries, thanks Eni for answering earlier questions.	-	
Northern Territory Gas Taskforce (NT)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Northern Territory Gas Taskforce (NT) since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Northern Territory Gas Taskforce (NT) to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Northern Territory Gas Taskforce (NT) to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (14/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Email	Incoming	21/11/2023	The Northern Territory Gas Taskforce acknowledged the update and information and state they have no issues or concerns at present.	-	
Department of Biodiversity, Conservation and Attractions (DBCA) (WA)	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DBCA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DBCA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DBCA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	28/07/2023	DBCA identifies that in the case of a hydrocarbon release, as a result of Eni's operations, ecologically important areas such as marine parks and nature reserves have the potential to be affected. DBCA requests that baseline studies of these ecologically important areas are conducted, including abundance and distribution data for benthic habitat and marine fauna species in the area are conducted. Where baseline information is unavailable suitable sources/methods to obtain information should be identified to ensure values are identified, monitored and remediated. Suggests that a before-after control-impact framework is used in planning and evaluating management planning. DBCA further recommend following the DCCEEW's National Light Pollution Guidelines for Wildlife as a best-practice industry standard for managing potential impacts of light pollution on marine fauna. DBCA request that in the event of a hydrocarbon release the Kimberley regional office is notified as soon as practicable (08) 9195 5500.	Y	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Incoming	6/09/2023	Automated response thanking Eni for the email.	-	
		Email	Incoming	6/09/2023	DBCA informs Eni that they had responded to previous emails on the 28/07/2023.	-	
		Email	Outgoing	13/11/2023	Eni provided response to the email from 28/7/2023 and confirmed that the Adele Island Nature Park Reserve and North Kimberley Marine Park are located within the EMBA. Hydrocarbon spill modelling for Blacktip operations was conducted and impacts from a spill risk, including those to ecologically important areas, were assessed within the EP. Eni confirms that National Light Pollution Guidelines for Wildlife have been used to inform the impact assessment within the EP. Further confirmation that the Blacktip Operational and Scientific Monitoring Plan provides information on the monitoring of relevant receptors in the event of a hydrocarbon spill. The plan includes the identification of appropriate survey data from the region and appropriate (e.g. lacking existing baseline) the use of a Before-After, Control-Impact framework. Eni note the DBCA's request to have the Kimberley regional office notified as soon as practicable at (08) 9195 5500 in the event of a hydrocarbon spill and have updated the OPEP accordingly	Y	
		Email	Outgoing	22/11/2023	Follow up email from previous consultation, requesting the DBCA to respond with any concerns regarding the approach. Noted that no response had been received.	-	
		Email	Outgoing	20/03/2024	Follow up email from previous consultation, requesting the DBCA to respond with any concerns regarding the approach. Noted that no response had been received.	-	
		Email	Incoming	21/03/2024	DBCA acknowledges response provided by Eni to previous queries regarding ecologically important areas within the EMBA, environmental monitoring, emergency response arrangements and incorporation of the National Light Pollution Guideline into the impact assessment. DBCA further acknowledges that Eni have confirmed notification to the Kimberly office will occur in the event of a hydrocarbon spill however note that the notification is limited to where there are imminent or physical impacts to wildlife within WA. DBCA request that notification to the Kimberley regional office is provided as soon as practicable in the event of a hydrocarbon spill on all departmental interests such as impacts to wildlife and reserves managed under the <i>Conservation and Land Management Act 1984</i> within WA. DCBA further informs Eni that the <i>Wildlife Conservation Act 1950</i> referred to in the EP and the National Light Pollution Guidelines for Wildlife have both been replaced by the <i>Biodiversity and Conservation Act 2016</i> and National Light Pollution Guidelines for Wildlife (2023).	-	

		Email	Outgoing	26/03/2024	Eni acknowledge DBCA's feedback and commit to updating notification requirements for the DBCA's Kimberley regional office as soon as practicable in the event of a hydrocarbon spill that may result in imminent or actual to impacts on all departmental interests, which includes wildlife and reserves managed under the <i>Conservation and Land Management Act 1984</i> within WA. Replacing the <i>Wildlife Conservation Act 1950</i> with the <i>Biodiversity Conservation Act 2016</i> and including an assessment of light impacts informed by the National Light Pollution Guidelines for Wildlife 2023.	-	
		Email	Incoming	28/03/2024	DBCA acknowledges consideration from Eni on feedback provided. Confirms that contact for the Kimberly regional office is: (08) 9195 5500 (preferable) however contact may be made by email at broome@dbca.wa.gov.au	-	
Department of Mines, Industry Regulation and Safety (DMIRS) (WA)	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DMIRS since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DMIRS to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DMIRS to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (06/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Phone Call	Outgoing	20/11/2023	Phone call from Eni to DMIR's in an attempt to elicit a response regarding consultation. DMIRS representative stated that a relevant representative would contact Eni if necessary.	-	
		Email	Outgoing	20/03/2024	Initial outgoing consultation email to relevant persons was recirculated. Noted that no response had been received.	-	
Department of Transport (DOT) (WA)	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DOT since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DOT to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DOT to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	Automated emailing indicating that initial emails had been received.	-	
		Email	Incoming	21/07/2023	DOT state if there is a risk of a spill impacting state waters as a result of the proposed activities, to please consult the DOT as outlined in the DOT Petroleum Industry Guidance Note - Marine Oil Pollution: Response and Consultation Arrangements (July 2020)	-	
		Email	Outgoing	14/11/2023	Eni thanked the DOT for the information provided in their email and informed them that the consultation requirements stated in the Department of Transport Offshore Petroleum Industry Guidance Note will be acted upon.	-	
		Email	Incoming	14/11/2023	Automated emailing indicating that initial emails had been received.	-	
		Email	Outgoing	21/03/2024	Eni provided DOT with the highlighted Blacktip OPEP and two consultation documents prepared to meet requirements of the DOT Petroleum Industry Guidance Note - Marine Oil Pollution: Response and Consultation Arrangements (July 2020); for DOT's review.	-	
		Email	Outgoing	2/04/2024	Eni queries if the description of the response arrangement of the DOT as referenced in the OPEP is correct.	-	
		Email	Incoming	5/04/2024	DOT query the reason for submission of the OPEP as it is not clear whether Eni would like them to review it which DOT note can take up to 6 weeks.	-	
		Email	Outgoing	12/04/2024	Eni confirms that the OPEP was supplied to ensure alignment with DOT. Eni clarifies that the text highlighted in the email (21/03/2024) was to assist with ease of review.	-	
Department of Primary Industries and Regional Development (DPIRD)(WA)	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DPIRD since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DPIRD to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DPIRD to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	18/07/2023	DPIRD notes the description of the activity and requirement of a 500 m safety exclusion zone which may impede the operation of commercial fishers in the area. Consultation with the Western Australian Fishing Industry Council and the following commercial fisheries was suggested: Kimberley crab managed fishery - Kimberley gillnet and Barramundi fisher - Mackerel managed fishery -Marine aquarium fishery - Specimen shell - Northern Demersal Scale Fishery - Pearl oyster fishery. DPIRD stated that after review of the Environmental Plan they have no additional comments to make at this stage.	Y	
		Email	Outgoing	15/04/2024	Eni confirms the requirement for a 500 m exclusion zone during the proposed activities and inform DPIRD of the locations where a 500 m exclusion zone will occur. Eni further confirm that where exclusions zone occur it will impede access for commercial fisheries, however given to low level of commercial fishing in the vicinity of the activity and the small area of exclusion relative to fishing licence areas any impact is considered negligible. Eni note that the new well will be within the already existing Blacktip wellhead platform exclusion zone which has been in place since 2009. Eni informs DPIRD that WAFIC has been consulted and where it cannot be established that a peak body represents individual license holders a letter has been sent via mail.	-	
Department of Planning, Lands & Heritage (DPLH) (WA)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult DPLH since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow DPLH to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DPLH to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	Automated emailing indicating that initial emails had been received.	-	

		Email	Incoming	19/07/2023	DPLH stated that as the proposal is outside State waters, the Land Management Division of DPLH has no comment.	-	make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for DPLH to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
<i>Aboriginal and Torres Strait Islander Community/First Nation Community</i>							
<i>National</i>							
Northern Australian Indigenous Land & Sea Management Alliance (NAILSMA)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult NAILSMA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow NAILSMA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for NAILSMA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (14/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Phone Call	Outgoing	20/11/2023	Forwarded email to relative manager and stated they will respond if they see fit.	-	
		Email	Outgoing	20/03/2024	Initial outgoing consultation email to relevant persons was recirculated. Noted that no response had been received.	-	
		Email	Outgoing	25/03/2024	Email requesting for response by 28 March 2028 should they view themselves a Relevant Person.- This email was recalled due to typo noted.	-	
<i>Northern Territory</i>							
Northern Land Council (NLC)	Group 2	Meeting	Outgoing	14/06/2023	Eni introduce themselves and present a summary of Blacktip activities and the Verus project. Majority of interest from meeting was surrounding the Verus project. Eni requested assistance from NLC to organise consultation with Traditional Owners. NLC indicated its willingness to support but stated that it will depend on resources. Eni suggested to follow up with Email to NLC to try to coordinate for consultation.	-	Eni has been seeking to consult NLC since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow NLC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for NLC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/06/2023	Post in-person meeting Eni provided NLC with a copy of the slide pack presented.	-	
		Email	Outgoing	21/06/2023	Email correspondence sent to NLC to complete action item identified from meeting with NLC 14/06/2024. Eni seek guidance from NLC on best approach to consult with Traditional Owners, NGOs or local communities might be affected by Eni's activity.	-	
		Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	
		Email	Outgoing	7/07/2023	Follow up on email from previous consultation.	-	
		Email	Incoming	12/07/2023	NLC response "We are in process of preparing a response to your email dated 21 June 2023 and will forward the same at the earliest. "	-	
		Email	Outgoing	13/07/2023	Resent initial outgoing consultation email. Eni noted no response had been received.	-	
		Email	Outgoing	14/07/2023	Eni emailed NLC, as referred to seek further comment on the Blacktip project, including consultation material.	-	
		Email	Incoming	17/07/2023	NLC response to Eni, "the NLC is still considering its response to the Tiwi Islands Case; in particular what role it will play following the decision. At this stage, we simply do not have the resources nor internal capacity to assist proponents with EP consultations for offshore projects. This may change following the ongoing discussions the sector is having with NOPSEMA and industry."	-	
		Email	Outgoing	11/03/2024	Eni emailed NLC, requesting further comment on the activities. Informing NLC Eni had directly visited the community in Wadeye. Information has been shared through the Regional Council for Wadeye. No consultation response has been received from NLC, however extension for comments extended to seek feedback from NLC.	-	
Tiwi Land Council (TLC) - representative of the following Traditional Owner Groups: Malawu Mantiyupwi Marrikawuyanga Munupi Yimpinari Wurankuwu Wulirankuwu	Group 3	Email	Outgoing	23/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult TLC since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow TLC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for TLC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	13/09/2023	Follow up email on previous consultation (23/06/2023). Noted that no response had been received. Were requested to respond by Friday 20th September should they view themselves a Relevant Person.	-	
		Email	Incoming	14/09/2023	TLC email to Eni. Informing of incoming letter from Principal Legal Advisor.	-	
		Email	Outgoing	14/09/2023	Eni send internal message informing the team about the confusion around the email notification for Blacktip.	-	
		Email	Incoming	15/09/2023	TLC, Principal Legal Officer (PLO) indicated "email on 23 June 2023 was not received by any of the intended Tiwi Land Council recipients. The first time the Tiwi Land Council became aware of the 23 June 2023 email was on 13 September 2023. The Tiwi Land Council requires more time to consider the information regarding the Blacktip Project and to provide its submissions. Please confirm the attached documents are the full extent of the documents available for the purposes of the consultation."	-	
		Email	Outgoing	15/09/2023	Eni respond with activity flyer information and the offer for further information pack, in the form of a Teams call.	-	
		Email	Outgoing	22/09/2023	Eni shared maps and posters with TLC, as an action from previous meeting held with Eni's representatives.	-	
		Email	Incoming	25/09/2023	TLC response acknowledging receipt of maps.	-	
		Email	Outgoing	25/09/2023	Eni response to TLC for discussion for scheduled meeting.	-	
		Email	Incoming	25/09/2023	TLC response of availability for discussion.	-	
Email	Outgoing	30/09/2023	Eni proposing time for in-person meeting, in Darwin.	-			
Email	Incoming	1/10/2023	TLC proposed time for meeting with Eni on 03/10/2023.	-			

		In-person	Outgoing	2/10/2023	Eni presented a summary of activity in Blacktip and showed EMBA map to identify reason for Eni to engage with TLC and seek feedback. TLC expressed that Eni's activities are located far from Tiwi Islands and that they do not anticipate interruption from Eni's activities, however formal feedback from TLC is expected before end of October. TLC requested a zoomed-in map of the EMBA focusing on the Tiwi Islands area.	Y	
		Email	Outgoing	6/10/2023	Eni provided updated figure indicating the closest focal point to the Tiwi islands.	-	
		Email	Outgoing	20/11/2023	Eni seeking response to updated EMBA and information provided via email on the 6/10/2023 regarding Eni's Blacktip activities.	-	
		Text message	Outgoing	22/11/2023	Eni attempts to elicit a response from TLC regarding operations.	-	
		Text message	Incoming	22/11/2023	HH expressed she is trying to receive a response from Environment Advisor at TLC	-	
		Email	Outgoing	11/03/2024	Eni provided follow up email to TLC-PLO, seeking feedback from previous meeting.	-	
		Text message	Outgoing	12/03/2024	Requesting representative support to provide response to Eni	-	
		Text message	Incoming	12/03/2024	Representative responded that TLC is trying to get a letter from CEO to respond to Eni	-	
		Text message	Outgoing	15/03/2024	Eni text to seek update from TLC	-	
		Text message	Incoming	16/03/2024	Representative responded that TLC is drafting a letter to be issued to Eni	-	
		Text message	Outgoing	18/03/2024	Eni texted to seek update	-	
		Email	Outgoing	19/03/2024	Eni provided additional follow up email to TLC-PLO, seeking feedback from previous meeting.	-	
		Email	Incoming	19/03/2024	TLC-PLO indicated since 15 Sept 2023, they have not been involved in the matter and the matter is with colleagues.	-	
		Email	Outgoing	19/03/2024	Eni respond stating they appreciate the clarification and look forward to a response form TLC on the matter.	-	
		Text message	Outgoing	22/03/2024	ENI texted to seek update	-	
		Text message	Incoming	22/03/2024	Representative responded that a letter will be received 22/03/2024	-	
		Text message	Outgoing	25/03/2024	ENI texted to seek update	-	
		Text message	Incoming	25/03/2024	Representative responded that a letter will be sent soon	-	
		Email	Outgoing	25/03/2024	Eni provided additional follow up email to TLC-PLO, seeking feedback from previous meeting.	-	
		Letter	Incoming	26/03/2024	TLC response to Eni, "Tiwi Land Council is pleased to note Eni Australia Limited (Eni) Blacktip Offshore Environment Plan June 2023 proposal, does not pose any potential risk to the following: - Tiwi's spiritual or cultural connection to the land and sea country; - Economic and social activities, such as fishing and hunting; or - Any functions or responsibilities of the Tiwi Land Council."	Y	
		Email	Incoming	28/03/2024	TLC request that this email is replaced with the email previously sent. Feedback letter dating 26/03/2024 is attached.	-	
		Email	Outgoing	15/04/2024	Eni thank TLC for response and the identification of threatened marine species found within Tiwi waters. Eni confirms that these species have been considered within the impact assessments of the EP. Eni further confirm that a range of controls have been adopted in the EP which aim to mitigate a spill entering Tiwi waters including response measures located within the OPEP.	-	
Larrakia Nation Aboriginal Corporation	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Larrakia Nation Aboriginal Corporation since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Larrakia Nation Aboriginal Corporation to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Larrakia Nation Aboriginal Corporation to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (13/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Phone Call	Outgoing	13/03/2024	Spoke with reception who requested email was forwarded to the reception email address and stated they will forward CEO.	-	
		Email	Outgoing	13/03/2024	Eni resent through the consultation email and attached flyers to reception requesting support in forwarding on information to the CEO. Eni informs that the request for feedback has been extended.	-	
		Email	Outgoing	18/03/2024	Relevant person were requested to respond by 28 March 2028 should they view themselves a Relevant Person. This email was recalled due to typo identified.	-	
		Email	Outgoing	21/03/2024	Eni provided additional follow up email requesting feedback on the previous engagement regarding the proposed activity. Inform representative that the opportunity to provide feedback has been extended to 28 March 2024.	-	
		Email	Outgoing	25/03/2024	Eni provided additional follow up email requesting feedback on the previous engagement regarding the proposed activity. Inform representative that the opportunity to provide feedback has been extended to 28 March 2024.	-	
Thamarrurr Development Corporation (TDC), including the Thamarrurr Rangers representative of the following Traditional Owner Groups: Rak Wudipuli Rak Thinti Rak Perrederr Rak Nuthunthu Rak Nganthawudi Rak Namarluk Rak Nadirri	Group 2	Email	Outgoing	17/05/2023	Initiating conversation with the CEO of the TDC. Briefly outlining the Blacktip project and asking for his assistance in meeting with Traditional Owner groups	-	Eni has been seeking to consult TDC since it issued information regarding this EP in May 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow TDC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for TDC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	Automated response saying TDC CEO is not in the office currently	-	
		Email	Outgoing	18/07/2023	Eni reached out to TDC to requests support in engaging and facilitating conversations with stakeholders.	-	
		Email	Incoming	20/07/2023	TDC confirms there interest in assisting Eni with proposed consultation actions and suggests that information on the project is included within a newsletter published at the end of the month.	-	

Rak Merrepen
Rak Kuy
Rak Kungarlbarl
Rak Kulingmirr
Rak Kubiyrir
Rak Kimmu
Rak Angileni
Yek Diminin
Yek Maninh
Yek Nangu
Yek Ngudanimarn
Yek Wunh
Yek Yederr

Note: Consultation within the Wadey Community was organised in coordination with TDC. Board member of TDC are representatives of 20 clans in Wadey. Therefore included within the TDC consultation records.

