Plan

VIC 1000 SAF PLN
CDN/ID 18986979

Victoria Offshore Oil Pollution Emergency Plan

IN THE EVENT OF AN OIL POLLUTION EMERGENCY REFER TO SECTION 4

Revision	Date	Reason for issue	Reviewer/s	Consolidator	Approver
3a	26/07/2024	Submission to NOPSEMA - OGV	NK	Xodus	BMU
4	20/10/2024	Annual Review	PP, LD	TF	KGA
5	17/04/2025	Submission to NOPSEMA – OGV Completions Program	RH, ZP, KGA	ZP	KGA
5a	08/08/2025	Submission to NOPSEMA – OGV Completions Program	ZP, RH, MH; RM	ZP	KGA

Review due	Review frequency
Annually from date of acceptance	1 year

THE THREE WHATS
What can go wrong?
What could cause it to go wrong?
What can I do to prevent it?

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1 Purpose

The purpose of this Offshore Oil Pollution Emergency Plan (OPEP or 'the Plan') is to:

- Describe the arrangements regarding Beach Energy (Operations) Ltd (Beach) access to resources and appropriately trained response personnel in order to effectively respond to and manage an emergency oil spill response in a timely manner.
- Provide timely implementation of the pre-determined response strategies as outlined in this OPEP, based on credible worst-case hydrocarbon spill risks as presented within activity-specific Environment Plan (EPs).
- Ensure the processes and response structures are consistent with those used in applicable government and industry oil spill response plans, namely:
    - National Plan for Maritime Environmental Emergencies ('NatPlan') (AMSA 2020).
    - Victorian State Emergency Management Plan (SEMP) (Emergency Management Victoria (EMV) 2023)
    - State Maritime Emergencies (non-search and rescue) Sub-Plan (Victoria State Government 2021).
    - Tasmanian Marine Oil and Chemical Spill Contingency Plan ('TasPlan') (EPA - DPIPWE 2022).
    - NSW State Emergency Management Plan (EMPLAN) (NSW Roads & Maritime Services 2018).
    - NSW State Waters Marine Oil and Chemical Spill Contingency sub-Plan (NSW Roads & Maritime Services 2016).
    - AMOSPlan (Australian Marine Oil Spill Centre (AMOSC) 2021).
    - National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) Guidance Note N-04750-GN1488 – Oil pollution risk management (NOPSEMA 7/7/2021).
- Ensure effective integration and use of industry and government response efforts and resources.
- Meet the following regulatory requirements based on the Beach petroleum titles applicable to this OPEP:
    - Commonwealth - Regulation 22(8) of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (herein referred to as the Commonwealth OPGGS(E) Regulations).
    - Victoria - Regulation 17 of the Offshore Petroleum and Greenhouse Gas Storage Regulations 2021 (herein referred to as the Victorian OPGGS Regulations).
    - Tasmania – Regulation 20 of the Petroleum (Submerged Lands) (Management of Environment) Regulations 2021 (herein referred to as the Tasmanian P(SL) (MoE) Regulations). Note, these regulations refer to an Oil Spill Contingency Plan (OSCP). This OPEP covers the requirements of an OSCP in Tasmanian waters.

A list of external and internal supporting references and plans applicable to the OPEP is supplied in Appendix H.

2 The Proponent

Beach is the operator of the Otway and Bass gas offshore fields.

Beach are the majority owner and the nominated operator for the offshore facilities and infrastructure presented in Figure 3-1 and located within the petroleum titles relevant to the scope of this OPEP (Table 3.1)

3 Scope

This OPEP covers potential oil pollution emergencies that may result from Beach's activities within Victorian State waters and Commonwealth waters between Victoria and Tasmania, including the Otway and Bass Basins. Spills within the Bass or Otway Basins may impact Commonwealth, Victorian, Tasmanian and/or New South Wales jurisdictions. No spills have been identified to impact South Australian waters.

The OPEP recognises the divisions of responsibility as defined under the terms of the "NatPlan", which have been incorporated into this OPEP.

3.1 Interface with other Beach Documents

This OPEP interfaces with the follow documents:

3.1.1 Beach Crisis Management Plan (CMP)

The purpose of the CMP is to detail the required actions by Beach – to be executed by the Crisis Management Team (CMT) members in line with the principle of prioritising People, Environment, Asset, Reputation, and Livelihood (PEARL). The document provides detail on the process of notification, escalation, and activation to provide a state of readiness for effective deployment and response.

The CMP addresses the response, ongoing strategic management, and associated recovery responsibilities – including processes and tools to be considered – and the strategic activities required to be initiated and associated arrangements required to be in place to manage a crisis event and to support Beach activities and personnel.

3.1.2 Beach Emergency Management Plan (EMP)

The purpose of the EMP is to provide guidance to the EMT on processes, roles, and responsibilities during an emergency event. The document provides detail on the process of notification, escalation, and activation to provide a state of readiness for effective deployment and response.

The EMP comprises actions and guidelines to enable Beach to:

- Support any response at any site, provide operational support and advice where the event may have an impact that cannot be handled through normal business processes.
- Facilitate appropriate notifications and communication with relevant stakeholders, both internal and external.
- Coordinate sourcing and deployment of additional resources as required, including corporate assistance, communications, specialist technical input and communications.
- This is achieved through pre-planning, appropriate mitigation, and recovery management, of any potential major emergency event that may be associated with Beach's operations.

The EMP describes the operational concepts, structures, and Emergency Management (EM) arrangements for the management of response and recovery activities, by outlining the processes and interrelationships between Beach and various stakeholders. It is designed as a generic construct that can be adapted as required, recognising that each event will be unique and therefore it is not possible to be overly prescriptive.

Furthermore, the EMP is designed to provide overarching support of Beach activities at various sites, facilities, commercial locations, and associated operations. The EMP is designed to be activated in the event of a Beach emergency or crisis, to either:

- Support a serious specific site / facility emergency (drilling, exploration, or production) event that requires ongoing corporate or business continuity management and involvement.
- A Beach non-emergency related event that has the potential to significantly impact or destabilise the entire organisation.

The EMP details each level of its 3-tier Crisis and Emergency Management (CEM) Framework, the key responsibilities of each, the associated responsibilities of the EMT members and includes the required interface with each Beach Emergency Response Team (ERT), Plans, organisation, and responsibilities.

The Asset and Wells Emergency Response Plans are found on the intranet and provide supporting information to this Plan.

3.1.3 Beach Well Operations Management Plan (WOMP)

A NOPSEMA accepted Well Operations Management Plan (WOMP) is required prior to well activities being undertaken in accordance with Part 5 of the Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011.

The purpose of the WOMP is to detail the controls in place to restore well integrity in the event of a LOWC incident.

The WOMP specifically addresses well integrity risks and controls in accordance with the requirements of Part 5 of the OPGGS (RMA) Compilation No.8 2011. Operational safety including hazard identification, risk assessment, and controls shall be described in the MODU Safety Case and a campaign specific Safety Case Revision (SCR).

3.1.4 Beach Source Control Emergency Response Plan (SCERP)

Beach Energy Limited (Beach), as the offshore Operator, has developed a Source Control Emergency Response Plan (SCERP) in alignment with NOPSEMA's Source Control Planning and Procedures (Information Paper, doc no: N-04750-IP1979 A787102). The SCERP provides a structured overarching framework for managing loss of well control (LOWC) events during the Equinox Campaign.

The SCERP outlines strategies for implementing the best-suited source control techniques and mobilising the associated personnel, equipment, and resources to minimise environmental and operational impacts. Its primary focus is blowout response, with the objective of stopping the uncontrolled release of hydrocarbons.