Email	Incoming	24/07/2023	TDC requests Eni to provide a one page notification regarding consultation with the community, otherwise they suggested they could develop something and get Eni's approval.	-
Email	Outgoing	24/07/2023	Eni request TDC to develop correspondence and report back for sign off.	-
Email	Incoming	24/07/2023	TDC develop draft to be included within newsletter once Eni confirms content. Organisation and assistance with the in-person meeting in August is discussed.	-
Email	Outgoing	25/07/2023	Eni provides updated draft to TDC and states that the finalised version will hopefully be with them Wednesday. Request regarding the addition of dates for in-person engagement to be included if TDC had any ideas of preferred days.	-
Email	Incoming	26/07/2023	TDC confirms email was received and stated they would try to get it into the newsletter. Further expressed concern regarding engagement scheduled for August/September as it is a busy month. Request if other options are available.	-
Email	Outgoing	28/07/2023	Eni updates TDC that newsletter text is under review and queries if a spot in the newsletter can be held.	-
Email	Outgoing	28/07/2023	Eni provides TDC with finalised community engagement form to be included within the newsletter.	-
Email	Outgoing	7/08/2023	Eni contacting Thamarurr Ranger Coordinator informing them of Eni's planned visit to Wadey for community engagement.	-
In-person	Outgoing/ Incoming	30/08/2023	Eni met with council member who recommended engagement with particular community members and leaders, and provided names and contact details. Eni was recommended to refer to a PHD paper on the Wadey published by Bill Ivory from Charles Darwin University. (Ivory, 2009). The council member stated that the Wadey community is aware of the Yelcher Gas Plant, but is not negatively impacted by it.	Y
In-person	Outgoing/ Incoming	30/08/2023	Eni held a meeting with a member of the community council which served to introduce Eni, provide a brief summary of Eni's activities and request permission to hold a community engagement session on 31/08/2023.	-
In-person	Outgoing/ Incoming	31/08/2023	Community engagement session held with general Wadey Community (inclusive of Traditional Owners) which served to ensure identified interested and relevant persons are informed about Eni's activities. No concerns regarding Eni's activities were expressed. Eni was informed that their story lines are not connected to the sea country and that story lines between clans inland are not connected to clans around the seashore. Confirmation was provided to Eni regarding accuracy of the map of culturally sacred areas.	Y
In-person	Outgoing/ Incoming	3/10/2023	Eni conducted a site visit to the Thamarurr Ranger's Office with efforts to conduct direct engagement with Wadey community members, particularly to identify clans with potential connection to sea country. No concerns regarding Eni's activities were expressed, however there was no opportunity to present the slide package.	-
In-person	Outgoing/ Incoming	3/10/2023	Eni participated in Wadey Service Committee meeting with efforts to widen engagement. Meeting agenda included an overview of Eni's activities and request for feedback. No concerns regarding Eni's activities were expressed.	-
Phone Call	Outgoing	14/11/2023	Phone call with TDC Ranger Coordinator in respect to Traditional Owner: *Traditional Owner is currently uncontactable as he has no phone and is in Darwin for personal business. In conversations with him, he has voiced no concerns or queries with the works associated with the BTP 5YR EP . Traditional Owner has never had any concerns with Eni or its associated activities at Blacktip"	-
Phone Call	Outgoing	15/03/2023	Eni call representative and seek support in organising consultation with the Traditional Owner for YGP. Representative states that they will try and organise a meeting between Eni and the Traditional Owners and inform Eni on best dates.	-
Email	Outgoing	15/03/2024	Eni send follow-up email post call with TDC representative thanking them for the help with organising consultation between Eni and the Traditional Owners, particularly for YGP.	-
Email	Outgoing	18/03/2024	Initial outgoing consultation email to relevant persons was recirculated. Noted that no response had been received.	-
Phone Call	Outgoing	4/04/2024	Eni spoke with representative who confirmed that it is possible to hold meeting with TOs on Thursday, 18 April 2024 and suggested that Eni produce a one-page announcement to be placed at Wadey town centre as a way to inform Traditional Owners.	-
Public Announcement	Outgoing	5/04/2024	Public Announcement published at Wadey shop notice board.	-
Email	Incoming	5/04/2024	Representative sent screenshots of consultation notice that they attached to the supermarket notice board. Representative informed Eni that they had delivered additional printed copies with the intention to post in additional places.	-
Phone Call	Outgoing	8/04/2024	Eni attempted to call representative. No response.	-
Phone Call	Incoming	11/04/2024	Representative contacted Eni to inform them that a relative of the Traditional Owner had passed away and therefore they would be unable to hold the meeting planned for the 18th of April. Representative informed Eni that they will try their best to inform the CEO of TDC and schedule time for a video chat with Eni.	-
Email	Outgoing	11/04/2024	Eni thank representative for providing information on current situation and request updates on areas that are currently closed off.	-
Text message	Outgoing	11/04/2024	Eni text representative and request an email be sent regarding 'sorry business in Wadey. Eni further request support in organising a video call with the TDC leadership.	-
Text message	Incoming	12/04/2024	Representative inform Eni of areas that will be closed off due to the current situation.	-
Text message	Outgoing	12/04/2024	Eni thank representative for maps and request support in organising a call with the TDC leadership.	-
Text message	Incoming	12/04/2024	Representative informs Eni of their day off and provides contact details of the deputy CEO.	-
Text message	Outgoing	12/04/2024	Eni message Deputy CEO for TDC requesting a call.	-
Text message	Incoming	12/04/2024	Deputy CEO reply stating they are available.	-

Phone Call	Outgoing	12/04/2024	Eni spoke with Deputy CEO and explain Eni's plan to visit Wadeye and request to meet TDC or would appreciate any form of communication through TDC. Deputy CEO informs Eni that they were not informed about Eni's previous efforts in contacting CEO and requests that Eni forward previous emails to them so they can notify the personal assistance of the CEO.	-
Email	Outgoing	12/04/2024	Eni forward previous correspondence to Deputy CEO.	-
Email	Incoming	12/04/2024	Eni received a failed delivery receipt.	-
Email	Outgoing	12/04/2024	Eni re-attempt to send email.	-
Email	Outgoing	12/04/2024	Eni apologise for mistake with previous email address.	-
Text message	Outgoing	12/04/2024	Eni message Deputy CEO to inform them that the email is not going through.	-
Text message	Incoming	12/04/2024	Deputy CEO inform Eni that they provided the incorrect address and provide the corrected version.	-
Text message	Outgoing	12/04/2024	Eni message Deputy CEO to confirm that email was sent.	-
Email	Outgoing	13/04/2024	Eni forward email chain to Deputy CEO.	-
Text message	Incoming	13/04/2024	Deputy CEO confirms that email was received.	-
Text message	Outgoing	13/04/2024	Eni query if Deputy CEO needs all the past emails with TDC	-
Text message	Incoming	13/04/2024	Deputy CEO informs Eni that this is not necessary.	-
Text message	Outgoing	13/04/2024	Eni request meeting with the TDC board on 18th April, 2024.	-
Text message	Incoming	14/04/2024	Deputy CEO informed that the board meeting is scheduled for 23rd of April but will try and organise a meeting on the 18th of April. Deputy CEO mentioned that Eni's previous email was addressed to some people that left had TDC and they will request IT to check why there was no automatic reply.	-
Text message	Outgoing	14/04/2024	Eni thank representative for their support.	-
Email	Incoming	17/04/2024	Email was forwarded internally within TDC.	-
Text message	Outgoing	17/04/2024	Eni requests an update on the plan for the board meeting April 23, 2024.	-
Text message	Incoming	17/04/2024	Deputy CEO informed Eni that the PA to the CEO will be incontact with Eni.	-
Email	Incoming	18/04/2024	Representative informs Eni that the board meeting is scheduled for April 23rd, 2024 and included the time and location.	-
Email	Outgoing	18/04/2024	Eni thanks representative for the details and opportunity to attend the meeting. Eni informs that due to operational requirements the consultation for the EP's will close on April 19th, 2024, however that Eni is committed to ongoing engagement and will therefore be pleased to still attend the board meeting to discuss ongoing operations and developments in Northern Australia.	-
Email	Incoming	19/04/2024	Representative states that they are disappointed that they have missed the communication on the proposed new activity and states that prior to March no correspondence was coming through as it was being sent to old email addresses. Relevant person queries if the EP consultation was raised previously when Eni was present at a monthly Wadeye Service Delivery Meeting.	-
Text message	Incoming	19/04/2024	Deputy CEO states that since consultation will be closed the presence of Eni at the board meeting may not be useful. If Eni only intends to attend for relationship building then it can be rescheduled.	-
Text message	Outgoing	19/04/2024	Eni thank Deputy CEO for the message and request for them to call when they are available.	-
Text message	Incoming	19/04/2024	Representative informs Eni they will call after 11:30.	-
Phone Call	Outgoing	19/04/2024	Relevant persons states that they are disappointed to have missed the deadline for submission. Eni states that they attended the Monthly Service Meeting in Wadeye in October 2023 and included EP consultation as agenda item. Further, Eni has also emailed CEO of TDC since July 2023 and also organise for town visit in August 2023 in coordination with TDC Ranger. Relevant person responds that it sounds like Eni may have completed criteria for consultation and inform Eni that they will discuss agenda for the meeting to include Eni's presentation at the end of the agenda.	-
Text	Outgoing	19/04/2024	Eni send a message to follow up on earlier conversation with representative.	-
Text	Incoming	19/04/2024	Representative informs Eni that they have been added to the end of the agenda with a 1 hour slot to present in and that the time will be confirmed the following week.	-
Email	Incoming	22/04/2024	Eni receive an email with details (location and time) of the presentation.	-
Text	Outgoing	23/04/2024	Eni inform representative that they are outside the meeting room.	-
Text	Incoming	23/04/2024	Representative apologises and states they had just seen the message.	-
In-person	Outgoing/ Incoming	23/04/2024	Efforts to re-engage with TOs in Wadeye & for opportunity to discuss Eni's project in Blacktip, Eni requested for a meeting with Thamarur Development Corporation (TDC).	-
Email	Outgoing	23/04/2024	Eni thank representative for the meeting and attach a copy of the presentation slides as promised.	-

Western Australia

Bardi Jawi Niimidiman Aboriginal Corporation RNTBC	Group 3	Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	Eni has been seeking to consult Bardi Jawi Niimidiman Aboriginal Corporation RNTBC since it issued information regarding this EP in September 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Bardi Jawi Niimidiman Aboriginal Corporation RNTBC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Bardi Jawi Niimidiman Aboriginal Corporation RNTBC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons was resent with update to feedback request date to 20th October 2023.	-	
		In-person	Outgoing/ Incoming	31/10/2023	Meeting held with Ardyaloon (One Arm Point) community where representatives from the Ardyaloon Corporation were present. Main relevant discussion points included importance of tourism and fishing to Ardyaloon and a clarification on the number of days that it would take for an oil spill to reach Ardyaloon. Concern was also expressed regarding the influence of drilling on earthquakes. It was requested that protection of turtle breeding grounds on the islets that can be found near Ardyaloon was ensured in the case of an oil spill.	Y	

In-person	Outgoing/ Incoming	31/10/2023	Following advice provided in Ardyaloon community session Eni opportunistically went to the Bardi Jawi Rangers' office and presented prepared information regarding the Blacktip activities. Rangers suggested that Eni meet the Bardi Jawi Chairman and offered to forward information provided to other members and the Chairman. No comments were made regarding the proposed activity.	-			
Email	Outgoing	4/11/2023	Eni followed up with persons from engagement meeting and provided a copy of the presentation given on the 31/10/2023.	-			
Email	Outgoing	11/03/2024	Eni followed up regarding previous engagement and extended the opportunity to provide feedback on the activities. A copy of the presentation was included as an attachment.	-			
Email	Outgoing	12/03/2024	Eni followed up regarding previous engagement and extended the opportunity to provide feedback on the activities. Attached relevant information. An alternative email was tried.	-			
Phone Call	Outgoing	12/03/2024	Call to Bardi Jawi Niimidiman AC representative with no response. Voice message was left.	-			
Phone Call	Outgoing	14/03/2024	Call to Bardi Jawi Niimidiman AC representative with no response. Voice message was left.	-			
Phone Call	Outgoing	15/03/2024	Call to Bardi Jawi Niimidiman AC representative with no response. Voice message was left.	-			
Email	Outgoing	18/03/2024	Eni followed up regarding previous engagement and requested feedback on the proposed activities.	-			
Phone Call	Outgoing	18/03/2024	Call to Bardi Jawi Niimidiman AC representative with no response. Voice message was left.	-			
Email	Outgoing	19/03/2023	Eni followed up regarding previous engagement and requested feedback on the proposed activities.	-			
Email	Outgoing	21/03/2024	Eni followed up regarding previous engagement and extended the opportunity to provide feedback on the activities. Attached relevant information. Response for feedback requested by 28 March 2024.	-			
Email	Incoming	21/03/2024	Bardi Jawi Niimidiman AC representative responded stating they had been very busy and will respond within the next few days.	-			
Email	Outgoing	21/03/2024	Eni acknowledged the response to email efforts and suggested holding an in-person meeting, or alternatively organising a video call.	-			
Phone Call	Outgoing	25/03/2024	Bardi Jawi Niimidiman AC representative apologised for lack of response and informed Eni that they were in the process of organising a meeting of the TOs, however that availability is only in June/July. It was further expressed that if the activity goes ahead prior to this meeting Mardi Jawi PBC will object against the EP and request that it is stopped.	-			
Email	Outgoing	25/03/2024	Eni followed up regarding previous engagement and requested feedback on the proposed activities.	-			
Email	Incoming	25/03/2024	Bardi Jawi Niimidiman AC representative responded stating that they need more time to consider material and pull together a Bardi Jawi resourcing protocol for Eni. Representative also mentioned that consultation with them is not considered consultation with the native title holders and that compensation for resourcing will be required. Email included a letter attachment.	Y			
Letter	Incoming	25/03/2024	Letter from the Bardi and Jawi Niimidiman Aboriginal Corporation RNTBC (BJNAC) chairperson detailing the process that BJNAC will go through to assess the information contained in the draft EP and the support they require from Eni to adequately do this.	-			
Text	Outgoing	25/03/2024	ENI thanking Bardi Jarwi for time to speak on the phone and requesting reply to email	-			
Text	Incoming	25/03/2024	Bardi Jarwi acknowledging receipt and will reply to email	-			
Email	Outgoing	10/04/2024	Eni acknowledge letter sent by Bardi Jawi Niimidiman AC representative on 25/03/2024 and respond with letter attached to the email.	-			
Letter	Outgoing	10/04/2024	Eni acknowledge the advice requested by BJNAC on 3 issues relating to the Blacktip activities, including the technical content, the assessment of the potential environmental implications and the assessment of the potential impact of the proposals on the cultural heritage and rights and interests under traditional law and custom as well as any rights and interests arising from contemporary sources of members and native title holders. Eni refers BJNAC to attached stakeholder consultation information packs for technical information and assessment of environmental impacts and risks. Eni suggests that BJNAC are in a position to make the assessment for potential impact of the proposed activity to cultural heritage and rights and interests. Eni considers that, consistent with the legislative requirements, BJNAC has been provided with reasonable opportunity for consultation and informs that the consultation timeline for the EP's will close on the 19th of April 2024. Eni states that they are committed to ongoing consultation through the duration of the EP activities. Where new information is received, Eni will apply its Management of Change process to determine if updates need to be made to the accepted EP.	-			
Balanggarra Aboriginal Corporation RNTBC	Group 2	Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Balanggarra Aboriginal Corporation RNTBC since it issued information regarding this EP in July 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Balanggarra Aboriginal Corporation RNTBC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Balanggarra Aboriginal Corporation RNTBC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Phone Call	Outgoing	13/07/2023	Call to Balanggarra not answered.	-	
		Phone Call	Outgoing	14/07/2023	Call to Balanggarra with regards to Eni wishes to provide further information on Blacktip activity.	-	
		Phone Call	Outgoing	18/07/2023	Call to Balanggarra to confirm Balanggarra received the email and email will be sent to Balanggarra CEO.	-	
		Phone Call	Outgoing	19/07/2023	Call to Balanggarra received contact details of Balanggarra CEO.	-	
		Email	Outgoing	19/07/2023	Eni provided follow up of previous phone call.	-	
		Email	Outgoing	19/09/2023	Eni resent initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	
		Email	Outgoing	19/09/2023	Eni resent initial outgoing consultation email to relevant persons with update to feedback request date to 20th October 2023.	-	
		Email	Incoming	20/10/2023	Provided name and contact of Balanggarra CEO.	-	

Email	Outgoing	20/10/2023	Eni informed Balanggarra CEO that Eni representatives are planning to travel to Kununurra for a discussion regarding the blacktip project. This discussion is intended to provide Balanggarra CEO and their team with information on Eni's process of drafting the Environment Plan future drilling activity as well as Eni's process to renew an Operational Environment Plan for the gas plant in Wadeye. Meeting date requested between the 24th and 26th of October 2023.	-
Email	Outgoing	23/10/2023	Eni provided follow up email to Balanggarra CEO recirculating flyers and re-requesting a meeting between the 24th and 26th of October 2023 or an alternative virtual meeting.	-
Email	Outgoing	26/10/2023	Eni emailed presentation slides for meeting scheduled for 27/10/2024.	-
In-person	Outgoing/ Incoming	27/10/2023	Eni presented details of Blacktip activity. - CEO sought clarification on monitoring of sea shells and other elements around Blacktip and YGP. Eni indicated to the slide covering Eni's ongoing arrangement with the TDC which allows for the Thamarrur Rangers involvement in monitoring Sea country and areas around YGP, this includes water testing. - CEO suggested that Eni present monitoring data including data on mammals, seashells, etc. in future engagements with community. The data will provide evidence of Eni's monitoring of the sea country and land. It will also demonstrate that Eni's operation does not have negative impact to 'country'. - Eni provided brief summary of all the meetings Eni attended in Kununurra, including meeting with CEO of Shire, CEO of Chambers of Commerce and Port Manager at Wyndham. - CEO suggested for meeting with TOs or 'town hall' meeting with First Nation community by mid of November.	Y
Email	Outgoing	28/10/2023	Eni provided copies of flyers and presentation slides to Balanggarra CEO. Eni stated their support for the 'town hall' suggested by the CEO and requested a cost estimate for transport and fees to support TOs to travel.	-
Text message	Outgoing	22/11/2023	Eni contacted Balanggarra CEO in an effort to elicit a response regarding consultation.	-
Text message	Incoming	22/11/2023	CEO responds apologising for delayed response. States that internal matters are holding things up.	-
Email	Outgoing	11/03/2024	Eni provided additional follow up email to Balanggarra CEO, seeking feedback from previous email and meeting in Kununurra.	-
Text message	Outgoing	12/03/2024	Eni contacted Balanggarra CEO in an effort to elicit a response regarding consultation.	-
Phone Call	Outgoing	13/03/2024	Eni contacted Balanggarra and advised person previously contacted and known as Balanggarra CEO is interim CEO. New contact details provided for Balanggarra CEO. Balanggarra board to discuss Blacktip activity end of March. Balanggarra queried if Eni have current agreements with Wadeye. Eni informed of involvement with Thamarrur Rangers. Balanggarra queried of status of communication between Eni and Mg Group. Eni informed of unsuccessful consultation efforts.	Y
Email	Outgoing	13/03/2024	Eni provided additional follow up email to new Balanggarra Aboriginal Corporation Chairperson in an effort to elicit a response regarding consultation.	-
Email	Incoming	14/03/2024	Interim Balanggarra CEO advised of newly appointed board members for Balanggarra Aboriginal Corporation.	-
Phone Call	Outgoing	14/03/2024	Eni contacted Balanggarra and left a voice message to inform that Eni will be happy to hold a virtual meeting.	-
Phone Call	Incoming	14/03/2024	Interim Balanggarra CEO called Eni to inform Eni's follow up email has been forwarded to the Balanggarra Aboriginal Corporation Chairperson. Balanggarra suggested to organise a virtual meeting between Eni and the Balanggarra Board.	-
Email	Incoming	14/03/2024	Interim Balanggarra CEO forwarded Eni's follow up email to the Balanggarra Aboriginal Corporation Chairperson requesting to contact Eni and organise a presentation to the Balanggarra Board. Eni was copied into the forwarded email.	-
Email	Outgoing	18/03/2024	Eni provided additional follow up email to new point of contact for Balanggarra, seeking response to Blacktip activity.	-
Email	Outgoing	21/03/2024	Eni provided additional follow up email to Balanggarra. Recirculating Blacktip Flyers with change in response timeline from 15 January 2024 to 28 March 2024.	-
Phone Call	Outgoing	25/03/2024	Eni contacted Balanggarra, Balanggarra advised a response to Eni's email will be provided. Eni informed that another reminder email will be sent.	-
Email	Outgoing	25/03/2024	Eni provided additional follow up email to new Balanggarra Aboriginal Corporation Chairperson and interim Balanggarra CEO in an effort to elicit a response regarding consultation.	-
Email	Incoming	27/03/2024	The new Balanggarra Aboriginal Corporation Chairperson responded stating the need to start the conversation between the BAC board and Eni, as he has not been engaged prior to his appointment.	-
Phone Call	Outgoing	27/03/2024	Eni contacted Balanggarra Aboriginal Corporation Chairperson to introduce Eni and the Blacktip activity. Advised Eni have engaged with Balanggarra since October 2023. Eni requested a virtual meeting or in-person meeting in April. Eni informed Balanggarra that Eni will appreciate a call or email to plan for meeting. Balanggarra Aboriginal Corporation Chairperson indicated best opportunity to meet the Balanggarra Board will be in 2 months. Balanggarra Aboriginal Corporation Chairperson committed to organising a brief meeting with Eni in the following week from the call.	-
Text message	Outgoing	28/03/2024	Eni messaged Chairperson requesting an introductory meeting.	-
Text message	Outgoing	3/04/2024	Eni followed up message regarding setting up an introductory meeting.	-
Text message	Incoming	3/04/2024	Representative responded saying they were unavailable to speak right now	-
Phone Call	Outgoing	5/04/2024	Eni called Chairperson to inform them of Eni's visit to Kununurra and requested a meeting. Chairperson confirmed that they would meet with Eni on Thursday April 11, 2024 at 10 am.	-
In-person	Outgoing/ Incoming	11/04/2024 12/04/2024	Eni visited Kununurra and waited for Chairperson. Chairperson did not attend, however called later to apologise and explained reason for absence.	-
Text message	Outgoing	13/04/2024	Eni messaged Chairperson requesting a future introductory meeting.	-

Kimberly Land Council (KLC)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult KLC since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow KLC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for KLC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Phone Call	Outgoing	13/07/2023	Phone was answered by reception who asked Eni to send all information to the Executive Assistant.	-	
		Phone Call	Outgoing	18/07/2023	Phone call to follow up on email (13/07/2023). Spoke to the Executive Assistant who confirmed they had received the email. Stated they would forward email to the CEO of KLC and Executive Members of KLC.	-	
		Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	
		Email	Outgoing	19/09/2023	Email resent with update.	-	
		Email	Outgoing	26/10/2023	Eni followed up regarding previous engagement and requested feedback on the proposed activities. Alternative contact was tried. Request for in-person meeting in Broome was proposed by Eni.	-	
		In-person	Outgoing/ Incoming	3/11/2023	Attempt to engage KLC was made by Eni, involving a discussion with the KLC manager for Land and Sea. No opportunity to go over slide package, however Eni's EMBA map was reviewed.	-	
		Email	Outgoing	11/03/2024	Eni followed up regarding previous engagement and requested feedback on the proposed activities. Previous attachments were re-sent.	-	
		Phone Call	Outgoing	12/03/2024	Phone was answered by reception who confirmed the email addresses used for previous correspondence were correct. Requested that Eni resend emails so they can forward to the Executive Assistant.	-	
		Email	Outgoing	12/03/2024	Eni followed up regarding email sent to the KLC 22/06/2023. Feedback request has been extended and flyers were attached to the correspondence.	-	
		Phone Call	Outgoing	14/03/2024	Phone was answered by reception who confirmed the email on 12/03/2024 was received and forwarded to the executive assistant, however Eni was informed the email would likely be forwarded to legal council at KLC. Reception requested that they were forwarded the email again.	-	
		Email	Outgoing	14/03/2024	Eni forwarded email initially sent to wrong email address. Content was regarding conversation with reception who committed to sending email once legal council returned from leave.	-	
		Email	Incoming	14/03/2024	KLC representative followed up post phone call to inform Eni that the legal secretary is on leave and will try to assist with the matter or hand it over to someone else.	-	
		Email	Outgoing	14/03/2024	Eni responded by acknowledging KLC's response.	-	
		Email	Incoming	14/03/2024	KLC representative informed Eni that they had forwarded the email to the legal officer.	-	
		Email	Outgoing	14/03/2024	Eni responded by acknowledging KLC's response.	-	
		Email	Incoming	15/03/2024	KLC representative informed Eni that they had been advised by the legal officer to inform the principal legal officer and wait for next steps.	-	
		Email	Outgoing	15/03/2024	Eni responded by acknowledging KLC's response.	-	
		Email	Outgoing	19/03/2024	Initial outgoing consultation email to KLC representative with direction to forward on to Nimanburr Aboriginal Corporation RNTBC was sent with extension to feedback request date. Flyers were attached.	-	
		Email	Incoming	20/03/2024	Courtesy email advising that contact person duties of KLC representative have been discharged as they have forwarded the email to the directors of the requested corporation. Notes that responses from the corporation may be delayed due to a lack of staff, office and access to emails/phones.	-	
		Email	Outgoing	22/03/2024	Eni acknowledges response and appreciation of help from the representative.	-	
		Email	Outgoing	25/03/2024	Eni followed up regarding previous engagement and requested feedback on the proposed activities by the 28th March 2024.	-	
		Email	Incoming	26/03/2024	Eni was cc'd in an email sent to the principal legal officer which included previous correspondence between Eni and KLC, including information on the proposed activities.	-	
		Phone Call	Outgoing	3/04/2024	Eni called KLC representative to inform them on Eni's plans to visit Kununurra and Broome. Representative suggested Eni speak with the executive assistant for KLC.	-	
		Phone Call	Outgoing	3/04/2024	Eni called KLC and left a voice message for executive assistant.	-	
		Phone Call	Incoming	3/04/2024	Executive assistant returned call and Eni provided brief background on reason for the call which covered Eni's plan for visit to Kununurra & Broome between 10-18th April. It was requested that Eni send an email detailing requests and travel plans.	-	
Email	Outgoing	3/04/2024	Eni thank executive assistant for their time on the phone earlier and provide a brief overview of correspondence including the request of availability to meet with KLC members or PBC directors during a trip to Kununurra and Broome between 10-18th of April 2024.	-			
Email	Incoming	3/04/2024	KLC representative thanks Eni for discussions and informs that they will advice regarding the potential for Eni to meet during a visit to Kununurra and Broome between April 10-18th 2024.	-			
Phone Call	Outgoing	8/04/2024	Eni call executive assistant to follow up on the request for an introduction meeting (03/04/2024). Executive assistant inform Eni that CEO and board members will not be available to meet Eni on those dates.	-			
MG Corporation - representative of the following Traditional Owner Groups: Miriuwung and Gajerrong #1 (Native Title PBC) Aboriginal Corporation RNTBC	Group 2	Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult MG Corporation since it issued information regarding this EP in July 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow MG Corporation to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for MG Corporation to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/09/2023	Follow up email on previous consultation. Noted that no response had been received. Were asked to please respond by Friday 22nd September should they view themselves a Relevant Stakeholder, with comments to add on this activity.	-	
		Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	
		Email	Outgoing	19/09/2023	Updated email with the same information above.	-	

In-person	Outgoing/ Incoming	25/10/2023	Eni visited MG Corporation's office for a meeting with MG Corporation representative. MG Corporation was aware of Eni's activities, however representative was not willing to listen to Eni's presentation and questioned Eni's attempt to meet without prior notification or appointment. MG questioned if Eni had informed KLC about this visit. Eni clarified that several communication attempts were made (email and phone), but no answer was received. As such, Eni took the initiative to visit MG Corporation directly. The MG representative stated that he is not authorised to discuss culturally sensitive information with Eni and suggested that Eni email the Chairman directly. Also, MG Corporation stated that they held similar discussions with another titleholder and preferred their approach of paying members to travel to Perth to attend this type of engagement.	-
Text message	Incoming	26/10/2023	Chair of MG Corp informing ENI of contact email address	-
Email	Outgoing	26/10/2023	Eni contacted the Chairmen in an effort to propose a meeting to inform about Eni's activities in Blacktip	-
Text message	Outgoing	30/10/2023	Eni sent a text message to the Chairmen to set up an in-person meeting with MG Corporation representative.	-
Text message	Incoming	30/10/2023	Response was received conforming the meeting for next Wednesday 3pm	-
Text message	Incoming	1/11/2023	Message declining the meeting due to other meeting going a bit longer	-
Text message	Outgoing	1/11/2023	Eni acknowledging the message and asked for another date	-
Text message	Outgoing	7/11/2023	Eni sent a further text message to set up another date to have an in-person meeting.	-
Email	Outgoing	12/03/2024	Eni followed up regarding email sent to the MG Corporation on 26/10/2023. Feedback request has been extended and flyers were attached to the correspondence.	-
Phone Call	Outgoing	12/03/2024	Call made to 9166 4801 (number registered in ORIC) and spoke to representative who provided a new email address to forward Eni's email. They informed that the MG Corp Chairman would not be available until Thursday and promised to reply to Eni's email with confirmation of email receipt.	-
Email	Outgoing	12/03/2024	Alternative email was sent to representative with the same information above (flyers included)	-
Email	Outgoing	12/03/2024	Email was sent to representative reinforcing the lack of response from MG Corporation and seeking feedback (flyers attached)	-
Phone Call	Outgoing	13/03/2024	Spoke to receptionist and left message for MG Corporation to seek response to Eni's email.	-
Phone Call	Outgoing	14/03/2024	Called MG Corporation but no response.	-
Phone Call	Outgoing	18/03/2024	Called Chairperson of MG Corporation.	-
Phone Call	Outgoing	19/03/2024	Called Chairperson of MG Corporation.	-
Phone Call	Outgoing	19/03/2024	Called MG Corporation office & spoke to reception, which informed that the Chairperson is on leave due to a funeral in his family. Eni requested to speak to previous representative but they were busy.	-
Text message	Incoming	19/03/2023	Eni received text messaged from Chairperson stating they were on leave and call Eni the following day.	-
Email	Outgoing	19/03/2024	Email was sent to representative reinforcing the lack of response from MG Corporation and seeking feedback (flyers attached)	-
Phone Call	Incoming	21/03/2024	Received call from MG Chairperson who informed Eni that they will be in Perth next week and propose for face to face meeting on Wed. 27 or Thur. 28 March in Perth. Chairperson will inform Eni on the best time for the meeting & he will be visiting Eni's office with another Director. Chairperson suggested possible follow up meeting with board via Teams. Eni is more than happy to accommodate both requests.	-
Email	Outgoing	22/03/2024	Email was sent to Chairperson thanking for the chat over the phone and asking for a meeting on the March 27th or 28th.	-
Phone Call	Outgoing	26/03/2024	Call was not answered. Left voice message	-
Text message	Incoming	26/03/2024	Text from Chairperson promised to call Eni on 27/03/2024.	-
Phone Call	Incoming	27/03/2024	Chairperson called Eni to confirm that they will be available to meet Eni on the 18/03/2024. Meeting is only introductory.	-
Email	Incoming	27/03/2024	Meeting acceptance by the Chairperson was received via email.	-
In-Person	Outgoing	28/03/2024	Summary: MG Chairperson made it clear that the meeting was only intended as introduction with Eni and considering the fact that Eni have visited his country & made all the efforts to meet him, he made the effort to meet Eni in person while he is in Perth. Eni welcome the opportunity to meet MG Corp's board of directors as introduction. Eni briefly explained the EMBA as low impact & moderate zone, as well as operational area. Chairperson pointed out 'lacrose island' as an area of interest for MG Corp & Balanggarra and explained that Balanggarra & MG Corp PBC shared jurisdiction of "Lacocrose Island" Eni explained that the spill is only in unlikely event and EMBA is a low exposure zone and the Operational Area is far from 'lacrose island' Chairperson suggested Eni to contact DBCA to find out more information. Eni confirmed it has been contacting DBCA and received their feedback and that suggestions from DBCA are included in the EP.	Y

		Email	Outgoing	5/04/2024	Eni provide follow up thanking Chairperson for the introductory meeting. Email included detail on the proposed activities and informed the Chairperson that the opportunity to provide feedback has been extended to 19th of April 2024. Eni further ensure that they remain happy to meet with the MG Board of Directors at a time convenient to the Board and understand that it may be some months before this meeting can take place. Any feedback provided past April 19th 2024 will be accepted and considered by Eni and if at any point new information is received, Eni will apply its Management of Change process to determine if updates need to be made to the accepted EP.	-	
		Text message	Outgoing	5/04/2024	Eni inform Chairperson that they will be in Kununurra on Wednesday afternoon and request to meet.	-	
		Text message	Outgoing	8/04/2024	Eni follow up with Chairperson on the request to meet while in Kununurra.	-	
		Text message	Incoming	9/04/2024	Chairperson responds that they will contact Eni back shortly.	-	
		Phone Call	Outgoing	10/04/2024	Eni attempts to call Chairperson back after a missed call.	-	
		Text message	Outgoing	11/04/2024	Eni inform Chairperson that they are in Kununurra and request to meet on the 12/04/2024.	-	
		Phone Call	Incoming	12/04/2024	Chairperson contacted Eni to inform them they will be unable to meet due to health circumstances.	-	
		In-person	Outgoing/ Incoming	11/04/2024 12/04/2024	Eni made efforts to meet with the Chairperson while in Kununurra. The Chairperson arrived back in Kununurra on the 12th of April but due to sickness cancelled the meeting. Eni request meeting during their next visit to Perth which is scheduled for the 30th of April.	-	
		Text message	Outgoing	17/04/2024	Eni request to meet with Chairperson while they are visiting Perth.	-	
Gogolanygor Aboriginal Corporation	Group 3	Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	Eni has been seeking to consult Gogolanygor Aboriginal Corporation since it issued information regarding this EP in September 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Gogolanygor Aboriginal Corporation to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Gogolanygor Aboriginal Corporation to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons was resent with update to feedback request date to 20th October 2023.	-	
		Email	Outgoing	11/03/2024	Eni followed up regarding previous engagement and requested feedback on the proposed activities. Previous attachments were resent.	-	
		Email	Outgoing	12/03/2024	Eni followed up regarding previous engagement and requested feedback on the proposed activities. Previous attachments were resent. Alternative email was tried.	-	
		Phone Call	Outgoing	12/03/2024	Attempted to call. No response.	-	
		Phone Call	Outgoing	12/03/2024	Called alternate phone number and briefly spoke to a representative who acknowledged that they had received the email from Eni regarding the proposed activities and verbally informed Eni that activities would not affect their PBC. Representative stated that they do not have any feedback or concern regarding the activities and said they would try to reply to Eni's email to confirm 'no issue & no feedback'.	-	
		Phone Call	Outgoing	13/03/2024	Brief phone call with representative. After reviewing the information provided concern was expressed regarding the extent of the EMBA and its potential impact to activities that Gogolanygor Corporation plans to undertake offshore. Including the corporation's business to have oyster farms, mud crabs, tripang. Eni informed that the EMBA is based on worst case scenario and reminded that there are layers of protection which Eni puts in place to prevent & mitigate such incident. Eni requested for an email to be sent to Eni detailing these concerns to allow for a more thorough response.	Y	
		Email	Outgoing	15/03/2024	Eni provided a follow up email to the representative requesting feedback on the previous discussion (13/03/2024) regarding the proposed activities.	-	
		Email	Outgoing	19/03/2024	Eni provided additional follow up email to representative requesting feedback on the previous discussions regarding the proposed activities.	-	
		Email	Outgoing	22/03/2024	Eni provided additional follow up email to representative requesting feedback on the previous discussions regarding the proposed activities.	-	
		Email	Outgoing	25/03/2024	Eni provided additional follow up email to representative requesting feedback on the previous discussions regarding the proposed activities.	-	
		Email	Incoming	25/03/2024	Automated out of office reply was received.	-	
Nyangunmartka Karajarri Aboriginal Corporation	Group 3	Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	Eni has been seeking to consult Nyangunmartka Karajarri Aboriginal Corporation since it issued information regarding this EP in September 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Nyangunmartka Karajarri Aboriginal Corporation to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Nyangunmartka Karajarri Aboriginal Corporation to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons was resent with update to feedback request date to 20th October 2023.	-	
		In-person	Outgoing/ Incoming	2/11/2023	Meeting was held in the Bidyadanga community. Eni presented information via slide pack in an attempt to further relevant persons consultation. Concern was expressed regarding the impacts of an oil spill to the pearl industry, stated that there are several pearl farms which could be captured within the EMBA. Further, that within the EMBA there are Flatback turtle and salmon breeding grounds and that the area adjacent to Roebuck Bay, Cable Beach should also be considered as protected area as it is an important areas with extensive sea grass, dugong breeding and migration of whales. Copies of flyers were distributed at the end of the meeting.	Y	
		In-person	Outgoing/ Incoming	2/11/2023	Meeting was held in the Bidyadanga community. Eni presented information via slide pack in an attempt to further relevant persons consultation. Concern was expressed regarding the impacts of fracking and mining to 'country'. Eni explained that the company is not involved with fracking. Questions on the information were asked however there were no clear views on the position of attendants on the activities proposed by Eni. Copies of flyers were distributed at the end of the meeting.	Y	
		Email	Outgoing	20/11/2023	Eni followed up with persons from engagement meeting and provided a copy of the presentation given on the 02/11/2023 and requested feedback.	-	
		Email	Outgoing	12/03/2024	Eni followed up regarding previous engagement and extended the opportunity to provide feedback on the activities. A copy of the activity flyers were included as an attachment.	-	

		Email	Outgoing	13/03/2024	Eni followed up regarding previous engagement and extended the opportunity to provide feedback on the activities. A copy of the activity flyers were included as an attachment.	-	
		Email	Outgoing	19/03/2024	Eni provided additional follow up email requesting feedback on the previous engagement regarding the proposed activity.	-	
		Email	Incoming	20/03/2024	KLC representative responded querying which corporation Eni is trying to reach as the correspondence was not directed to a particular corporation name.	-	
		Email	Outgoing	20/03/2024	Eni responded that the correspondence is intended to reach the Nyangumarta Karajarri Aboriginal Corporation.	-	
		Email	Incoming	21/03/2024	Courtesy email advising that contact person duties of KLC representative have been discharged as they have forwarded the email to the directors of the requested corporation. Notes that responses from the corporation may be delayed due to a lack of staff, office and access to emails/phones.	-	
Mayala Inninalang Aboriginal Corporation	Group 3	Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	Eni has been seeking to consult Mayala Inninalang Aboriginal Corporation since it issued information regarding this EP in September 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Mayala Inninalang Aboriginal Corporation to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Mayala Inninalang Aboriginal Corporation to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons was resent with update to feedback request date to 20th October 2023.	-	
		Email	Outgoing	11/03/2024	Eni followed up regarding previous efforts and inform that the opportunity to provide feedback on the proposed activities has been extended. Activity flyers were included as an attachment.	-	
		Email	Outgoing	12/03/2024	Eni followed up regarding previous efforts and inform that the opportunity to provide feedback on the proposed activities has been extended. Activity flyers were included as an attachment.	-	
		Email	Outgoing	12/03/2024	Eni forwarded email directly to KLC of initial outgoing email resent on 12/03/2024. Noted that no response has been received and requested KLC to review Eni activity in Blacktip and attached flyers to provided any feedback.	-	
		Phone Call	Outgoing	12/03/2024	Spoke with reception at KLC who informed Eni that email address used for PBCs is legalsecretary@klc.org.au	-	
		Email	Outgoing	13/03/2024	Consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email referenced direct attempt to contact Mayala Inninalang Aboriginal Corporation due to a lack of success going through KLC.	-	
		Email	Outgoing	18/03/2024	Eni followed up regarding previous efforts.	-	
		Email	Incoming	20/03/2024	Courtesy email advising that contact person duties of relevant persons representative have been discharged as they have forwarded the email to the directors of the requested corporation. Notes that responses from the corporation may be delayed due to a lack of staff, office and access to emails/phones.	-	
		Email	Outgoing	25/03/2024	Eni provided additional follow up email requesting feedback on the previous efforts regarding the proposed activity. Inform representative that the opportunity to provide feedback has been extended to 28 March 2024.	-	
		Email	Incoming	27/03/2024	Courtesy email advising that contact person duties of KLC representative have been discharged as they have forwarded the email to the directors of the requested corporation. Notes that responses from the corporation may be delayed due to a lack of staff, office and access to emails/phones.	-	
Nyul Nyul PBC Aboriginal Corporation	Group 3	Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	Eni has been seeking to consult Nyul Nyul PBC Aboriginal Corporation since it issued information regarding this EP in September 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Nyul Nyul PBC Aboriginal Corporation to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Nyul Nyul PBC Aboriginal Corporation to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons was resent with update to feedback request date to 20th October 2023.	-	
		In-person	Outgoing/ Incoming	31/10/2023	Meeting was held in the Beagle Bay community. Eni introduced themselves and presented information. Concerns from attendees were confidential and can be found in <i>Sensitive Information</i> . It was suggested that Eni attend the annual general meeting to provide the same presentation to all Board or Executive of the PBC. Copies of flyers were distributed at the end of the meeting.	Y	
		Email	Outgoing	18/03/2024	Eni followed up regarding previous engagement and extended the opportunity to provide feedback on the activities. A copy of the attendance record of the meeting on (31/10/2023) and the activity flyers were included as an attachment.	-	
		Phone Call	Outgoing	18/03/2024	Spoke to ORIC representative and informed them that Eni is seeking feedback from meeting held in Beagle Bay community (31/10/2023) regarding information that was shared on the proposed activities.	-	
		Text message	Outgoing	18/03/2024	Sent text message to ORIC representative informing them that an email was sent from Eni that requires attention.	-	
		Email	Outgoing	20/03/2024	Eni provided additional follow up email referencing voice message left with representative requesting feedback on the previous engagement regarding the proposed activity. Inform representative that the opportunity to provide feedback has been extended to 28 March 2024.	-	
		Phone Call	Outgoing	25/03/2024	Eni attempted to call representative. No response. Voice message was left informing representative of the purpose of the call.	-	
		Email	Outgoing	25/03/2024	Eni provided additional follow up email referencing voice message left with representative requesting feedback on the previous engagement regarding the proposed activity. Activity flyers were included as an attachment.	-	
Email	Incoming	25/03/2024	Relevant person representative informed Eni that they would ensure information is presented to the board during the Nyul Nyul PBC meeting on the 1 and 2 of May 2024. Representative will be in contact with Eni if attendance is required.	-			