Structured as an overarching document, the SCERP interfaces with well-specific Source Control Contingency Plan (SCCP, see below) documents to ensure consistency and avoid duplication across planning documents. It includes:

- A basin-wide source control framework for the Otway and Bass basins
- SCCP addenda detailing specific response strategies for each well or group of wells

The SCERP is designed to:

- Provide purpose, direction and guidance to the Beach Emergency Management Team (EMT) and any established Source Control Incident Management Team (SCIMT)
- Ensure the health and safety of all personnel involved in well control operations
- Mitigate the environmental consequences which may arise from a well control event
- Mitigate the damage to assets and production as a consequence of a well control event
- Ensure the reputation of Beach and business partners are protected

3.1.5 Beach Otway Offshore well-specific Source Control Contingency Plan (SCCP) inclusive of well-specific relief well plan

Well specific SCCPs detail the source control strategy to contain a loss of containment event in an effective and timely manner and is submitted to NOPSEMA as part of the WOMP. These SCCPs are consistent with International Oil and Gas Producers (IOGP) Report 594 - Subsea Well Source Control Emergency Response Planning Guide for Subsea Wells (Jan 2019). The SCCPs specifically detail:

- The structure, function, and responsibilities of the Beach Emergency Management Team (EMT) and Source Control Incident Management Team (SCIMT) inclusive of external support services.

- Details of well control and emergency response procedures and processes to be applied by the EMT and SCIMT during a LOWC event.
- An analysis of alternate MODUs capable of both being mobilised to the relief well location and of performing a dynamic well kill operation based upon identified selection criteria (including technical capability, current location, Australian Safety Case status and mutual aid arrangements).
- A mobilisation and deployment plan (including logistical pathways, potential constraints, and schedule) for equipment and personnel for effective implementation of source control (dynamic well kill and/or well capping where feasible) in a timely manner.
- A well-specific worst-case discharge analysis and well kill simulation.
- Pre-identified relief well locations and relief well intersection targets.
- Casing design, mud kill weight and pumping rate required to achieve a dynamic well kill based upon the intersection target.

3.1.6 Activity-specific Environmental Plan (EP)

All petroleum activities in Commonwealth and State waters require an activity specific EP. Each EP includes:

- Activity specific worst-case discharge oil pollution emergency scenarios.
- Description of the environment that may be affected (EMBA) by an oil pollution emergency including key ecological and socio-economic receptors including matters protected under Part 3 of the EPBC Act.
- Person(s) or organisations whose interests or activities may be affected by an oil pollution emergency.
- Impact and risk evaluation for both planned operations and unplanned events inclusive of oil pollution.
- Spill response needs analysis based upon activity spill risk profile.
- Response option feasibility assessment and ALARP evaluation.

3.1.7 Site specific Tactical Response Plans (TRP)

Site specific Tactical Response Plans (TRPs) have been developed for priority protection areas along the Victorian and Tasmanian coastline as detailed in Section 4.4.1. The purpose of the TRPs is to pre-determine site and response information prior to an oil pollution incident to ensure an informed, timely and effective protection of priority areas as required. The TRPs detail:

- **Site Information:** site location description and map, site access description and map, site specific logistical / access constraints, key ecological and socio-economic sensitivities within the area, nearby facilities, and services.
- **Response Information:** response strategies and tasks, site overview and maps, response checklists, site establishment information, local information including contact details of key stakeholders, detailed task checklists, resource requirements (personnel / vehicles / vessels / equipment / site support).

3.1.8 Vessel-specific Shipboard Oil Pollution Emergency Plan (SOPEP) / Shipboard Marine Pollution Emergency Plan (SMPEP), or equivalent

SOPEP and SMPEP detail vessel specific spill response arrangements.

3.1.9 Beach Offshore Operational and Scientific Monitoring Program (OSMP).

The Offshore Operational and Scientific Monitoring Plan (OSMP) provides the framework for environmental monitoring response to Level 2 and Level 3 offshore oil spills from petroleum activities undertaken by Beach in the Otway and Bass Basins.