		Email	Outgoing	5/04/2024	Eni provide follow up email with detail on the proposed activities and inform the representative that the opportunity to provide feedback has been extended to 19th of April 2024. Eni further ensure that they remain happy to meet with the Nyul Nyul PBC Board of Directors at a time convenient to the Board and request they would like Eni to attend the 1 and 2 May Board meeting. Any feedback provided past April 19th 2024 will be accepted and considered by Eni and if at any point new information is received, Eni will apply its Management of Change process to determine if updates need to be made to the accepted EP.	-	
		Email	Incoming	5/04/2024	Representative queried the number of emails received and requested confirmation that they are all the same and only one is needed to be kept.	-	
		Email	Outgoing	5/04/2024	Eni confirm that the representative can delete duplicate emails and apologise for the technical error.	-	
		Email	Incoming	12/04/2024	On behalf of the contact person for relevant persons invited by Eni Australia to meet with the board at their next directors meeting in Broome on May 3rd to discuss correspondence and consultations. It is stated that the PBC will require a funding contribution for this meeting if Eni would like to attend.	-	
		Email	Outgoing	16/04/2024	Eni inform representative that consultation for Blacktip EPs will close April 19th, however as Eni is committed to ongoing consultation throughout the duration of the EPs they would like to attend the board meeting to discuss operations and continue to develop the relationship.	-	
		Email	Incoming	29/04/2024	Invitation to meeting with Nyul Nyul board members including agenda for the 1-2 May.	-	
		Phone Call	Outgoing	29/04/2024	Eni spoke with representative regarding arrangement for Eni to attend the Nyul Nyul board meeting and the payment process for the sitting fee.	-	
		Email	Incoming	29/04/2024	Representative invites Eni to meeting with Nyul Nyul PBC directors on the 2nd of May. Email includes budget estimate attachments.	-	
		Email	Outgoing	29/04/2024	Eni requests clarification on the budget estimates.	-	
		Email	Incoming	30/04/2024	Representative confirms Eni's assumption.	-	
		Email	Outgoing	30/04/2023	Eni thank the representative for the clarification and state they will begin the process internally.	-	
		Email	Outgoing	30/04/2024	Eni inform representative that they will need to set Nyul Nyul up as a vendor and request that the attached form is completed.	-	
		Email	Incoming	30/04/2024	Email forwarded internally to support with filling out the form.	-	
		Email	Incoming	30/04/2024	KLC representative sends through the completed vendor information form on behalf of Nyul Nyul.	-	
		Email	Outgoing	1/05/2024	Eni inform the representative that the finance team is reviewing the information.	-	
		Email	Incoming	1/05/2024	Representative states that due to cancellations from other operators the agenda has changed to two days and query if Eni will be able to make it a day earlier than anticipated.	-	
		Email	Outgoing	1/05/2024	Eni inform representative of their expected arrival time in Broome.	-	
		In-person	Outgoing/ Incoming	2/05/2024	Eni attended Nyul Nyul board meeting. Directors expressed appreciation with Eni's community programs and approach to operating within the Wadeye community.	-	
		Text Message	Outgoing	2/05/2023	Correspondence with relevant person of Eni asking for the meeting location address, indicating they are at meeting location, and requesting a copy of the attendance list.	-	
		Text Message	Incoming	2/05/2023	Relevant persons responded saying they will send the attendees list the following day.	-	
		Email	Incoming	3/05/2024	Relevant persons provided Eni with list of Directors who attended the consultation meeting.	-	
		Email	Outgoing	3/05/2024	Eni thank representative for the directors list and request and explanation on the next steps for the response of Nyul Nyul to Eni's Environment Plan.	-	
Yawuru Native Title Holders Aboriginal Corporation	Group 3	Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	Eni has been seeking to consult Yawuru Native Title Holders Aboriginal Corporation since it issued information regarding this EP in September 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Yawuru Native Title Holders Aboriginal Corporation to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Yawuru Native Title Holders Aboriginal Corporation to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons was resent with update to feedback request date to 20th October 2023.	-	
		Email	Outgoing	12/03/2024	Eni followed up regarding previous efforts and inform that the opportunity to provide feedback on the proposed activities has been extended. Activity flyers were included as an attachment.	-	
		Phone Call	Outgoing	12/03/2024	Attempted to call. No response.	-	
		Phone Call	Outgoing	13/03/2024	Spoke with reception who recommended an alternative email address for correspondence so that they are able to distribute the email chain to relevant people.	-	
		Email	Outgoing	13/03/2024	Eni followed up regarding previous efforts and inform that the opportunity to provide feedback on the proposed activities has been extended. Activity flyers were included as an attachment. Alternative email address was used.	-	
		Phone Call	Outgoing	14/03/2024	Reception confirmed that email had been received and forwarded to the relevant department. Recommended to wait until the department returns correspondence.	-	
		Phone Call	Outgoing	18/03/2024	Spoke with reception who requested the email chain be sent to them so that they are able to forward on to relevant departments.	-	
		Email	Outgoing	18/03/2024	Email sent to individuals email address acknowledging their assistance and requesting feedback from the relevant department.	-	
		Email	Outgoing	18/03/2024	Email resent to individual email address and alternative email address.	-	
		Email	Outgoing	25/03/2024	Eni provided additional follow up email requesting feedback on the previous efforts regarding the proposed activity. Inform representative that the opportunity to provide feedback has been extended to 28 March 2024.	-	
Wanjina-Wungurr (Native Title) Aboriginal Corporation RNTBC	Group 2	Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	Eni has been seeking to consult Wanjina-Wungurr (Native Title) Aboriginal Corporation RNTBC since it issued information regarding this EP in September 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Wanjina-Wungurr (Native Title) Aboriginal Corporation RNTBC to make an informed assessment of
		Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons was resent with update to feedback request date to 20th October 2023.	-	

		Email	Outgoing	12/03/2024	Eni followed up regarding previous efforts and inform that the opportunity to provide feedback on the proposed activities has been extended. Activity flyers were included as an attachment.	-	Title) Aboriginal Corporation RNTBC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Wanjina-Wunggurr (Native Title) Aboriginal Corporation RNTBC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Phone Call	Outgoing	18/03/2024	Requested to speak with representative of Wanjina-Wunggurr but was directed to KLC representative who suggested Eni continues to reach out to ORIC contact.	-	
		Email	Outgoing	18/03/2024	Eni followed up regarding previous efforts.	-	
		Email	Outgoing	25/03/2024	Eni provided additional follow up email requesting feedback on the previous efforts regarding the proposed activity. Inform representative that the opportunity to provide feedback has been extended to 28 March 2024.	-	
Warrwa People Aboriginal Corporation RNTBC	Group 3	Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	Eni has been seeking to consult Warrwa People Aboriginal Corporation RNTBC since it issued information regarding this EP in September 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Warrwa People Aboriginal Corporation RNTBC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Warrwa People Aboriginal Corporation RNTBC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons was resent with update to feedback request date to 20th October 2023.	-	
		Phone Call	Outgoing	12/03/2024	Attempted to call number registered in ORIC. Number not connected.	-	
		Email	Outgoing	12/03/2024	Eni followed up regarding previous efforts and inform that the opportunity to provide feedback on the proposed activities has been extended. Activity flyers were included as an attachment.	-	
		Phone Call	Outgoing	13/03/2024	Attempted to call registered number. Number not connected.	-	
		Phone Call	Outgoing	18/03/2024	Attempted to call number registered in ORIC. Number not connected.	-	
		Email	Outgoing	18/03/2024	Eni followed up regarding previous efforts.	-	
		Email	Outgoing	25/03/2024	Eni provided additional follow up email requesting feedback on the previous efforts regarding the proposed activity. Inform representative that the opportunity to provide feedback has been extended to 28 March 2024.	-	
Walalakoo Aboriginal Corporation RNTBC	Group 3	Email	Outgoing	19/09/2023	Outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets. Email was specifically directed to Kimberley Coastal PBCs and stated that Eni Australia are in the process of scheduling local consultation dates.	-	Eni has been seeking to consult Walalakoo Aboriginal Corporation RNTBC since it issued information regarding this EP in September 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Walalakoo Aboriginal Corporation RNTBC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Walalakoo Aboriginal Corporation RNTBC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	19/09/2023	Initial outgoing consultation email to relevant persons was resent with update to feedback request date to 20th October 2023.	-	
		Email	Outgoing	12/03/2024	Eni followed up regarding previous efforts and inform that the opportunity to provide feedback on the proposed activities has been extended. Activity flyers were included as an attachment.	-	
		Phone Call	Outgoing	12/03/2024	Attempted to call number registered in ORIC. Number not connected.	-	
		Email	Outgoing	18/03/2024	Eni followed up regarding previous efforts.	-	
		Email	Outgoing	25/03/2024	Eni provided additional follow up email requesting feedback on the previous efforts regarding the proposed activity. Inform representative that the opportunity to provide feedback has been extended to 28 March 2024.	-	
Businesses							
Amateur Fisherman's Association of the Northern Territory (AFANT)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheet.	-	Eni has been seeking to consult AFANT since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow AFANT to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for AFANT to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	13/07/2023	Automated reply stating the email is unattended 19/12/22 to 13/01/23	-	
		Email	Outgoing	4/08/2023	Resent initial outgoing consultation email. Eni noted no response had been received.	-	
		Phone Call	Outgoing	26/09/2023	Relevant person requested consultation email to be resent .	-	
		Email	Outgoing	26/09/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/11/2023	Follow up consultation invitation issued 26/09/23. Eni noted no response had been received. Were requested to respond by Thursday 30th November should they view themselves a Relevant Person.	-	
Australian Maritime Oil Spill Centre (AMOSC)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult AMOSC since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow AMOSC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for AMOSC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on consultation initiation issued 22/06/2023. Eni noted that no response had been received.	-	
		Email	Incoming	26/09/2023	AMOSC has no concerns regarding Eni's offshore petroleum activities. They ask to be kept informed as developments progress	Y	
Anglers Choice Fishing Safaris	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Anglers Choice Fishing Safaris since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Anglers Choice Fishing Safaris to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on consultation initiation issued 22/06/2023. Eni noted that no response had been received.	-	
		Text Message	Outgoing	26/09/2023	Eni representative sent text regarding email sent to persons organisation about the proposed activities – Blacktip project and requesting feedback on the email (6/9/2023)	-	

		Email	Outgoing	28/09/2023	Follow up email on consultation initiation issued 22/06/2023. Eni noted that no response had been received.	-	Eni has been seeking to consult Anglers Choice Fishing Safaris since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Anglers Choice Fishing Safaris to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Anglers Choice Fishing Safaris to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Phone Call	Outgoing	10/10/2023	Eni representative called Anglers Choice, stated they had no comments on the Blacktip activities but requested the email be resent to email with attention to Anglers Choice representative.	-	
		Email	Outgoing	10/10/2023	Email was resent following phone call with flyers attached.	-	
		Email	Outgoing	14/11/2023	Reply to previous correspondence asking them to reply if they consider themselves to be a relevant stakeholder.	-	
		Email	Outgoing	20/03/2024	Follow up email on the last consultation issued 14/11/2023. Eni asked for feedback until 28/03/2024	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received. Were requested to respond.	-	
Arafura Bluewater Charters	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Arafura Bluewater Charters since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Arafura Bluewater Charters to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Arafura Bluewater Charters to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on consultation initiation issued 14/07/2023. Eni noted that no response had been received.	-	
		Phone Call	Outgoing	10/10/2023	Eni called representative who stated Arafura Charters do not have activities around Eni's offshore activities. No concerned raised and Eni requested for reply to email sent in September. Representative stated they will try to find Eni's email and provide response.	-	
		Email	Outgoing	20/03/2024	Follow up email on the last consultation issued 14/11/2023. Eni asked for feedback until 28/03/2024	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received. Were requested to respond.	-	
Cannon Charters	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Cannon Charters since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Cannon Charters to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Cannon Charters to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on consultation initiation issued 22/06/2023. Eni asked for a response until 22/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up on correspondence from 06/09/2023	-	
		Phone Call	Outgoing	20/11/2023	No answer to phone call so Eni left a message including contact details.	-	
		Email	Outgoing	20/03/2024	Follow up email on the last consultation issued 14/11/2023. Eni asked for feedback until 28/03/2024	-	
Clearwater Fish / Clearwater Island Lodge	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Clearwater Fish / Clearwater Island Lodge since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Clearwater Fish / Clearwater Island Lodge to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Clearwater Fish / Clearwater Island Lodge to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on consultation initiation issued 22/06/2023. Eni asked for a response until 22/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up on correspondence from 06/09/2023. Asking feedback by 30/11/2023	-	
		Phone Call	Outgoing	20/11/2023	No answer to phone call so Eni left a message including contact details.	-	
		Email	Outgoing	20/03/2024	Follow up email on the last consultation issued 14/11/2023. ENI asked for feedback until 28/03/2024	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received. Were requested to respond.	-	
Darwin Harbour Fishing Charters	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Darwin Harbour Fishing Charters since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Darwin Harbour Fishing Charters to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Darwin Harbour Fishing Charters to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 22/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up on correspondence from 06/09/2023. Asking feedback by 30/11/2023	-	
		Phone Call	Outgoing	20/11/2023	Phone call follow up. No need to be consulted further. Stated any permission is above his organisation.	-	
		Email	Outgoing	19/03/2024	Follow up email with flyers on the last consultation issued 20/11/2023.	-	
		Email	Outgoing	20/03/2024	Follow up email with flyers and request reply by the 28/03/2024.	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received. Were requested to respond.	-	
Darwin Port	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Darwin Port since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	

		Email	Outgoing	6/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 22/09 if the stakeholder see itself as a relevant person for the activity.	-	Appendix C1. Eni has provided sufficient information to allow Darwin Port to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Darwin Port to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	20/11/2023	Follow up on correspondence from 06/09/2023. Asking feedback by 30/11/2023	-	
		Phone Call	Outgoing	20/11/2023	No answer to phone call so Eni left a message including contact details.	-	
		Email	Outgoing	20/03/2024	Follow up email with flyers and asking for reply by the 28/03/2024.	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received. Were requested to respond by 28th March 2024.	-	
Dundee Beach Fishing Charters	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Dundee Beach Fishing Charters since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Dundee Beach Fishing Charters to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Dundee Beach Fishing Charters to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	13/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 22/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up on correspondence from 06/09/2023. Asking feedback by 30/11/2023	-	
		Phone Call	Outgoing	20/11/2023	Representative stated they had sent emails through to the head of the company and they had most likely put them in the "too hard basket" as the head of the company tended to be disinterested about "this sort of thing". Stated that he will respond if he feels necessary or has any concerns. Stated that it is unlikely he will.	-	
		Email	Outgoing	20/03/2024	Follow up email with flyers and asking for reply by the 28/03/2024.	-	
Equinox Fishing Charters	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Equinox Fishing Charters since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Equinox Fishing Charters to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Equinox Fishing Charters to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 22/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up on correspondence from 14/09/2023. Asking feedback by 30/11/2023	-	
		Phone Call	Outgoing	20/11/2023	Representative from Equinox stated that they had a brief look and did not understand the purpose of the emails. Stated they will have another look and reply via email if they have any concerns, or wish to be updated.	-	
		Email	Outgoing	19/03/2024	Follow up email requesting feedback from Equinox.	-	
		Email	Outgoing	20/03/2024	Follow up email with flyers requesting reply by the 28/03/2024.	-	
Fish Darwin	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Fish Darwin since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Fish Darwin to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Fish Darwin to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up consultation invitation issued 14/07/23. Correspondence included a summary of the Blacktip facilities and the petroleum area. Correspondence included attachment of the 2023 activity factsheet.	-	
		Phone Call	Outgoing	20/11/2023	Phone call follow up with no answer from relevant persons nor an option to leave a message.	-	
		Email	Outgoing	20/11/2023	Follow up consultation invitation issued 14/07/23. Correspondence included a summary of the Blacktip facilities and the petroleum area. Correspondence included attachment of the 2023 activity factsheet.	-	
		Email	Outgoing	20/03/2024	Recirculated initial outgoing consultation email to relevant persons and included initial outgoing consultation material. Eni noted no response had been received. Were requested to respond by Thursday 28th March 2024.	-	
Marine Tourism Association of WA (MTWA)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult MTWA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow MTWA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for MTWA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 22/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up on correspondence from 06/09/2023. Asking feedback by 30/11/2023	-	
		Phone Call	Outgoing	20/11/2023	Representative can't comment but recommends Eni contact Recfish West and DPIRD.	-	
		Phone Call	Outgoing	20/11/2023	Phone call attempted with no reply. Left message.	-	
		Email	Outgoing	20/03/2024	Follow up email with flyers and asking for reply by the 28/03/2024	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received. Were requested to respond by 28th March 2028. This email was recalled due to typo identified.	-	
Melville Lodge	Group 3	Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	Eni has been seeking to consult Melville Lodge since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow
		Email	Outgoing	13/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 22/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	10/10/2023	Follow up email with flyers and asking for reply by the 28/03/2024	-	

		Email	Outgoing	14/11/2023	Follow up on correspondence from 10/10/2023. Asking feedback by 30/11/2023	-	Melville Lodge to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Melville Lodge to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	20/03/2024	Follow up email with flyers and requesting feedback.	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received. Were requested to respond by 28th March 2028. This email was recalled due to typo identified.	-	
Monsoon Aquatics	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Monsoon Aquatics since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Monsoon Aquatics to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Monsoon Aquatics to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 22/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Incoming	14/09/2023	Relevant persons acknowledge emails and have no concerns.	-	
Northern Territory Guided Fishing Industry Association (NTGFIA)	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult NTGFIA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow NTGFIA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for NTGFIA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 20/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up on correspondence from 14/09/2023. Asking feedback by 30/11/2023	-	
		Phone Call	Outgoing	20/11/2023	Representative stated they will look at consultation and respond if they see fit.	-	
		Email	Outgoing	20/03/2024	Follow up email with flyers and asking for a response by 28/03/2024.	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received. Were requested to respond by 28th March 2028. This email was recalled due to typo identified.	-	
Offshore Boat Fish Charters	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Offshore Boat Fish Charters since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Offshore Boat Fish Charters to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Offshore Boat Fish Charters to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	13/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 20/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up on correspondence from 13/09/2023. Asking feedback by 30/11/2023	-	
		Phone Call	Outgoing	20/11/2023	No answer to phone call so Eni left a message including contact details.	-	
		Email	Outgoing	20/03/2024	Follow up email with flyers and asking for a response by 28/03/2024.	-	
Oil Spill Response Limited (OSRL)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult OSRL since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow OSRL to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for OSRL to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	13/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 20/09 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Incoming	13/09/2023	Automated response saying OSRL representative was out of office	-	
		Email	Outgoing	8/11/2023	Follow up on correspondence from 13/09/2023. Asking feedback or acknowledge the activities without issues or concerns.	-	
		Email	Incoming	8/11/2023	Stakeholder acknowledge the update on activities and confirm that they have no issues or concerns at present.	-	
Recfish West	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Recfish West since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Recfish West to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Recfish West to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Follow-up consultation email to relevant persons was sent.	-	

		Email	Incoming	25/07/2023	Stakeholder acknowledge the update on activities and confirm that we have no issues or concerns at present.	-	Appendix C1. Eni has provided sufficient information to allow Rectish West to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Rectish West to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
Darwin Red Devil Charters	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Darwin Red Devil Charters since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Darwin Red Devil Charters to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Darwin Red Devil Charters to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Follow-up consultation email to relevant persons was sent.	-	
		Email	Outgoing	13/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 20/09/23 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up email on consultation issued 13/09/2023. Eni asked for a response until 20/09/23 if the stakeholder see itself as a relevant person for the activity.	-	
		Phone Call	Outgoing	20/11/2023	Darwin Red Devil Charters representative stated they had not seen any emails and that "they wouldn't get far with it" hung up before elaborating.	-	
		Email	Outgoing	20/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received.	-	
Seafarms Group Ltd	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Seafarms Group Ltd since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Seafarms Group Ltd to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Seafarms Group Ltd to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Follow-up consultation email to relevant persons was sent.	-	
		Email	Outgoing	13/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 20/09/23 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	20/11/2023	Follow up email on consultation issued 13/09/2023. Eni asked for a response until 30/11/23 if the stakeholder see itself as a relevant person for the activity.	-	
		Phone Call	Outgoing	20/11/2023	Noted that CEO and Project Managers would respond.	-	
		Email	Incoming	23/11/2023	Seafarms informed of Seafarms commencement of their own activities, indicating there would be no concerns unless the Blacktip activities would impact the quality of seawater that Seafarms would be using, at their stated intake location at Forsyth Creek.	Y	
		Email	Outgoing	9/04/2024	Eni inform Seafarm that in the highly unlikely event of a hydrocarbon release during Blacktip activities spill modelling has predicted potential for low exposure for entrained hydrocarbons at Forsyth Creek. Eni notes that modelling is highly conservative and assumes no emergency response measures, however in the unlikely case a spill occurs Eni will implement the Blacktip Oil Pollution Emergency Plan (OPEP) to mitigate and reduce any environmental impacts to the marine environment. An impact assessment for fisheries and aquaculture in the event of a spill has been assessed within the EPs. Further, Eni ensure Seafarms that Eni are responsible for any costs expenses, liability and damages that may occur. Any entity (including fisheries and aquaculture) who has, or may be, financially disadvantaged as a direct result of a hydrocarbon spill associated with Blacktip activities are entitled to seek compensation. Eni commits to notifying Seafarms in the unlikely event a spill predicted to contact Forsyth Creek occurs.	-	
Seafood Industries Australia (SIA)	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult SIA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow SIA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for SIA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Follow-up consultation email to relevant persons was sent.	-	
		Email	Outgoing	13/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 20/09/23 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Incoming	13/09/2023	Automated reply responding relevant persons is out of office and provided alternate email contacts.	-	
		Email	Outgoing	13/09/2023	Initial outgoing consultation email to alternate email contact was sent, including a summary of the Blacktip Facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets	-	
		Email	Outgoing	20/11/2023	Follow up on correspondence from 13/09/2023. Asking feedback by 30/11/2023	-	
		Email	Outgoing	20/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received.	-	
Tiwi Island Adventures	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Tiwi Island Adventures since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Tiwi Island Adventures to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Tiwi
		Email	Outgoing	14/07/2023	Follow-up consultation email to relevant persons was sent.	-	
		Email	Outgoing	13/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 20/09/23 if the stakeholder see itself as a relevant person for the activity.	-	
		Phone Call	Outgoing	10/10/2023	Contact person noted they were in QLD and not interested in discussing anything related to Eni's activity.	-	

		Email	Outgoing	10/10/2023	Forwarded consultation material following phone call.	-	interests or activities. Eni has provided a reasonable period for Hwi Island Adventures to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
Vocus Communications	Group 3	Email	Incoming	13/11/2023	Eni filled out a form on vocus.com.au identifying Vocus communications as a potential stakeholder and requested to provide more information to Vocus Communications. The enquiry was received by the relevant persons and an automated response was received stating they would be in contact.	-	Eni has been seeking to consult Vocus Communications since it issued information regarding this EP in November 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Vocus Communications to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Vocus Communications to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Incoming	13/11/2023	Stakeholder responded with offer of supporting services.	-	
		Email	Outgoing	13/11/2023	Eni thanked relevant persons for their email and asked if they consider themselves to be a relevant stakeholder and provide Blacktip flyers	-	
		Email	Outgoing	15/11/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities and requesting feedback by the 30th November 2023.	-	
		Email	Incoming	16/11/2023	Vocus responded that the North West Cable System (NWCS) telecommunications submarine cable that runs from Darwin to Port Hedland is more than 250 km away from the well head at the nearest location, Vocus has no issues or operational concerns with this notification.	Y	
Yknot Fishing Charters	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Yknot Fishing Charters since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Yknot Fishing Charters to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Yknot Fishing Charters to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	13/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by 20 September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (13/09/2023). Noted that no response had been received. Were requested to respond by 30 November should they view themselves a Relevant Person.	-	
		Phone Call	Outgoing	20/11/2023	Spoke with representative from Yknot Fishing Charters who confirmed they had seen the emails and that they would review the proposal with their partner and reply via email.	-	
		Email	Outgoing	20/03/2024	Follow-up email requesting feedback from Yknot Fishing Charters.	-	
<i>Oil and Gas</i>							
EOG Resources Australia	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult EOG Resources Australia since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow EOG Resources Australia to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for EOG Resources Australia to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	19/07/2023	EOG thanked Eni for the information and inform Eni they consider themselves a relative person and as such would like to be kept in communications. They do not have any questions or issues at the time of writing.	Y	
Inpex	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Inpex since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Inpex to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Inpex to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	Automated response that Inpex had received the email.	-	
		Email	Outgoing	14/11/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Email	Incoming	14/11/2023	Automated response that Inpex had received the email.	-	
Kufpec	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Kufpec since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Kufpec to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Kufpec to provide objections or claims in relation to the EP and for consultation to occur. In these
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22 September if they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (13/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	


		Phone call	Outgoing	20/11/2023	Stakeholder stated had not seen emails and stated they would forward them onto the operations manager for a reply	-	claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	20/03/2024	Follow up email with flyers requesting reply by the 28/03/2024	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received. Were requested to respond by 28th March 2028. This email was recalled due to typo identified.	-	
Melbana Energy	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Melbana Energy since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Melbana Energy to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Melbana Energy to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22 September if they view themselves a Relevant Person.	-	
		Email	Incoming	14/09/2023	Melbana reports that they have no issues with the planned activities at Blacktip Project. They would like to would like to stay informed of any further activities.	Y	
Neptune Energy	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Neptune Energy since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Neptune Energy to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Neptune Energy to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	1/08/2023	Neptune Energy supports Eni's activities and would like to be included in any future communication via StakeholderAustralia@neptuneenergy.com	Y	
		Email	Outgoing	14/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 22 September if they view themselves a Relevant Person.	-	
		Email	Incoming	18/09/2023	Neptune Energy supports Eni's activities and would like to be included in any future communication via StakeholderAustralia@neptuneenergy.com. Additionally ask that Eni confirm that they received this email.	Y	
		Email	Outgoing	13/11/2023	Eni acknowledging that Neptune's email had been received.	-	
Santos	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Santos since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Santos to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Santos to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	13/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 20 September if they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up email on previous consultation (13/09/2023). Noted that no response had been received. Were requested to respond by Thursday 30 November should they view themselves a Relevant Person.	-	
		Phone Call	Outgoing	20/11/2023	No answer to phone call so Eni left a message including contact details.	-	
NGOs							
Conservation Council of Western Australia (CCWA)	Group 4	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult CCWA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow CCWA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for CCWA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Follow up email on previous consultation (14/07/2023). Noted that no response had been received. Were requested to respond by Friday 20 September if they view themselves a Relevant Person.	-	
		Email	Incoming	7/09/2023	CCWA informs Eni that they do view themselves as relevant stakeholders for the Blacktip Projects, however need more time to provide comment on the operations and drilling EP. They would also like more information on the impacts and mitigation for the proposed works.	Y	
		Email	Outgoing	7/11/2023	Eni advise that more information on the impacts and mitigations of the proposed works will be provided through the NOPSEMA EP process which will become publicly available. Eni stated if they have any further questions please contact Eni.	-	
		Email	Outgoing	22/11/2023	Follow up email requesting for feedback from CCWA.	-	
		Email	Incoming	22/11/2023	Automated response from CCWA representative stating that they no longer work at CCWA as of 27/10/2023.	-	
		Email	Outgoing	23/11/2023	Follow up email requesting for feedback from CCWA.	-	
		Email	Outgoing	19/03/2024	Follow up email requesting for feedback from CCWA.	-	
		Email	Incoming	19/03/2024	CCWA they are interested in continuing involvement in consultation with Eni Australia, however, they presently do not have the capacity to review the draft Operations Environment Plan.	Y	
Environment Centre Northern Territory (ECNT)	Group 4	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult ECNT since it issued information regarding this EP in June 2023. Eni has made subsequent consultation

		Email	Outgoing	14/11/2023	Initial outgoing consultation email to relevant persons was resent.	-	efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow ECNT to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for ECNT to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
<i>Fisheries</i>							
A Raptis & Sons	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheet.	-	Eni has been seeking to consult A Raptis & Sons since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow A Raptis & Sons to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for A Raptis & Sons to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	13/09/2023	Follow up email on previous consultation. Noted that no response had been received. Were asked to please respond by the 20th of September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Following up consultation invitation issued 13/09/23. Eni noted no response has been received. Were requested to respond by Thursday 30th November should they view themselves a Relevant Person	-	
		Phone Call	Outgoing	20/11/2023	Phone call follow up with relevant persons. Relevant persons stated they had no objections were issued with the Blacktip facilities and the petroleum activities.	-	
		Letter	Outgoing	22/03/2024	Outgoing consultation letter to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheet.	-	
		Letter	Outgoing	3/04/2024	Recirculated letter to relevant persons including a summary of the Blacktip facilities and the petroleum activities requesting feedback.	-	
Austral Fisheries	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Austral Fisheries since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Austral Fisheries to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Austral Fisheries to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Following up consultation invitation issues 14/07/23. Eni noted that no response has been received.	-	
		Phone Call	Outgoing	10/10/2023	Phone call follow up with relevant persons. No questions, claims, or objections were stated and no further information or updates were required. Recommended information on activities to be forwarded to another representative.	-	
		Email	Outgoing	7/11/2023	Forwarded initial outgoing consultation email to recommended representative including a summary of the Blacktip Facilities and petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	
		Email	Outgoing	20/03/2024	Initial outgoing consultation email to relevant persons were resent.	-	
		Letter	Outgoing	22/03/2024	Outgoing consultation letter to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheet.	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons and included initial outgoing consultation material. Eni noted no response had been received. Were requested to respond by Thursday 28th March 2024.	-	
		Letter	Outgoing	3/04/2024	Recirculated letter to relevant persons including a summary of the Blacktip facilities and the petroleum activities requesting feedback.	-	
Commonwealth Fisheries Association (CFA)	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult CFA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow CFA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for CFA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	6/09/2023	Following up consultation invitation issues 14/07/23. Eni noted that no response has been received. Were requested to respond by Friday 22nd September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Following up on consultation invitation issues 6/09/2023. Eni noted that no response has been received. Were asked to respond by Thursday 30th November should they view itself as a Relevant Person.	-	
		Phone Call	Outgoing	20/11/2023	Phone call follow up with relevant persons. No questions, claims, or objections were stated and no further information or updates were required. Relevant persons stated the conversation not be recorded as proper stakeholder engagement.	-	
		Email	Outgoing	20/03/2024	Recirculated initial outgoing consultation email to relevant persons and included initial outgoing consultation flyers. Eni noted no response had been received. Were requested o respond by Thursday 28th March 2024.	-	
Northern Prawn Fisheries	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Northern Prawn Fisheries since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Northern Prawn Fisheries to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Northern Prawn Fisheries to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	13/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	18/07/2023	Relevant person thanked for the content from the initial outgoing consultation email including a summary of the Blacktip facilities and the petroleum activities. Requested the attached material.	-	
		Email	Outgoing	18/07/2023	Attachment of the 2023 activity factsheet was sent per relevant persons request.	-	
		Email	Incoming	19/07/2023	Relevant persons state no comments on the Blacktip facilities and petroleum activities. Requested to contact the provided email address.	-	
		Phone Call	Outgoing	18/08/2023	Phone call to relevant persons to prompt a response, no answer. Voice message was left.	-	
		Email	Outgoing	18/08/2023	Email issued (undeliverable message returned). Eni request an alternative email address for the CEO.	-	
		Email	Incoming	18/08/2023	Relevant person mentioned to resend.	-	
		Email	Outgoing	18/08/2023	Eni requested feedback from relevant person noting that they had not previously responded.	-	
		Email	Incoming	18/08/2023	Email stated relevant persons had been cc'd in.	-	
		Email	Incoming	22/08/2023	Relevant persons requested shapefiles of the proposed drilling activities area	Y	
		Email	Outgoing	22/08/2023	Forwarded initial outgoing consultation email to alternate relevant persons, including a summary of the Blacktip facilities and petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	

		Phone Call	Outgoing	6/11/2023	Phone call to relevant persons to prompt a response, no answer. Voice message was left.	-			
		Email	Outgoing	6/11/2023	Attached the requested shapefile from correspondence on the 22/08/23.	-			
		Email	Incoming	9/11/2023	Relevant persons requested information regarding the differences between the two EMBA's. Noted concern that in the event of an oil spill could enter onto the coast and rivers within the Joseph Bonaparte Gulf.	Y			
		Email	Outgoing	13/11/2023	Email to relevant persons describing the difference between the two EMBA's and how the EMBA works	-			
		Email	Outgoing	23/11/2023	Follow up on previous consultation requesting any concerns with the Blacktip facilities and petroleum activities approach.	-			
		Email	Incoming	14/03/2024	Relevant persons mentioned Eni refer to previous email chain.	-			
		Email	Outgoing	14/03/2024	Eni requested contact for the suggested relevant person.	-			
		Email	Incoming	14/03/2024	Relevant persons redirected Eni to a relevant person and provided contact.	-			
		Phone Call	Outgoing	18/03/2024	Phone call to relevant persons to prompt a response, no answer. Voice message was left.	-			
		Email	Outgoing	19/03/2024	Recirculated initial outgoing consultation email to relevant persons and included initial outgoing consultation material. Eni noted no response had been received.	-			
		Email	Outgoing	22/03/2024	Eni resent initial outgoing consultation email to relevant persons and included initial outgoing consultation material. Eni noted no response had been received.	-			
Northern Territory Seafood Council (NTSC) which encompasses: - Demersal Fishery - Offshore Net & Line Fishery - Spanish Mackerel Fishery - Coastal Line Fishery	Group 1	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult NTSC since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow NTSC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for NTSC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.		
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-			
		Email	Outgoing	14/09/2023	Follow up consultation invitation issued 14/07/23. Eni noted that no response had been received. Were requested to respond by the 20th of September should they view themselves a Relevant Person.	-			
		Phone Call	Outgoing	14/11/2023	Phone call to relevant persons. Eni were advised to send relevant stakeholder information to provided email address	-			
		Email	Outgoing	14/11/2023	Resent initial outgoing consultation email to an email addressed mentioned from phone call.	-			
		Email	Outgoing	13/03/2024	Follow up with recirculated initial outgoing consultation email to relevant persons and included initial outgoing consultation material. Eni noted no response had been received.	-			
		Email	Incoming	13/03/2024	Automated email stating the previous email sent had been read.	-			
		Phone Call	Outgoing	13/03/2024	Phone call to relevant persons and stated that they did not have time to attend to the consultation invitation.	-			
		Email	Outgoing	14/03/2024	Recirculated initial outgoing consultation email to relevant persons and included initial outgoing consultation material. Eni noted no response had been received.	-			
		Email	Incoming	14/03/2024	Automated email stating the previous email sent had been read.	-			
		Phone Call	Outgoing	14/03/2024	Phone call to relevant persons and provided further information on Blacktip facilities and petroleum activities to determine if they were relevant to the relevant persons. Relevant persons stated they will review before responding if they view themselves a relevant person.	-			
		Phone Call	Outgoing	15/03/2024	Phone call to relevant persons to request response to information provided. Relevant persons stated that they would speak with the CEO once they are available. Eni requested the information for members to allow Eni to communicate directly with them. Eni were informed that details could not be distributed and that communication should go through NTSC. Eni requested that the representative put this statement in an email. Representative noted and stated they will inform the CEO.	-			
		Email	Incoming	15/03/2024	Relevant persons stated that the information had not been reviewed yet. Stated where Eni can locate a contact list with postal address to send physical information.	-			
		Email	Outgoing	15/03/2024	Eni thank the relevant persons for their response and state that they would still appreciate the consideration of the materials provided.	-			
		Email	Outgoing	20/03/2024	Eni follow up with request for feedback on the Blacktip activities and request consideration by the 28th of March 2024.	-			
				Letter	Outgoing	22/03/2024		Consultation letters sent out to licence holders under relevant NT fisheries requesting feedback on proposed Blacktip activities. <ul style="list-style-type: none"> - Coastal Line Fishery (36 licence holders) - Coastal Net Fishery (2 licence holders) - Spanish Mackerel Fishery (10 licence holders) - Demersal Fishery (9 licence holders) - Mollusc Fishery (1 licence holders) - Offshore Net and Line Fishery (8 licence holders) - Jigging Fishery (1 licence holders) - Timor Reef Fishery (5 licence holders) - Mud Crab Fishery (1 licence holders) - Barramundi Fishery (3 licence holders) 	-

		Letter	Outgoing	3/04/2024	Eni recirculated letters to relevant NT fisheries licence holders from 22/03/2024 requesting feedback on proposed Blacktip activities. <ul style="list-style-type: none"> • Coastal Line Fishery (36 licence holders) • Coastal Net Fishery (2 licence holders) • Spanish Mackerel Fishery (10 licence holders) • Demersal Fishery (9 licence holders) • Mollusc Fishery (1 licence holders) • Offshore Net and Line Fishery (8 licence holders) • Jigging Fishery (1 licence holders) • Timor Reef Fishery (5 licence holders) • Mud Crab Fishery (1 licence holders) • Barramundi Fishery (3 licence holders) 	-	
		Email	Incoming	12/04/2024	Wife of fisher responded stating that her husbands licences does not allow him to fish within the area of interest and therefore he will not be partaking in the survey. Relevant persons holds a licence with the coastal line fishery.	-	
Northern Wild Catch Seafood Australia (NWSA)	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult NWSA since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow NWSA to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for NWSA to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Outgoing	14/09/2023	Follow up consultation invitation issued 14/07/23. Eni noted that no response had been received. Were requested to respond by the 20th of September should they view themselves a Relevant Person.	-	
		Email	Outgoing	20/11/2023	Follow up consultation invitation issued 14/09/23. Eni noted that no response had been received. Were requested to respond by Thursday 30th November should they view itself as a Relevant Person.	-	
		Phone Call	Outgoing	20/11/2023	Phone call to relevant persons and stated the email sent on 20/11/23 was viewed and will respond.	-	
		Email	Outgoing	19/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received.	-	
		Email	Outgoing	25/03/2024	Recirculated initial outgoing consultation email to relevant persons and included initial outgoing consultation material. Eni noted no response had been received. Were requested to respond by Thursday 28th March 2024.	-	
Pearl Producers Australia	Group 3	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult Pearl Producers Australia since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow Pearl Producers Australia to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for Pearl Producers Australia to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Follow-up consultation email to relevant persons was sent.	-	
		Email	Outgoing	13/09/2023	Follow up email on consultation issued 14/07/2023. Eni asked for a response until 20/09/23 if the stakeholder see itself as a relevant person for the activity.	-	
		Email	Outgoing	19/03/2024	Recirculated initial outgoing consultation email to relevant persons. Eni noted no response had been received.	-	
Western Australian Fishing Industry Council (WAFIC) Which encompasses: - Kimberley Prawn Fishery - Kimberley Crab Fishery - Kimberley Gillnet & Barramundi Fishery	Group 2	Email	Outgoing	22/06/2023	Initial outgoing consultation email to relevant persons including a summary of the Blacktip facilities and the petroleum activities. Correspondence included attachment of the 2023 activity factsheets.	-	Eni has been seeking to consult WAFIC since it issued information regarding this EP in June 2023. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow WAFIC to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for WAFIC to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.
		Email	Outgoing	14/07/2023	Initial outgoing consultation email to relevant persons was resent.	-	
		Email	Incoming	14/07/2023	Automatic response stating contact was on leave.	-	
		Email	Outgoing	10/08/2023	Follow-up consultation email to relevant persons was sent.	-	
		Phone Call	Outgoing	8/11/2023	Call with WAFIC representative requesting feedback on proposed activities. Representative stated they have no objections or issues.	-	
		Email	Outgoing	14/11/2023	Follow up from phone call on 08/11/23. Requested if the relevant persons had any objections or issues with the Blacktip facilities and petroleum activities.	-	
<i>Self Identified Relevant Persons</i>							
Self Identified Relevant Person	Group 4	Email	Incoming	11/01/2024	Relevant person requested to provide feedback on the Blacktip Environmental Plan which was advertised in the West Australian on December 30th 2023. Relevant person requested that Eni provide an email address with a relevant form so that they are able to provide adn send feedback.	-	Eni has been seeking to consult the Self Identified Relevant Person since it issued information regarding this EP in January 2024. Eni has made subsequent consultation efforts in accordance with its consultation approach outlined in Appendix C1. Eni has provided sufficient information to allow the Self Identified Relevant Person to make an informed assessment of the possible consequences of the activities the subject of this EP on their functions, interests or activities. Eni has
		Email	Outgoing	11/01/2024	Eni informed relevant person that there are no feedback forms to complete however if they feel they are relevant to the activity that they may provide comment by responding to this email. Eni request that a response is recieved within 7 days.	-	

	Email	Incoming	12/01/2024	<p>Relevant person provided feedback to Eni regarding the broad capture efforts published in the West Australian newspaper December 30, 2023. Relevant matters raised included:</p> <ul style="list-style-type: none"> -the contribution of greenhouse gases from the proposed activities to climate change -the proposed activity does not support the transition away from fossil fuels and is contrary to Eni's commitment to 'sustainable and responsible energy transition' -the principal of intergenerational equity is the responsibility of companies and is not met by the proposed activity -persons considers themselves relevant as community interests may be affected by the proposed activity due to the emissions of GHG resulting in an increased climate change and more extreme weather events -the impacts and risks (individually and cumulatively) to the marine environment from the proposed activity are unacceptable and should be avoided -the omission of a GHG assessment is unacceptable. <p>Relevant person concludes that the only way to mitigate potential impacts is to avoid all the impacts by withdrawing the proposal.</p>	Y	<p>subject of this EP on their functions, interests or activities. Eni has provided a reasonable period for the Self Identified Relevant Person to provide objections or claims in relation to the EP and for consultation to occur. In these circumstances, Eni considers consultation is complete.</p>
	Email	Outgoing	12/01/2024	Eni acknowledged the receipt of feedback and informed the relevant person that it will be reviewed.	Y	

 eni australia	Company document identification 000036_DV_PR.HSE.0677.000	Owner document identification	Rev. index.	
			Validity Status	Rev. No.
			PR-OP	16