The OSMP is to be read in conjunction with the relevant EP, this OPEP and the activity specific Addendum to the OSMP when considering the existing environment, values and sensitivities, credible oil spill risks and potential impacts, response activities and the decision processes that will apply if a spill occurs.

The OSMP is relevant to all Beach petroleum activities within the Otway and Bass Basins regulated under the Commonwealth OPGGS(E) Regulations, Victorian OPGGS Regulations and Tasmanian P(SL) (MoE) Regulations. This includes, but is not limited to the following activity types:

- Operation of a facility or pipeline.
- Vessel activities.
- Drilling and plug and abandonment.

Spill risks from the above activities that could result in a Level 2 or Level 3 spill event include two oil types:

- Gas condensate
- Marine diesel.

The OSMP is relevant to all oil types and states (i.e. fresh and weathered); and all distributions throughout the environment (e.g. surface, entrained, dissolved and shoreline).

3.2 Beach Offshore Facilities and Activities within the Otway and Bass Basin

This OPEP covers petroleum activities in Commonwealth waters and Victorian State waters within the Otway and Bass Basins.

Beach facilities and activities within the Otway and Bass Basins covered by this OPEP are summarised in Table 3-1. A detailed description of offshore facilities and petroleum activities is available within activity-specific EPs.

The locations of facilities, infrastructure and petroleum titles covered by this OPEP are presented in Figure 3-1.