APPENDIX C4b: MERIT ASSESSMENT

Organisation	Date Raised	Type of Feedback	Summary of RP Feedback	Summary of Titleholder Correspondence	Relevant matter, Objection or Claim	Assessment of Merits	Outcome of Assessment
Australian Communications & Media Authority (ACMA) within the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDC)	14/07/2023	Relevant matter	Relevant person confirmed the EMBA does not overlap with any existing protection zones declared by the ACMA; and requested Eni contact the owners of any submarine cables inside and within the vicinity of the EMBA regarding proposed activities. Relevant person notified Eni that the EMBA appears to be in vicinity of Vocus' North-west Cable System and provided a link to further information. Relevant person recommended Eni contact the Australian Hydrographic Office (AHO) for geospatial coordinates of all active and out-of-service submarine cables. Relevant person confirmed they do not require any further engagement on the EP at this time.	Eni noted the EMBA does not overlap with any existing protection zones declared by the ACMA. Eni confirmed that Vocus have been contacted as per the recommendation, and are awaiting a response. Eni also confirmed that the AHO has been consulted with.	Relevant person raised: 1. Vocus' North-west Cable System appears to be in the vicinity of the EMBA. 2. Recommended engagement is undertaken with Vocus and the AHO regarding submarine cables.	Relevant matter has merit: 1. The presence of subsea marine cables within the region should be considered within the EP. 2. Relevant person identified additional relevant persons (Vocus and AHO) who should be engaged.	1. EP has been revised: Section 4.6.7 - Subsea Cables has been included within the Existing Environment to include the presence of subsea marine cables within the EMBA. 2. No change to EP content. Further engagement with AHO and Vocus was undertaken. Section 5 and Appendices C1, C2 and C4 have been revised accordingly.
Australian Fisheries Management Authority (AFMA)	19/07/2023	Relevant matter	Relevant person stated they have no specific comment regarding the Blacktip operations; but encourage Eni to contact the Northern Prawn Fishery.	Eni requested specific contact person for the Northern Prawn Fishery Industry.	Relevant person raised: Recommended engagement is undertaken with additional relevant persons (specifically Northern Prawn Fishery Industry).	Relevant matter has merit: Relevant person identified additional relevant persons (Northern Prawn Fishery Industry) who should be engaged.	No change to EP content. NPFI is considered a relevant person and consulted with accordingly. Section 5 and Appendices C1, C2 and C4 have been revised accordingly.
Australian Maritime Safety Authority (AMSA)	17/07/2023	Relevant matter	Relevant person requested that Eni ensure that timely and relevant Maritime Safety Information (MSI) is promulgated for the area and nature of operations; and provided instructions. Relevant person reminded vessels of their obligations under International Rules for Preventing Collisions at Sea (COLREGs) to use appropriate lights and shapes. Relevant person provided instructions for how to obtain vessel traffic information and data.	Eni confirmed that items raised will be addressed in the project planning process; and requested whether the relevant person would consider this matter to be closed for the purpose of the EP.	Relevant person raised: 1. Maritime safety information should be promulgated as per instructions. 2. Eni must comply with obligations under the International Rules for Preventing Collisions at Sea (COLREGs).	Relevant matters have merit: 1. Maritime safety information should be promulgated as per relevant person instructions to notify other marine users of the proposed activity. 2. Marine Order 30 (Prevention of Collisions) (under the Commonwealth Navigation Act 2012) enacts the International Rules for Preventing Collisions at Sea (COLREGs).	1. No change to EP content. Notifications to AHO and AMSA's Joint Rescue Coordination Centre (JRCC) have been included in Table 10.3. 2. No change to EP content. Marine Order 30 and the Navigation Act 2012 are included in Section 2.1.3; and CM01: navigation equipment and procedures (lighting as required for safe work conditions and navigational purposes).
Department of Agriculture, Fisheries & Forestry (DAFF)	8/09/2023	Relevant matter	Relevant person provided information on Commonwealth biosecurity requirements, including links to biosecurity guidelines and reporting, including: Biosecurity (Exposed Conveyances – Exceptions from Biosecurity Control) Determination 2016, Offshore Installations Biosecurity Guide, Australia's ballast water and biofouling requirements and pre-arrival reporting using MARS. Relevant person advised Eni must apply to the department >2 months prior to project commencement via the questionnaire provided. Relevant person advised Eni must provide a Biosecurity Management Plan and Sail Away Reports for the installation to further assess the application.	Eni confirmed that items raised will be addressed in the project planning process; and requested whether the relevant person would consider this matter to be closed for the purpose of the EP.	Relevant person raised: 1. All relevant Commonwealth biosecurity requirements are complied with. 2. Eni must provide DAFF with information to assess biosecurity risk: including the attached questionnaire, a Biosecurity Management Plan and Sail Away Reports; and applications must be made to DAFF >2 months prior to project commencement.	Relevant matters have merit: 1. Relevant person is the relevant regulator of the Australian Government's biosecurity requirements. 2. Relevant person requires particular information in order to assess biosecurity risk status; within an appropriate timeframe.	1. No change to EP content. Relevant biosecurity requirements are included in the following CMs, and their associated EPSSs, in Section 8.3 Introduction of MPS: •implementation of an IMS risk assessment tools (CM-20) •ballast water management (CM 21) •biofouling management (CM-22). 2. No change to EP. Eni will provide requested information to DAFF in the timeframe requested.
Department of Defence (DOD)	31/9/2023	Relevant matter	Relevant persons advised that the wellhead is located in a restricted area R264G and that NOTAM could be activated depending on the activity; and that there may be times when civilian airborne assets will not be permitted access to the restricted area, if large-scale DOD exercises are underway. Relevant person further advised that there may be unexploded ordnance (UXO) in the area; and activities in the area at Eni's own risk. Relevant person requested continued liaison with the Australian Hydrographic Service for Noticers to Mariners to ensure the AHS is notified three weeks before commencement of activities; and provided contact details.	Eni confirmed that Eni will comply with all requested activities; and ensure the AHS are notified within the requested timeframe.	Relevant person raised: 1. The wellhead is located in a restricted area; and there may be times when civilian aircraft are not permitted access (during DOD exercises), unless there is an emergency. 2. UXO may be present; and Eni undertaken any activities at their own risk. 3. Requested that AHS are notified >3 weeks prior to commencement of activities to enable Notice to Mariners.	Relevant matter has merit: 1. Noted - statement only. 2. Noted - statement only. 3. AHS are the administrator of Notice to Mariners. Maritime safety information should be promulgated as per relevant person instructions to notify other marine users of the proposed activity.	1. No change to EP content. 2. No change to EP content. 3. No change to EP content. Notifications to AHS are included in Table 10.3. Relevant notification requirements are included in the following EPS: 'The Australian Hydrographic Office (AHO) is notified four weeks prior to commencing activities so they can then issue a Notice to Mariners (EPS-2.2)'. 4. No change to EP content.
Director of National Parks (DNP), Parks Australia, part of the Department of Climate Change, Energy, the Environment and Water (DCCEEW)	7/12/2023	Relevant matter	Relevant person advised that planned activities do not overlap any Australian Marine Parks, therefore there are no authorisation requirements from the DNP. Relevant person provided links to information on values of marine parks and a reminder that impacts and risks to AMPs are managed to an acceptable level; and the activity is not inconsistent with the North Marine Park Network Management Plan 2018. Relevant person confirms DNP do not require further notification of progress made in relation to this activity unless details regarding the activity change and result in an overlap with or new impact to a marine park, or for emergency responses. Relevant person requires notification of pollution incidents which occur within a marine park or are likely to impact on a marine park as soon as possible; and provided contact details and information requirements.	No response from Eni.	Relevant person raised: 1. The EP must demonstrate that all impacts and risks to AMPs are managed to an acceptable level; and the activity is not inconsistent with the North Marine Park Network Management Plan 2018. 2. Eni notify DNP as soon as possible of any pollution incidents that are likely to impact a marine park.	Relevant matter has merit: 1. Noted - statement only. 2. DNP are the administrator of AMPs on behalf of the Australian Government.	1. No change to EP content. 2. No change to EP content. EP includes notification to DNP in Table 10.3: 'Notification of the event of oil pollution within a marine park or where an oil spill response action must be taken within a marine park; or if there are any changes to intended operations (requested through consultation)'; with the information requested by DNP.
Aboriginal Areas Protection Authority (AAPA)	24/07/2023	Relevant matter	Relevant person requested spatial data for the EMBA.	Eni provided EMBA shapefiles to the relevant person.	Relevant person raised: Requested that Eni provide EMBA shapefiles.	Relevant matter has merit: Relevant person requested further information to understand the potential impacts on their functions, interests or activities.	No change to EP content.
Aboriginal Areas Protection Authority (AAPA)	24/07/2023	Relevant matter	Relevant person confirmed they consider themselves an interested person under NOPSEMA guidelines and communicated their purpose (issuing Authority Certificates authorising activities in the vicinity of sacred sites). Relevant person considers a spill from Eni operations has the potential to impact sacred sites along the coastline within the EMBA. Relevant person advised they have recently engaged with the Territory Emergency Management Council (TEMC) on how to manage a spill to the coastline in a culturally sensitive way to protect sacred sites. Relevant person advised that the APPEA Oil Spill Working Group had recently met with TEMC; and recommended Eni contact the APPEA Working Group.	Eni advised it is a member of the APPEA Oil Spill Working Group; and is closely monitoring its process.	Relevant person raised: Recommended Eni contact the APPEA Oil Spill Working Group regarding Authority Certificates and the certificate process, and how to manage a spill to the coastline in a culturally sensitive way to protect sacred sites.	Relevant matter has merit: Managing potential impact to cultural heritage during shoreline spill response is relevant; as are TEMC and the APPEA Oil Spill Working Group.	EP has been revised: An additional environmental performance standard has been included in Section 8.6.9 of the OPEP to manage impacts to cultural heritage values during shoreline clean-up.
Department of Environment, Parks and Water Security (DEPWS)	21/03/2023	Relevant matter	Relevant persons informed Eni that they had previously responded in July 2023. Relevant persons resent minor queries which included a request for further information on potential impacts to areas within our jurisdiction and asked if Eni expect any changes to the licenced activity. Relevant persons acknowledged that Eni responded that no changes to the licence were foreseen and stated that duties and obligations to comply with relevant NT environmental laws is the responsibility of Eni.	Eni informed relevant persons that potential impacts to the NT would only occur as a result of an unplanned hydrocarbon spill. The Environment Plan includes spill modelling for worst-case scenarios to inform the spill risk assessments. A maximum of 46 cubic meters of hydrocarbon accumulation was predicted to occur on the NT coastline in the unlikely event of a vessel collision at the Blacktip single point mooring (SPM). Eni further informed DEPWS that spill response arrangements can be found in the Blacktip OPEP, including the jurisdictional and notification requirements to relevant NT authorities.	Relevant person raised: 1. Requested clarification whether there was additional information relating to impacts and risk mitigation relevant to NT jurisdiction. 2. Requested clarification whether the works would result in changes / amendments to the Environment Protection Licence.	Relevant matters have merit: 1. Relevant person requested further information to understand the potential impacts on their functions, interests or activities - specifically NT jurisdiction. 2. Relevant person requested confirmation whether the proposed activity will trigger an update to another legislative instrument.	1. No change to EP content. Potential impacts within NT jurisdiction from a worst-case hydrocarbon spill are assessed in Section 8.6.3. Relevant notifications to NT authorities are included in Section 10.8 and the OPEP. 2. No change to EP content. Environment Protection Licence is required by NT legislation and is not within the scope of the EP.


Department of Industry Tourism and Trade (DITT) / NT Fisheries	8/09/2023	Claim	Relevant person recognise that the operational area is contained wholly within WA waters and therefore there will be no NT commercial fisheries operating in the area. However, concern was expressed regarding the stock structure of commercially and recreationally important fish species as any potential impact on aquatic life in the OA may have negative impacts on stocks across NT or shared stocks that straddle the WA border. Relevant person state they are comfortable with the EP and proposed management measures provided. Relevant person request that where possible, work should be undertaken from March/April onwards as conducting the work from September to March could also lead to negative impacts on fish stocks due to spawning. Relevant person suggests that the Northern Territory Seafood Council is contacted in regards to identifying and consulting with NT commercial fisheries that operate within the EMBA.	Eni acknowledges relevant persons request that where possible work is not undertaken in the warmer months of the year. Eni inform relevant persons that during the EP development process Eni investigated options to avoid activities during sensitive periods, however considering the nature of the proposed activities it was not possible to limit work to specific periods of the year. Eni references the range of controls and mitigation measures within the EP which manage the risk to the fishing industry to ALARP and acceptable levels. Adverse impacts to the fish stocks across the NT are not anticipated from planned activities, however in the event of an unplanned spill it is recognised that fish stocks may be adversely impacted.	Relevant person claimed: 1. Request that, where possible, work does not occur within the warmer months of the year (September-March) to avoid fish spawning season. 2. Potential impacts on aquatic life within the operational area could negatively impact fish stocks across the NT including shared stocks that straddle the WA/NT border. Relevant person raised: 3. Eni contact the Northern Territory Seafood Council to assist with consultation with NT commercial fisheries that operate within the EMBA.	Claim has merit: 1. Relevant person advised of the possible consequences of the activity on the functions, interests or activities of the relevant person, being the impact of commercially important fish species. Relevant person identified a control measure - that where possible, the timing of the activity is undertaken to avoid a period of sensitivity for a value and sensitivity important to their activities - i.e. spawning season for commercially valuable fish species. This claim should be assessed as an alternative or additional control measure as part of the ALARP evaluation process in the EP; and included in acceptability evaluation. 2. Relevant person raised concern on the potential for population level impacts to fish stocks that may move between NT and WA state waters. Relevant matters have merit: 3. Relevant person identified additional relevant persons (Northern Territory Seafood Council) who should be engaged.	1. No change to EP content. Eni has reviewed the EP to ensure that impacts to fish species from planned activities have been adequately assessed, throughout Section 7 (Environmental Risk Assessment - Planned Operations). Any impacts to fish are anticipated to be slight and temporary, relating to behavioural impacts only and therefore will not impact the sustainability of the population. 2. No change to EP content. Northern Territory Seafood Council were engaged as a relevant person.
Northern Territory Environment Protection Authority (NTEPA)	18/07/2023	Relevant matter	Relevant persons informed Eni that correspondence had been communicated to the Environmental Operations team. Relevant persons requested further information on potential impacts to areas within their jurisdiction and asked if Eni expect any changes to the licenced activity.	Eni informed relevant persons that potential impacts to the NT would only occur as a result of an unplanned hydrocarbon spill. The Environment Plan includes spill modelling for worst-case scenarios to inform the spill risk assessments. A maximum of 46 cubic meters of hydrocarbon accumulation was predicted to occur on the NT coastline in the unlikely event of a vessel collision at the Blacktip SPM. Eni further informed NTEPA that spill response arrangements can be found in the Blacktip OPEP, including the jurisdictional and notification requirements to relevant NT authorities.	Relevant person raised: 1. Further information relating to impacts relevant to NT jurisdiction. 2. Whether the works would result in changes / amendments to the licenced activity.	Relevant matters have merit: 1. Relevant person requested additional information regarding impacts and risk mitigations relevant to NT jurisdiction, which is within the EMBA. 2. Relevant person requested confirmation whether the proposed activity will trigger an update to another legislative instrument.	1. No change to EP content. Potential impacts within NT jurisdiction from a worst-case hydrocarbon spill are assessed in Section 8.6.3. Relevant notifications to NT authorities are included in Section 10.8 and the OPEP. 2. No change to EP content. The Environment Protection Licence is required by NT legislation and is not within the scope of the EP.
Department of Biodiversity, Conservation and Attractions (DBCA)	28/07/2023	Claim	Relevant person identified that a number of ecologically important areas including marine parks and conservations reserves (including but not limited to North Kimberley Marine Park and Adele Island Nature Reserve) have potential to be impacted in the case of a hydrocarbon release. Relevant person suggest that the following should be conducted: 1.Desktop review and risk assessment 2.Collection of appropriate baseline abundance and distribution data for benthic habitat and marine fauna species in the EMBA, including information on the key habitats used by threatened and specially protected fauna for activities like foraging, breeding and aggregating. Where data is not available, the titleholder should ensure that information commensurate with the level of risk of the activity is attained to ensure that impacts on ecological values and recovery of these vales can be clearly identified, monitored and remediated. Relevant person identified sources of information published on DBCA website; but notes these monitoring data is targeted to inform DBCA's values and objectives for marine park management and may not provide information needed for spill response planning and assessment. Relevant person encouraged Eni to adopt a Before-After, Control-Impact (BACI) framework in planning and evaluating its management response. Relevant person recommended the updated National Light Pollution Guidelines for Wildlife 2023 is used in the EP. Relevant person requested that in the event of a hydrocarbon spill, Eni notify DBCA's Kimberley regional office as soon as practicable on (08) 9195 5500. Relevant person advises that DBCA will not implement an oil wildlife response on behalf of the titleholder except as part of a whole of government response mandated by regulatory decision makers, and any advice or assistance from DBCA, at any scale, will occur on a full cost recovery basis. Relevant person advises that Eni should also commit to the monitoring and clean-up of any DBCA interests affected by an oil spill in consultation with DBCA. Eni should refer to the Department of Transport's (DoT) web content regarding marine pollution (https://www.transport.wa.gov.au/marine/marine-pollution.asp), and the Offshore Petroleum Industry Guidance Note of July 2020 titled Marine Oil Pollution: Consultation Arrangements. These documents provide information on the Western Australian emergency management arrangements for marine oil pollution incidents in State waters, petroleum titleholders' obligations under those arrangements, and the DoT's expectations as the jurisdictional authority for such incidences.	Eni confirm that the EMBA includes both identified marine parks (Adele Island Nature Reserve and North Kimberley Marine Park) and conservation areas and describes how the EMBA is determined and how risk assessment are conducted using the modelling. Eni confirmed that the OSMF considers gaps in baseline knowledge of potentially affected areas within the EMBA, and that the BACI method would be applied. Eni confirms the request to notify the relevant person in the event of an oil spill has been included in the EP and OPEP, and outlined that the OPEP associated with the activity includes response arrangements and the jurisdictional authorities highlighted by the relevant person. Eni confirm that the EP has referenced the National Light Pollution Guidelines for Wildlife.	Relevant person claimed: 1. A number of ecologically important areas including marine parks and island conservation reserves are located in the EMBA, including but not limited to the North Kimberley Marine Park and Adele Island Nature Reserve. 2. Ensure the appropriate level of baseline data for benthic habitat, marine fauna species and their key habitats in the EMBA is used and attained. Relevant person suggested monitoring data sources on DBCA website, but advised they are for the purposes of managing the reserves and may not be suitable. Relevant person raised: 3. Encouraged Eni to adopt a Before-After, Control-Impact (BACI) framework in planning and evaluating its management response. 4. Recommended the National Light Pollution Guidelines for Wildlife 2023 (DCCEEW, 2023) are used in the EP for the management of light emissions. 5. Requested that in the event of a hydrocarbon spill, Eni notify DBCA's Kimberley regional office as soon as practicable on (08) 9195 5500. 6. Advises Eni should commit to the monitoring and clean-up of any DBCA interests which are affected by an oil spill in consultation with said relevant person; and that DBCA will not implement an oiled wildlife management plan, except as part of a whole of government response mandated by regulatory decision makers; and will occur on a full cost recovery basis. 7. Advises Eni to refer to the Offshore Petroleum Industry Guidance Note of July 2020 titled Marine Oil Pollution: Consultation Arrangements for emergency management arrangements and obligations for marine oil pollution incidents in state waters.	Claims have merit: 1. Relevant person advised on the ecologically important areas of interest located within the EMBA, which are within their jurisdiction. 2. Appropriate baseline data is required for impact assessment and planning spill response and remediation. Relevant person suggested a suitable framework for planning and evaluating Eni's management response. Relevant matters have merit: 3. Appropriate relevant government guidelines must be included in the EP, specifically the National Light Pollution Guidelines for Wildlife 2023. 4. Relevant person requested to be notified in the case of a hydrocarbon spill which is relevant to their jurisdiction. 5. Relevant person requested that monitoring and clean-up of any interests affected by an oil spill occurs in consultation with relevant bodies. 6. Relevant person recommended published guidance to assist Eni in understanding titleholder obligations and for making emergency management arrangements for marine oil pollution incidents in state waters.	1. No change to EP content. The potential impact of a hydrocarbon spill to State protected areas is assessed in Section 8.6.3. The spill modelling report (RPS, 2019) shows that there is no contact to Adele Island or the Kimberley coast. 2. The OSMF considers gaps in baseline knowledge of potentially affected areas within the EMBA. The OPEP and OSMF describe how the BACI framework is applied as a study design (Section 8.6.1 of OPEP). 3. EP has been revised. The correct version of the National Light Pollution Guidelines for Wildlife 2023 has been referenced throughout the EP. 4. EP has been revised. Notification to DBCA in the event of a hydrocarbon spill has been included in Section 10.8.1 of the EP; and in Section 1.1 of the OPEP. 5. No change to OPEP content. The OPEP includes response arrangements and the jurisdictional authorities highlighted by the relevant person. 6. No change to OPEP content. The OPEP refers to the recommended published guidance (Section 4).
Department of Biodiversity, Conservation and Attractions (DBCA)	21/03/2024	Relevant matter	Relevant person acknowledges that Eni have responded to and addressed the relevant persons previous comments. Relevant person has raised that the notification of hydrocarbon spill is limited to imminent or actual impacts on wildlife in WA and emphasis' importance for Eni to notify to the relevant person as soon as reasonable practicable that may result in imminent or actual impacts on all department interests. Relevant person outlined changes in legislation that should be captured in the OPEP (specifically the Wildlife Conservation Act 1950 has been repealed and replaced by the Biodiversity Conservation Act 2016). Relevant person recommended the updated National Light Pollution Guidelines for Wildlife 2023 is used in the EP.	Eni acknowledged and committed to updating the EP/OPEP with the relevant and appropriate information request contact details for the Kimberley Regional Office and State Duty Officer.	Relevant person raised: 1. Notification requirements to the DBCA Kimberley Regional office as soon as practicable in the event of a hydrocarbon spill hat may result in imminent or actual impacts on all departmental interests, which includes wildlife and state reserves. Relevant person provided contact details. 2. Advised changes in legislation that musty be captured in the EP and OPEP (specifically the Wildlife Conservation Act 1950 has been repealed and replaced by the Biodiversity Conservation Act 2016). 3. Advised of an update to the National Light Pollution Guidelines for Wildlife 2023.	Relevant matters have merit: 1. Relevant person requested to be notified in the case of a hydrocarbon spill which is relevant to their jurisdiction; using contact details provided by relevant person. 2. Appropriate relevant legislation must be included in the EP, specifically the WA Biodiversity Conservation Act 2016. 3. Appropriate relevant government guidelines must be included in the EP, specifically the National Light Pollution Guidelines for Wildlife 2023.	1. EP has been revised. Notification to DBCA in the event of a hydrocarbon spill that may result in imminent or actual impacts on DBCA interests (e.g. wildlife or State reserves) has been included in Section 10.8.1 of the EP; and in Section 1.1 of the OPEP. 2. EP has been revised. The correct Act has been referenced in Section 4.4. 3. EP has been revised. The correct version of the National Light Pollution Guidelines for Wildlife 2023 has bene referenced throughout the EP.
Department of Primary Industries and Regional Development (DPIRD)	18/08/2023	Claim	Relevant person recommended engagement with the Western Australian Fishing Industry Council (WAFIC) and with the following commercial fisheries: Kimberley crab managed fishery Kimberley gillnet and Barramundi fishery Mackerel Managed fishery Marine aquarium fishery Specimen shell Northern demersal Scale fish fishery Pearl oyster fishery. Relevant persons advises they have reviewed the EP and have no additional comments at this stage.	Eni acknowledge that where exclusions zone occur it will impede access for commercial fisheries, however given to low level of commercial fishing in the vicinity of the activity and the small area of exclusion relative to fishing licence areas any impact is considered negligible. Eni noted existing Blacktip wellhead platform exclusion zone which has been in place since 2009. Eni informs DPIRD that WAFIC has been consulted and where it cannot be established that a peak body represents individual license holders a letter has been sent via mail.	Relevant person raised: 1. Relevant person suggested engagement is undertaken with additional relevant persons (specifically WAFIC and specified commercial fisheries).	Relevant matters have merit: 1. The 500m safety exclusion zone is mandated by the OPGGS Act, and will exclude all other marine users from this area (including commercial fisheries) for the duration of the offshore petroleum activity. 2.Relevant person identified additional relevant persons (WAFIC and specific commercial fisheries) who should be engaged.	1. EP has been revised. The potential impact of this displacement of commercial fisheries due to the 500 m exclusion zone is assessed in Section 7.1. Section 4.6.1 has been updated to include fisheries catch and effort data from 2017 to 2022 for WA, and 2017 to 2021 for NT. This additional information has been included in the impact assessment to commercial fisheries (Section 7.1 Interaction with other marine users, Section 8.3 Introduction of marine pest species, Section 8.6 Loss of containment of well control and Section 8.7 Loss of MDO). 2. No change to EP content. Eni engaged with WAFIC and all commercial fisheries identified by relevant person (Kimberley crab managed fishery, Kimberley gillnet and Barramundi fishery, Mackerel

<p>Tiwi Land Council (TLC) - representative of the following Traditional Owner Groups:</p> <p>Malawu Mantiyupwi Marrikawuyanga Munupi Yimpinari Wurankuwu Wulirankuwu</p>	<p>2/10/2023</p>	<p>Relevant matter</p>	<p>Relevant person was not prepared to comment on Eni's activities as they had not been able to review the information presented. Relevant person requested a zoomed-in map of the EMBA focusing on the area closest to the Tiwi Islands.</p>	<p>Eni acknowledged receipt of the information. Eni followed up by providing another version of the EMBA map with a focus on the area close to the Tiwi Islands.</p>	<p>Relevant person raised: Request for a figure showing the area of the EMBA closest to the Tiwi Islands.</p>	<p>Relevant matter has merit: Relevant person requires sufficient information to understand potential impacts to their functions, activities and interests.</p>	<p>No change to EP content. Eni provided relevant person with another version of the EMBA map with a focus on the area close to the Tiwi Islands.</p>
<p>Tiwi Land Council (TLC) - representative of the following Traditional Owner Groups:</p> <p>Malawu Mantiyupwi Marrikawuyanga Munupi Yimpinari Wurankuwu Wulirankuwu</p>	<p>26/03/2024</p>	<p>Claim</p>	<p>Relevant person confirmed the Operational Area is outside of what Tiwi consider their land and waters; but notes that there is potential for impact from worst-case spill scenarios; and that the EMBA comes within 10 km of the Tiwi Islands. Relevant person notes that such events have the potential to impact migratory species of economic/social relevance to Tiwi, including the Threatened marine species under the EPBC Act - Loggerhead turtle, Pacific Ridley turtle, Hawksbill turtle, Flatback turtle, Green turtle, Humpback whale, Whale shark, Freshwater sawfish, Hammerhead shark. Relevant person advised they recently completed a response to DCCEEW in relation to any potential impacts to Tiwi cultural and ecological values in relation to Charter activities conducted within the Oceanic Shoals Marine Park northwest of the Tiwi Islands; and found the potential impacts in relation to the Charter activities conducted within the Oceanic Shoal Marine Park are likely to be minimal. Relevant person advised the Tiwi Islands are important turtle nesting grounds, and dugong and seagrass sites, and engages with scientists on research (including AIMS). Relevant person advised that Eni's Blacktip Offshore Environment Plan June 2023 proposal, does not pose any potential risk to the following: Tiwi's spiritual or cultural connection to the land and sea country; Economic and social activities, such as fishing and hunting; or Any functions or responsibilities of the Tiwi Land Council.</p>	<p>Eni thank relevant person for correspondence and the identification of threatened marine species found within Tiwi waters. Eni confirms that these species have been considered within the impact assessments of the EP. Eni further confirm that a range of controls have been adopted in the EP which aim to mitigate a spill entering Tiwi waters including response measures located within the OPEP.</p>	<p>Relevant person claimed: 1. Confirmed Operational Area is outside of the what they consider their land and waters; however advise that the EMBA comes within 10km of the Tiwi Islands. Relevant person advised a spill may impact particular values and sensitivities of importance to them, identified as the Loggerhead turtle, Pacific Ridley turtle, Flatback turtle, Green turtle, Humpback whale, Whale shark, Freshwater sawfish, Hammerhead shark. 2. Relevant person advised the Tiwi Islands are important turtle nesting sites, and dugong and seagrass sites. Relevant person raised: 3. Relevant person advised the proposed petroleum activity does not pose any potential risk to the following : Tiwi's spiritual or cultural connection to the land and sea country; Economic and social activities, such as fishing and hunting; or Any functions or responsibilities of the Tiwi Land Council.</p>	<p>Claim have merit: 1. Relevant person confirmed the EMBA does not contact the Tiwi Islands, but is within the offshore vicinity (10 km). Relevant person advised of the possible consequences of the activity on the functions, interests or activities of the relevant person, being impact on the Loggerhead turtle, Pacific Ridley turtle, Hawksbill turtle, Flatback turtle, Green turtle, Humpback whale, Whale shark, Freshwater sawfish and Hammerhead shark. 2. Relevant person advised of an area of interest to them, being the Tiwi Islands, with particular values of turtle nesting sites, dugong and seagrass sites. Relevant matter has merit: 3. Relevant person advised the petroleum activity does not pose any risk to their functions, interests or activities.</p>	<p>1. No change to EP content. The potential impact of a worst-case hydrocarbon spill on EPBC-listed species is assessed in Section 8.6.3. 2. No change to EP content. Tiwi Islands are outside of the EMBA. 3. No change to EP content.</p>
<p>Thamarrurr Development Corporation (TDC), including the Thamarrurr Rangers representative of the following Traditional Owner Groups:</p> <p>Rak Wudipuli Rak Thinti Rak Perrederr Rak Nuthunthu Rak Nganthawudi Rak Namarluk Rak Nadirri Rak Merrepen Rak Kuy Rak Kungarlbarl Rak Kulingmirr Rak Kubyirr Rak Kimmu Rak Angileni Yek Diminin Yek Maninh Yek Nangu Yek Ngudanimarn</p>	<p>30/08/2023</p>	<p>Relevant matter</p>	<p>Relevant person provided information on community interactions, and social structures, and advice on effective engagement. Relevant person recommended engagement with particular community members and leaders, and provided names and contact details. Relevant person recommended Eni refer to a PHD paper on the Wadeye published by Bill Ivory from Charles Darwin University. (Ivory, 2009) 'KUNMANGGUR, LEGEND AND LEADERSHIP - A Study of Indigenous Leadership & Succession Focussing on the Northwest Region of the Northern Territory of Australia.' Relevant person advised that the Wadeye community is aware of the Yelcher Gas Plant, but is not negatively impacted by it.</p>	<p>Eni acknowledged receipt of information. Eni reviewed the recommended Ivory paper, and utilised it in consultation material undertaken on 31/8/202.</p>	<p>Relevant person raised: Recommended a source of data on Wadeye (Ivory, 2009).</p>	<p>Relevant matter has merit. Relevant person recommended a appropriate source of data on relevant values and sensitivities - i.e. on the Wadeye (Ivory, 2009). This data was used in subsequent engagements.</p>	<p>EP has been revised. A reference to Ivory (2009) has been included in Section 4.6.9 of the EP.</p>
<p>Thamarrurr Development Corporation (TDC), including the Thamarrurr Rangers representative of the following Traditional Owner Groups:</p> <p>Rak Wudipuli Rak Thinti Rak Perrederr Rak Nuthunthu Rak Nganthawudi Rak Namarluk Rak Nadirri Rak Merrepen Rak Kuy Rak Kungarlbarl Rak Kulingmirr Rak Kubyirr Rak Kimmu Rak Angileni Yek Diminin Yek Maninh Yek Nangu Yek Ngudanimarn Yek Wunh Yek Yederr</p>	<p>31/08/2023</p>	<p>Claim</p>	<p>Relevant persons confirmed that their story lines are not connected to sea country; and that storylines between clans in: and is not connected to clans around the coastline. Relevant person recommended engagement with the Yak Maninh group and provided a name. Relevant person confirmed the accuracy of the map of culturally sacred areas provided by Eni. Relevant person requested further information on Eni's activity in Blacktip and Wadeye.</p>	<p>Eni provided further information on activities at the Yelcher gas plant, gas production from Blacktip and use of gas for power generation in the NT.</p>	<p>Relevant person raised: 1. Advised their storylines are not connected to sea country. Relevant person raised: 2. Suggested engagement is undertaken with additional relevant persons (Yak Mininh group). 3. Confirmed accuracy of Eni's map of culturally sacred areas.</p>	<p>Relevant matters have merit: 1. Relevant person confirmed their functions, activities and interests regarding cultural heritage values (storylines) would not be impacted by the proposed activity. 2. Relevant person identified additional relevant persons (Yak Maninh group) who should be engaged. 3. Relevant person confirmed the accuracy of Eni's map of particular values and sensitivities (culturally sacred areas).</p>	<p>1. No change to EP content. 2. No change to EP content. The additional relevant person suggested by Wadeye could not be engaged with due to personal circumstances. 3. No change to EP content.</p>

Bardi Jawi Niimidiman Aboriginal Corporation RNTBC	31/10/2023	Claim	<p>Relevant persons raised concerns including impact to fishing and tourism (and therefore community livelihood), oil spill, and contamination of groundwater (often seen in the mining industry). Relevant persons sought clarification on number of days until the potential oil spill will reach Ardyaloon.</p> <p>Relevant person confirmed the community in Ardyaloon would not be interested in Eni's activities in Blacktip and Wadeye.</p>	<p>Eni clarified that modelling of the oil spill indicated a few days until shoreline contact at Ardyaloon, noting that this will also depend on Eni's emergency responses to be activated (including mitigation measures included in the Safety Case).</p> <p>Eni clarified the difference between mining and offshore drilling for oil and gas, and explained the distance from Ardyaloon to the Blacktip location means the likelihood of any impact is very low.</p>	<p>Relevant person raised:</p> <ol style="list-style-type: none"> 1. Requested information on how many days until shoreline contact at Ardyaloon in the event of a spill. <p>Relevant person claimed:</p> <ol style="list-style-type: none"> 2. Concerns including impact to fishing and tourism (and therefore Ardyaloon community livelihood) from the activity, including from an oil spill. 3. Concern that the activity may cause groundwater contamination. 	<p>Relevant matter has merit:</p> <ol style="list-style-type: none"> 1. Relevant person requires particular/sufficient information in order to understand potential impact. <p>Claim has merit:</p> <ol style="list-style-type: none"> 2. Relevant person raised concern that the proposed activities may impact their functions, activities or interests. Modelling of a worst-case spill from a loss of well control has the potential to extend to offshore waters in the vicinity of Ardyaloon/One Arm Point: which may impact fishing and tourism. However, there is no shoreline contact at any hydrocarbon threshold predicted at One Arm Point, which is within the 'King Sound' key receptor in spill modelling report (RPS, 2019). The exposure threshold in the coastal waters off One Arm Point is predicted to be at the very low threshold only, which do not cause ecological impact i.e. toxicity to marine fauna). 3. There are no planned onshore activities as part of the petroleum activity; however onshore spill response activities and waste management in the event of a spill could have the potential to cause groundwater contamination. 	<ol style="list-style-type: none"> 1. No change to EP content. The time until shoreline contact at Ardyaloon was discussed during the engagement. 2. EP has been revised. The potential impacts of a worst-case loss of well control to tourism and fishing are assessed in Section 8.6.3 of the EP. Relevant persons concerns are considered in the 'social acceptability' criteria of Eni's acceptability process; and have been included in the social acceptability evaluation in Section 8.6.6 for Loss of containment of well control. 3. No change to EP content. Potential impact from operational discharges and waste during onshore spill response activities is assessed in Section 8.8.3.5. There will be low volumes of waste expected, as any spilled MDO or Blacktip condensate are anticipated to rapidly evaporate and weather. Minimal waste is expected to be generated and impacts from waste are anticipated to be short term, geographically confined and slight. Waste management control measures during spill response are described in Section 8.5.5 of the OPEP.
Bardi Jawi Niimidiman Aboriginal Corporation RNTBC	26/03/2024	Relevant matter	<p>Relevant person advised that they require independent expert advice on the proposed activity and potential environmental implications described in the EP in order to consider whether they have received sufficient information in order for BJNAC's members and other native title holders to provide a decision or comment in relation to the proposal that has genuine free, prior and informed consent.</p> <p>Relevant person advised that their members and native title holders will then consider this independent expert advice to understand the potential impact of the proposal on the cultural heritage and rights and interest under traditional law and custom as well as any rights and interests arising from contemporary sources of their members and native title holders; who may also then additionally seek to engage a suitably qualified consultant to assist in this process.</p> <p>Relevant person advised that the work associated with the above work is considerable, and BJNAC receives no funding to undertake these functions.</p> <p>Relevant person advised that in order for BJNAC to commence work in seeking independent expert advice and potential additional suitably qualified consultant to assist in this process, Relevant person will require a preliminary payment of several thousands of dollars. This is to allow for staff and officers' time to identify costs associated with consultation materials, convening meetings, and prepare any other materials deemed necessary as the process advances, once estimates have been received from relevant consultants.</p> <p>Relevant person notified Eni that a copy of the correspondence will be forwarded to NOPSEMA.</p>	<p>Via formal correspondence, Eni acknowledged the comments and requests of the relevant person in relation to the following 3 issues:</p> <ol style="list-style-type: none"> 1. technical information in relation to the proposal contained in the draft EPs 2. assessment of the potential environmental implications of the proposal as contained in the draft EPs 3. assessment of the potential impact of the proposals on the cultural heritage and rights and interests under traditional law and custom as well as any rights and interests arising from contemporary sources of members and native title holders. <p>Eni referred the relevant person to the two previously provided stakeholder consultation information packs for points 1 and 2 which were previously provided to BJNAC, and summarised potential impacts and risks as well as planned management measures.</p> <p>With this abovementioned information, Eni considers this information provided is sufficient to allow the relevant person to make an informed assessment of the possible consequences of the EP activities on their functions, interests and activities, and so contended that the relevant person is in a position to make the assessment for point 3.</p> <p>Eni also highlighted that multiple attempts via email and phone have been made to further consult with the relevant person since 19/09/2023, and that Eni had successfully met in person with relevant person's associated rangers on 31/10/23 and with the relevant person's associated community members on the same day.</p> <p>Whilst acknowledging relevant person's request for preliminary and further funding to facilitate consultation, Eni stated that it does not consider consultants necessary to allow consultation to occur.</p> <p>Eni highlighted it had extended the consultation period from 20/10/24, to 15/01/24, then to 28/03/24 and has now offered a further face-to-face meeting opportunity to 19/04/24.</p> <p>For the post consultation period, Eni stated that where new information is received, Eni would apply its Management of Change process to determine if updates need to be made to the accepted EP.</p>	<p>Relevant person raised:</p> <ol style="list-style-type: none"> 1. Sufficient information and sufficiently timely information on the proposed activity is required in order for BJNAC's members and other native title holders to provide a decision or comment in relation to being able to make an informed assessment of impacts to their functions, interests or activities. <p>Relevant person claimed:</p> <ol style="list-style-type: none"> 2. This requires the engagement of independent experts to advise on the technical information and potential environmental impact in the EP; and potentially on impact to cultural heritage, rights and interests. Relevant person requests a preliminary payment of several thousands of dollars to commence facilitating consultation; with further cost recovery for independent consultants and time involved for BJNAC's members and native title holders. 	<p>Relevant matter has merit:</p> <p>Whilst relevant matter has merit, Eni views it has provided appropriate technical information for the draft EP as well as information regarding the assessment of the potential environmental implications to enable the relevant person to make an informed assessment of possible consequences to its functions, interests or activities. This was done through the provision of two Stakeholder Consultation information packs which were provided to BJNAC, as well as direct in person meetings with the relevant person's associated rangers and community members.</p> <p>Claim does not have merit:</p> <p>Eni considers that information provided to BJNAC is sufficient to allow it, and native title holders it represents, to make an informed assessment of the possible consequences of the proposed EP activities on their functions, interests and activities.</p> <p>Eni's initial consultation closing period was 20/10/24, and over a 7-month period, Eni extended this period to 15/01/24, then 28/03/24 and again to 19/04/24. Appendix C4a shows that Eni has made multiple attempts to consult with the relevant person from 19/09/2023 to its final letter on 10/04/24 inviting relevant person to meet face-to-face up to 19/04/24. The relevant person did not reply to this letter.</p> <p>Eni considers that, consistent with the legislative requirements, Eni has provided the relevant person with all reasonable opportunity for consultation, which has been extended multiple times. After the fourth extension (to 19/04/24), Eni advised that due to operational requirements, Eni is not in a position to provide any further extension to the consultation timeframe.</p> <p>For the post Regulation 25 consultation period, where any new information is received, Eni will apply its Management of Change processes to determine if updates need to be made to the accepted EP.</p>	<p>No change to EP content. Relevant person was invited on numerous occasions - over a 7-month period - to consult on the EP and/or the mitigations proposed, and has not provided any information.</p> <p>Eni considers that, consistent with the legislative requirements, the relevant person has been provided with reasonable opportunity for consultation.</p>
Balanggarra Aboriginal Corporation RNTBC	27/10/2023	Claim	<p>Relevant person sought clarification on whether Eni have conducted monitoring of seashells and other elements around Blacktip and Yelcher Gas Plant, since they have been operating in the area since 2009.</p> <p>Relevant person suggested that Eni present monitoring data in future engagements with community, including data on marine mammals and seashells; stating the data will provide evidence of Eni's monitoring of sea country and land; and help demonstrate that Eni's operation does not have negative impact to 'country'.</p> <p>Relevant person requested information on Eni's engagement timeline.</p> <p>Relevant person suggested organising a 'town hall' for TOs in Wyndham or Kununurra; and advised Eni would need to consider paying for travel from Kulumburu and meeting fees.</p>	<p>Eni shared information on the arrangement with the Thamarrur Rangers, including ongoing monitoring of sea country; and confirmed seashell monitoring was recently completed in 2023; and rangers have been involved in monitoring of reefs and water quality sampling.</p> <p>Eni provided an overview of engagement to date in Kununurra with the Shire, Chamber of Commerce and Port of Wyndham; and based on this Eni is considering publishing flyers in the East Kimberley Chamber of Commerce and Industry (EKCCI) newsletter.</p>	<p>Relevant person raised:</p> <ol style="list-style-type: none"> 1. Clarification on whether Eni have conducted monitoring of seashells and other elements around Blacktip and Yelcher Gas Plant. 2. Recommendation to present an overview of monitoring programs and data in future engagements with relevant person; specifically marine mammals and seashells. 3. Recommendation to investigate an arrangement with Eni similar to the Thamarrur Rangers for Balanggarra country. 4. Recommended not publishing flyers in the EKCCI's newsletter as its not a suitable method of engagement; and instead organising a 'town hall' in Kununurra or Wyndham; with Eni to pay for travel and meeting costs. Relevant person offered support to arrange this. 	<p>Relevant matters have merit:</p> <ol style="list-style-type: none"> 1. Relevant person requested information on existing monitoring programs; specifically for seashells. 2. Noted. The Thamarrur Ranger program is outside of the scope of the EP. Eni may consider this as part of long-term relationship building. 3. Relevant person advised that the proposed engagement method was not suitable for First Nations people; and suggested an alternative (an in-person 'town hall'); and offered support to arrange. Eni has endeavoured to work with relevant person to arrange a town hall, including requesting costs. <p>Relevant matters do not have merit:</p> <ol style="list-style-type: none"> 4. Relevant person suggested that a summary of monitoring data is provided during future consultation; specifically for marine mammals and seashells. The purpose of these monitoring programs is to monitor environmental impact from discharges during the operation of the Yelcher Gas Plant, and is outside the scope of this EP. 	<ol style="list-style-type: none"> 1. No change to EP content. Seashell and other environmental monitoring undertaken by the Thamarrur Rangers is described in Section 4.6.9.3 of the EP. 2. No change to EP content. The Thamarrur Ranger program is not within the scope of the EP. 3. No change to EP content. 4. No change to EP content.
Balanggarra Ventures Ltd Balanggarra Aboriginal Corporation RNTBC	13/03/2024	Relevant matter	<p>Relevant person advised there is a new Chairperson for the Balanggarra Aboriginal Corporation; and advised the Board was meeting soon and could discuss Eni's activities.</p> <p>Relevant person queried whether Eni have had arrangements with other Traditional Owner groups in Wadeye; and asked if they have engaged with MG Corporation.</p>	<p>Eni acknowledged the change in Chairperson and the upcoming Board meeting.</p> <p>Eni confirmed they have attempted to engage with MG Corporation.</p>	<p>Relevant persons raised:</p> <ol style="list-style-type: none"> 1. Change in Chairperson of relevant persons organisation. 2. Queried whether Eni have engaged with MG Corporation. 	<p>Relevant matters have merit:</p> <ol style="list-style-type: none"> 1. Relevant person advised of new Chairperson and contact details for engagement. 2. Relevant person querying about whether another organisation has been engaged as a relevant person. MG Corporation have been engaged. 	<p>No change to EP content.</p>