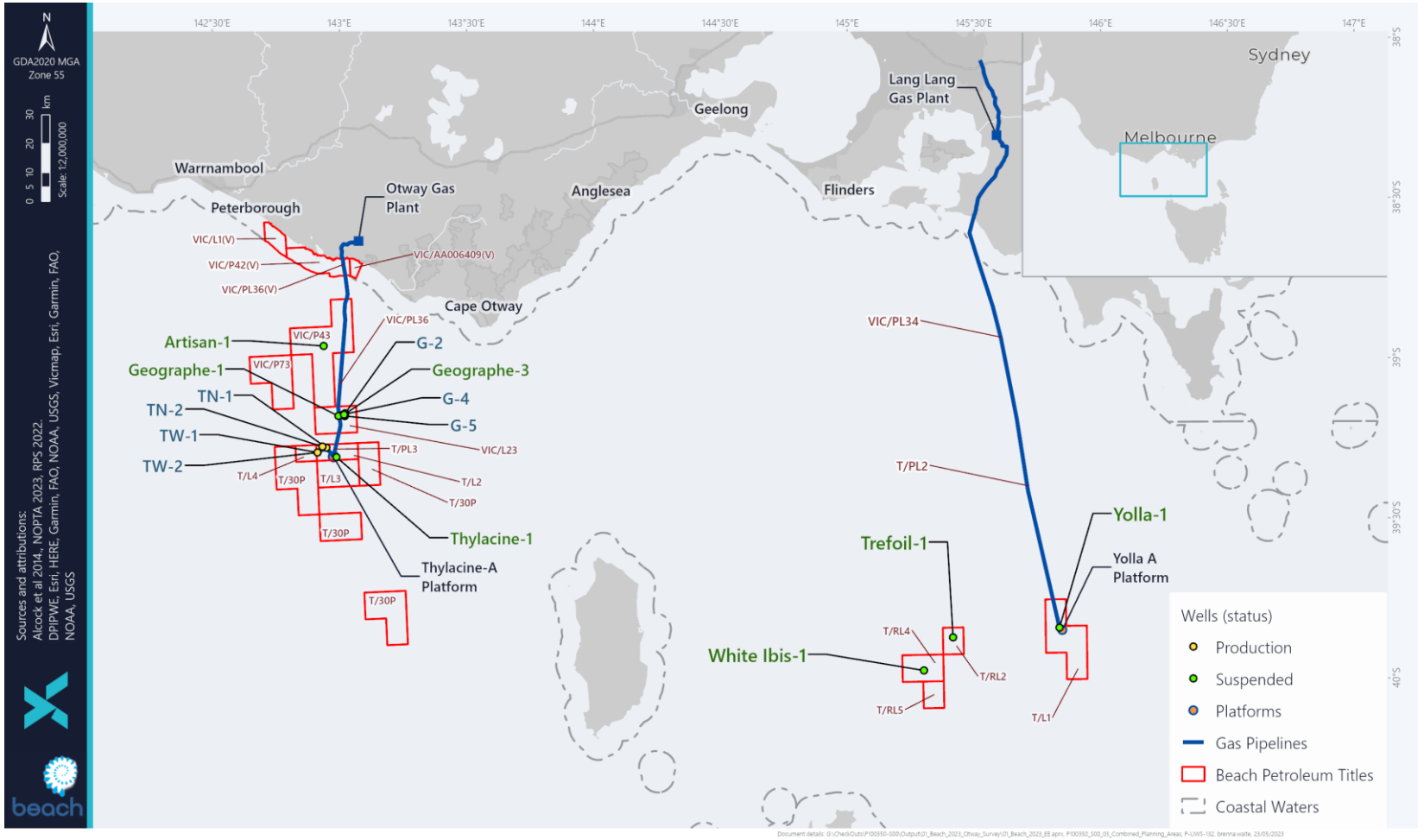


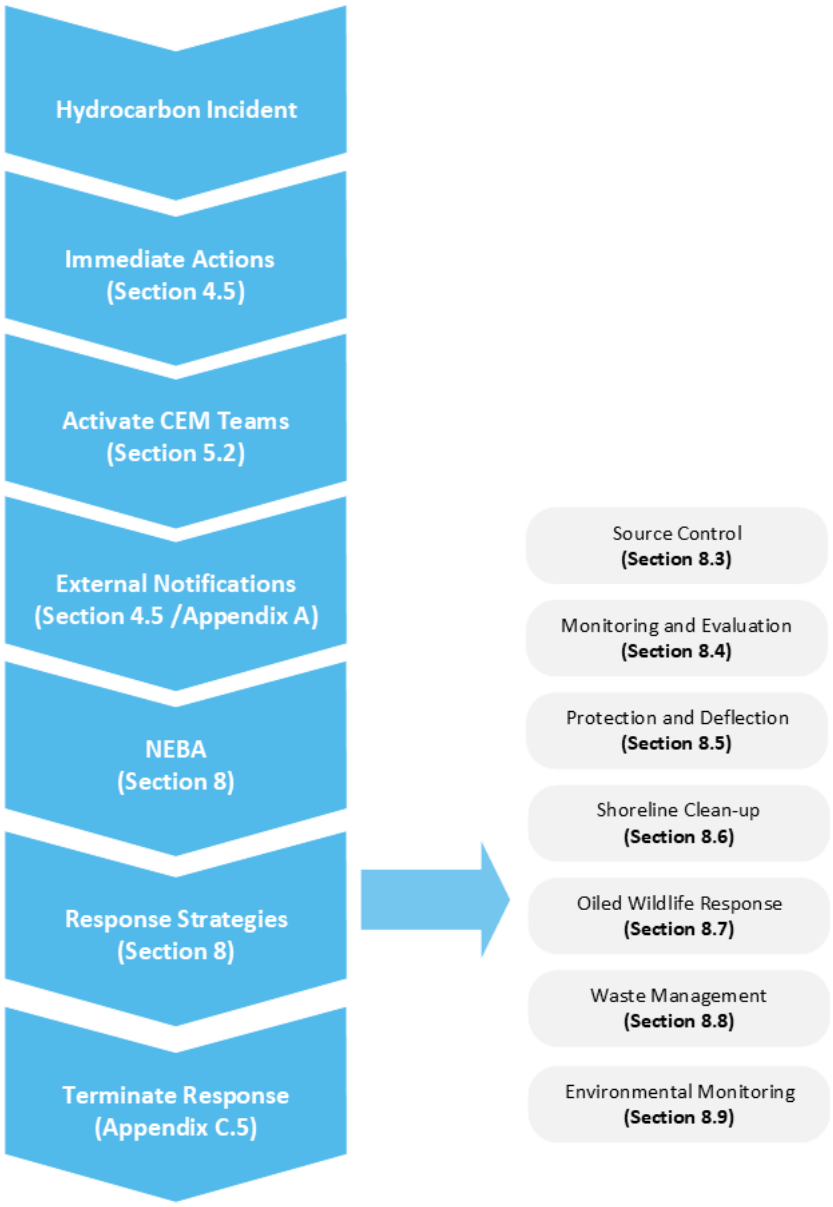
Figure 3-1: Beach Offshore Victorian Assets