MG Corporation - representative of the following Traditional Owner Groups: Miriung and Gajerrong #1 (Native Title PBC) Aboriginal Corporation RNTBC	28/03/2024	Claim	Relevant person raised that Lacrosse Island, which was shown on the map provided by Eni, as an area of interest and MG Corporation and Balangarra have shared jurisdiction of the island. Relevant person suggested Eni contact DBCA to find out more information.	Eni showed the relevant person a map of the EMBA and moderate exposure zone, and briefly explained the EMBA. In response to the relevant person expressing that Lacrosse Island is an area of interest for them, Eni explained that the moderate exposure zone would not reach Lacrosse Island and the Operational Area is far from the island. Eni confirmed that DBCA had been engaged and that feedback from DBCA is included in the EP.	Relevant person claimed: 1. Lacrosse Island as an area of interest to the MG Corporation and Balangarra, and concern regarding the potential impact of a worst-case spill. Relevant person raised: 2. Relevant person suggested engagement is undertaken with additional relevant persons (specifically DBCA).	Claim has merit: 1. Relevant person advised of an area of interest to them, being Lacrosse Island; which is within the EMBA and expressed concern regarding the potential impact of a hydrocarbon spill. Relevant matter has merit: 2. Relevant person identified additional relevant persons (DBCA) who should be engaged.	1. EP has been revised. Additional detail on Lacrosse Island has been included in Section 8.6.3 in the impact assessment for a Loss of containment from well control; and in Section 8.8 Oil spill response operations; specifically regarding its value as marine turtle nesting habitat. The interesting buffer BIA and habitat critical to the survival of the species for flatback turtles described in Sections 4.4.1 and 4.4.2 refers to the Cape Domett/Lacrosse Island stock (Recovery Plan for Marine Turtles 2017). 2. No change to EP content. DBCA were engaged by Eni, and relevant matters raised were assessed and associated updates were included in the EP and OPEP.
Gogolanyngor Aboriginal Corporation	13/03/2024	Claim	Relevant person raised concerns that the EMBA has the potential to impact on the Corporation's business in relation to oyster farms, mud crabs and tripeng (sea cucumbers).	Eni explained to the relevant person that the EMBA shows the worst case scenario for a hydrocarbon spill and suggested the relevant person email Eni with their concern; so they can respond appropriately.	Relevant person claimed: EMBA has the potential to impact on the corporation's business in relation to oyster farms, mud crabs and tripang (sea cucumbers).	Claim has merit: Relevant person advised of the possible consequences of a hydrocarbon spill on the functions, interests or activities of the relevant person; being impacts on the business in relation to oyster farms, mud crabs and tripeng (sea cucumbers).	No change to EP content. The potential impacts of a worst-case loss of well control to commercial and recreational fishing are assessed in Section 8.6.3 of the EP.
Nyangu martka Karajarri Aboriginal Corporation	2/11/2023	Claim	Relevant persons, including rangers, identified that the pearl industry could be impacted by oil spill, as there are several pearl farms that could be captured within the EMBA. Relevant person also identified flatback sea turtle and salmon breeding grounds. Relevant person identified that Cable Beach should also be considered a protected area, as there are important areas with extensive sea grass, dugong breeding and whale migration. Relevant person also raised that there is possibility that community has connection with salt water or sea country. Some of the rangers are participating in rangers' meeting in Broome, while others are conducting sea county monitoring.	Eni explained to the relevant persons that the EMBA shows the worst case scenario for an oil spill and that Eni has measures in place to prevent and respond to a spill. Eni responded to the relevant persons that they will consider the information provided in developing their EP.	Relevant person claimed: 1. EMBA has the potential to impact on the pearl farms, flatback sea turtles and salmon breeding grounds. 2. Cable Beach, which is adjacent to Roebuck Bay, should also be considered a protected area with its extensive sea grass, dugong breeding area and whale migration. 3. There is possibility of community with connection to salt water or sea country.	Claims have merit: 1. Relevant person advised of the possible consequences of the activity on the functions, interests or activities of the relevant person, being impact on pearl farms, flatback sea turtles and salmon breeding grounds. 2. Relevant person advised of an area of interest to them, being Cable Beach, which is adjacent to Roebuck Bay. 3. Relevant person advised of the possibility of community connection to salt water or sea country.	No change to EP content. 1. No change to EP content. The potential impacts of a worst-case loss of well control to commercial and recreational fishing are assessed in Section 8.6.3 of the EP.
Nyangu martka Karajarri Aboriginal Corporation Karajarri Traditional Lands Association (Aboriginal Corporation) RNTBC	2/11/2023	Claim	Relevant persons advised that they do not support mining or 'fracking'. Some attendees asked questions of the information provided, but did not express their view on the project.	Eni responded to concerns raised at the meeting about opposition to mining and fracking.	Relevant person claimed: Relevant persons oppose fracking and mining.	Claim does not have merit: Blacktip offshore petroleum activity does not involve any fracking or mining.	No change to EP content.
Nyul Nyul PBC Aboriginal Corporation	31/10/2023	Claim	Relevant person confidentially informed Eni about the Bardi Jawi Gaara National Park and its associated Marine Park Management Plan. Relevant person advised that Eni needs to consider the potential impacts to the Bardi Jawi Gaara National Park if it is within the EMBA; and advised it is a turtle breeding area. Relevant person advised that they will need to discuss further with other Traditional Owner groups who they can not make decisions on behalf of. Relevant person requested further clarification on Eni's activities within Wadeye or contribution to local community; and whether the activities were identified as priorities for Wadeye. Relevant person suggested Eni attend the AGM to present to the Board.	Eni confirmed they will discuss internally regarding assessment of Bardi Jawi Gaara National Park in the EP. Eni confirmed they seek community's feedback prior to deciding on social initiative projects or LDPs; and projects are as proposed by the rangers in Wadeye. Eni confirmed they would like to present to the Board at the AGM.	Relevant person claimed: EMBA has the potential to impact on Bardi Jawi Gaara National Park, which they advised is a turtle breeding area.	Claim has merit: Relevant person advised of the possible consequences of a hydrocarbon spill on the a particular value or sensitivity (Bardi Jawi Gaara National Park) and turtle breeding area within the EMBA.	No change to EP content. The Bardi Jawi Gaara National Park is included in Section 4.5.1 and the potential impact to protected area/marine parks in the event of a loss of well control is included in Section 8.6.3. The potential impact to marine turtles is assessed in Section 8.6.3.
AMOSC	26/09/2023	Relevant matter	Relevant person stated they have no concerns regarding Eni's offshore petroleum activity but request Eni keep them informed.	No response from Eni.	Relevant person raised: To be kept informed on the proposed activity.	Relevant matter has merit: Eni acknowledge that communication with relevant persons who have requested to be kept informed on the proposed activity should be continued.	The activation of AMOSC in the event of a hydrocarbon spill is already included in the OPEP.
Seafarms Group Ltd	23/11/2023	Claim	Relevant person stated that providing that no pollution event occurs which would impact seawater quality at Forsyth Creek Project Sea Dragon has no issues or concerns with the Blacktip Project. Further request that future communications are sent to an alternative email.	Eni inform Seafarm that in the highly unlikely event of a hydrocarbon release during Blacktip activities spill modelling has predicted potential for low exposure for entrained hydrocarbons at Forsyth Creek. Eni notes that modelling is highly conservative. In the unlikely case a spill occurs Eni will implement the Blacktip OPEP to mitigate and reduce any environmental impacts to the marine environment. Further, an impact assessment for fisheries and aquaculture in the event of a spill has been assessed within the EPs. Eni ensure Seafarms that Eni are responsible for any costs expenses, liability and damages that may occur. Any entity (including fisheries and aquaculture) who has, or may be, financially disadvantaged as a direct result of a hydrocarbon spill associated with Blacktip activities are entitled to seek compensation. Eni commits to notifying Seafarms in the unlikely event a spill predicted to contact Forsyth Creek occurs.	Relevant person claimed: Providing no pollution event which impacts the water quality at Forsyth Creek Project Sea Dragon, they do not have any issues or concerns.	Claim has merit: Relevant person advised of the possible consequences of a hydrocarbon spill on the a particular value or sensitivity (water quality at Project Sea Dragon).	No change to EP content. The potential impact of a worst-case hydrocarbon spill on commercial fisheries (including aquaculture) is assessed in Section 8.6.3.
Vocus Communications	16/11/2023	Relevant matter	Relevant person inform Eni that the North West Cable System (NWCS) telecommunications submarine cable is more than 250 km away from the well head at the nearest location and state that they have no issues or operational concerns with the proposed activity.	No response from Eni.	Relevant person raised: Confirmed that Blacktip activities will have no operational impact on the Vocus NWCA.	Relevant matter has merit: The presence of subsea marine cables within the region should be considered within the EP.	EP has been revised. Section 4.6.7 - Subsea Cables has been included within the Existing Environment to include the presence of subsea marine cables within the EMBA.
EOG Resources Australia	18/07/2023	Relevant matter	Relevant person stated they have no concerns regarding the proposed activities; but request Eni keep them informed.	No response from Eni.	Relevant person raised: Requested to be kept informed on the proposed activity.	Relevant matter has merit: Eni acknowledge that communication with relevant persons who have requested to be kept informed on the proposed activity should be continued.	EP has been revised. Notification to relevant persons as requested (including EOG Resources) prior to the activity commencing has been included in Table 10-3.
Melbana Energy	14/09/2023	Relevant matter	Relevant person stated they have no concerns regarding the proposed activities; but request Eni keep them informed.	No response from Eni.	Relevant person raised: Requested to be kept informed on the proposed activity.	Relevant matter has merit: Eni acknowledge that communication with relevant persons who have requested to be kept informed on the proposed activity should be continued.	EP has been revised. Notification to relevant persons as requested (including Melbana Energy) prior to the activity commencing has been included in Table 10-3.
Neptune Energy	1/08/2023	Relevant matter	Relevant person stated they have no concerns regarding the proposed activities; but request Eni keep them informed.	No response from Eni.	Relevant person raised: Requested to be kept informed on the proposed activity.	Relevant matter has merit: Eni acknowledge that communication with relevant persons who have requested to be kept informed on the proposed activity should be continued. Eni acquired Neptune Energy Group in January 2024, including the Bonaparte Basin assets; therefore no further consultation is required.	No change to EP content.
Neptune Energy	18/09/2023	Relevant matter	Relevant person resent previous emailed which stated they have no concerns regarding the proposed activities; but request Eni keep them informed. Relevant person further request that Eni confirm they have received the email.	Eni acknowledge receipt of email and thank relevant person for support.	Relevant person raised: Requested to be kept informed on the proposed activity.	Relevant matter has merit: Eni acknowledge that communication with relevant persons who have requested to be kept informed on the proposed activity should be continued. Eni acquired Neptune Energy Group in January 2024, including the Bonaparte Basin assets; therefore no further consultation is required.	No change to EP content.
Conservation Council of Western Australia (CCWA)	7/09/2023	Relevant matter	Relevant person requested more information on the impacts and mitigation for the proposed activity.	Eni acknowledge the email and inform CCWA that information on the impacts and mitigations of the proposed works will be provided through the NOPSEMA EP process which will become publicly available.	Relevant person raised: Requested information on the impacts and mitigation for the proposed works.	Relevant matter has merit: Relevant person requires sufficient information to understand potential impacts to their functions, activities and interests.	No change to EP content. Relevant person did not provide specific concerns relating to the impacts assessed within the EP or the mitigations proposed within the EP.

Conservation Council of Western Australia (CCWA)	19/03/2024	Relevant matter	Relevant person stated they do not have capacity to review the EP but have requested to be kept informed on the proposed activities.	No response from Eni.	Relevant person raised: To be kept informed on the proposed activity.	Relevant matter has merit: Eni acknowledges that communication with relevant persons who have requested to be kept informed on the proposed activity should be continued.	EP has been revised. Notification to relevant persons as requested (including CCWA) prior to the activity commencing has been included in Table 10-3.
Northern Prawn Fisheries	22/08/2023	Relevant matter	Relevant person requested shapefiles from Eni to inform their feedback assessment.	Eni provided relevant person with shapefiles	Relevant person raised: Requested that Eni provide EMBA shapefiles.	Relevant matter has merit: Relevant person requires sufficient information to understand potential impacts to their functions, activities and interests.	No change to EP content. Eni provided relevant persons with information requested to allow them to make an informed assessment.
Northern Prawn Fisheries	9/11/2023	Relevant matter	Relevant person queries the difference between the combined EMBA area	Eni informs relevant person that the difference between the two shapefiles is due to the scope of each Blacktip Ep. The drilling activities scope only occur at the Blacktip wellhead platform, whilst the Blacktip operations scope occur at the wellhead platform and along the Blacktip gas export pipeline and single point mooring in Commonwealth waters.	Relevant person raised: Requested a description of the difference between the EMBA shapefile provided by Eni.	Relevant matter has merit: Relevant person requires sufficient information to understand potential impacts to their functions, activities and interests.	No change to EP content. Eni provided relevant persons with information requested to allow them to make an informed assessment.
Self Identified Relevant Person	12/01/2024	Claim	<p>Relevant person provided feedback to Eni regarding the broad capture efforts published in the West Australian newspaper December 30, 2023.</p> <p>Concerns raised included:</p> <ul style="list-style-type: none"> -the contribution of greenhouse gases from the proposed activities to climate change -the proposed activity does not support the transition away from fossil fuels and is contrary to Eni's commitment to 'sustainable and responsible energy transition' -the principal of intergenerational equity is the responsibility of companies which is not met by the proposed activity -persons considers themselves relevant as community interests may be affected by the proposed activity due to the emissions of GHG resulting in an increased climate change and more extreme weather events -the impacts and risks (individually and cumulatively) to the marine environment from the proposed activity -the omission of a GHG assessment. <p>Relevant person concludes that the only way to mitigate potential impacts is to avoid all the impacts by withdrawing the proposal.</p>	Eni acknowledge response and inform relevant person that feedback will be reviewed accordingly.	<p>Relevant person claimed:</p> <ol style="list-style-type: none"> 1. The proposed activity will contribute to climate change. 2. The proposed activity does not support the transition away from fossil fuels and is contrary to Eni's commitment to 'sustainable and responsible energy transition'. 3. The principal of intergenerational equity is the responsibility of companies; and is not met by the proposed activity. 4. Relevant person considers themselves relevant as community interests may be affected by the proposed activity due to the emissions of GHG resulting in an increased climate change and more extreme weather events. 5. Concern raised the impacts and risks (individually and cumulatively) to the marine environment from the proposed activity: specifically impacts from seabed disturbance, airborne and underwater noise stress to marine fauna including whales and dolphins, atmospheric emissions, impact to fisheries, and a hydrocarbon spill impacting seabirds, fish and invertebrates. 6. Relevant person claimed the EP should include a GHG assessment for the production and end use of gas. 7. Relevant person claimed that the above claims result in unacceptable environmental impacts, and the only mitigation is to withdraw the EP. 	<p>Claims have merit:</p> <ol style="list-style-type: none"> 1. GHG emissions generated by the development of the gas reservoir and end use of the gas (i.e. scope 3 emissions) will be undertaken within the five-yearly revision of the Blacktip Operations EP (000036_DV_PR.HSE.0677.000). 2. Eni has appropriate climate change and energy transition targets and will be referenced in the Blacktip Operations EP 3. The demonstration of acceptability for all impacts and risks is required by the OPGGS(E) Regulations. Criteria must include the principles of Ecologically Sustainable Development (ESD), which includes the principle of intergenerational equity. This is undertaken as per Eni's process (described in Section 6.3.2), and is included in all sub-sections of Sections 7 and 8. 4. Relevant person has self-identified as a relevant person, as their interests may be affected by the proposed activity. 5. Relevant person raised concern that the proposed activities may impact the marine environment; specifically impacts from seabed disturbance, airborne and underwater noise stress to marine fauna including whales and dolphins, atmospheric emissions, impact to fisheries, and a hydrocarbon spill impacting seabirds, fish and invertebrates. <p>Claims do not have merit:</p> <ol style="list-style-type: none"> 2. Eni has appropriate climate change and energy transition targets, which are available on the eni website and will be referenced in the five-yearly revision of the Blacktip Operations EP (000036_DV_PR.HSE.0677.000). 6. The GHG emissions generated by the development of the gas reservoir and end use of the gas (i.e. scope 3 emissions) will be undertaken within the five-yearly revision of the Blacktip Operations EP (000036_DV_PR.HSE.0677.000). 7. A demonstration of acceptability for all impacts and risks is required by the OPGGS(E) Regulations. This is undertaken as per Eni's process (described in Section 6.3.2), and is included in all sub-sections of Sections 7 and 8. 	<ol style="list-style-type: none"> 1. Section 7.2 of the EP includes atmospheric emissions from the activities. 2. Eni has appropriate climate change and energy transition targets and will be referenced in the Blacktip Operations EP 3. No change to EP content. An assessment of the activity against the principles of ESD is undertaken as per Eni's process (described in Section 6.3.2), and is included in all sub-sections of Sections 7 and 8. 4. No change to EP content. 5. No change to EP content. The potential impacts of a worst-case loss of well control to be assessed in Section 8.6.3 of the EP. The potential impacts from seabed disturbance are assessed in Section 7.9, atmospheric emissions in Section 7.2, underwater noise emissions in Section 7.4; and impact to other marine users (including commercial fisheries) in Section 7.1. 6. No change to EP content. Table 7-1 includes a calculation of GHG emissions relevant to the scope of the EP. 7. No change to EP content. A demonstration of acceptability for the activity is undertaken as per Eni's process (described in Section 6.3.2), and is included in all sub-sections of Sections 7 and 8.

 eni australia	Company document identification	Owner document identification	Rev. index.	
	000036_DV_PR.HSE.0677.000		Validity Status	Rev. No.
			PR-OP	16

APPENDIX D:

HEALTH, SAFETY AND ENVIRONMENT STATEMENT

health safety & environment statement

Eni Australia Ltd, in its natural resources and energy evolution activities is committed to providing a safe work place, safe systems of work, a competent workforce and a culture conducive to exercising prudent Health, Safety, Environment (HSE) and Energy Management practices and behaviours.

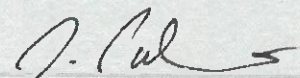
This commitment statement applies to all operational activities undertaken by Eni Australia Ltd, including activities carried out by our contractors and sub contractors.

Eni Australia Ltd will:

- Provide a safe and healthy workplace for the prevention of worker related injury and ill health.
- Set objectives and targets to ensure continual improvement in the HSE Management System and overall HSE performance.
- Comply with relevant legislation and other obligations, or apply company standards where laws and regulations do not exist.
- Commit to eliminating HSE risks across the business life cycle to As Low as Reasonably Practicable
- Adopt high management and technical standards to prevent and mitigate major accidents associated with process safety events.
- Include HSE performance in appraisal of staff and contractors.
- Respect the environment and prevent pollution by actively monitoring and managing emissions, effluents, discharges and other impacts on the environment.
- Endeavour to reduce greenhouse gas emission intensity, fugitive emissions and process flaring as part of our climate strategy.
- Adopt energy efficient systems in our planning activities.
- Provide systems, resources and skills to maintain emergency response capabilities.
- Consult with stakeholders, local communities, public interest groups, workers and their representatives.
- Remain committed to sustainable development and the welfare of our host communities, and
- Promote HSE best practice in all our activities.

All staff, contractors and sub contractors at Eni Australia Ltd have a personal responsibility to support this HSE Statement and are encouraged to openly report any HSE issue or concern. In addition, everyone is obliged to intervene in unsafe acts or conditions to prevent injury, environmental impact or damage to assets.

Managing Director



Denis Palermo

Date

01 November 2023



eni
australia