Table 3-1: Summary of Beach Facilities and Activities within Commonwealth and Victorian Waters

Facility / Activity	Description	Title	Hydrocarbon type	Minimum distance from shore	Water Depth (approx.)	Flight Time (approx.)	Vessel Steaming Time (approx.)
Geographe subsea production wells	Producing Geographe gas wells; Geographe-2 (G-2), Geographe-4 (G-4), Geographe-5 (G-5).	VIC/L23	Geographe gas condensate	45 km	80 m	30 min Warrnambool	15 hrs Geelong
Thylacine subsea production wells	Producing Thylacine gas wells.: Thylacine North-1 (TN-1), Thylacine North-2 (TN-2), Thylacine West-1 (TW-1), Thylacine West-2 (TW-2).	T/L2	Thylacine gas condensate	70 km	100 m	35 min Warrnambool	15 hrs Geelong
Otway Basin Non-production wells	Suspended wells in the Otway Basin; Artisan-1, Geographe-1 and 3, Thylacine-1.	VIC/P43, VIC/L23, T/L2	Gas condensate	32 km	70 – 100 m	30 – 25 min Warrnambool	15 hrs Geelong
Thylacine-A Platform (unmanned)	Unmanned Thylacine-A production platform, supporting the wellheads (TA-1, TA-2, TA-3, TA-4) and topsides facilities required for production metering from the combined Thylacine wells.	T/L2	Thylacine gas condensate	70 km	100 m	35 min Warrnambool	15 hrs Geelong
Otway Gas Pipeline	Offshore pipeline system consisting of a 500mm (20 inch) production pipeline and a 100mm mono ethylene glycol (MEG) piggyback service pipeline from the platform to the shore crossing at the Port Campbell Rifle Range, situated to the west of Port Campbell.	VIC/PL36(V) VIC/PL36 T/PL3	Co-mingled gas condensate	0-70 km	Shallow to 100 m	Varies	Varies

Facility / Activity	Description	Title	Hydrocarbon type	Minimum distance from shore	Water Depth (approx.)	Flight Time (approx.)	Vessel Steaming Time (approx.)
Bass Basin Non-production wells	Suspended wells in the Bass Basin; Trefoil-1, White Ibis-1, and Yolla-1.	T/RL2, T/RL4, T/L1	Gas condensate	83 km	60 – 80 m	60 mins Tooradin	16 hrs Geelong
Yolla-A Platform	Manned Yolla-A production platform, supporting the wellheads (Yolla 3, 4, 5, 6) and topsides facilities.	T/L1	Gas and condensate	93 km	80 m	60 mins Tooradin	16 hrs Geelong
Yolla Offshore Raw Gas Pipeline	Offshore pipeline system (350 mm diameter) from the Yolla-A Platform to the shore crossing near Kilcunda.	T/L1	Gas and condensate	0 – 93 km	Shallow to 80 m	Varies	Varies
Vessel-based activities	Site surveys, operations and project support, inspection, maintenance, and repair campaigns.	All petroleum titles in Figure 3.1	Marine diesel	0-100 km	Shallow to 100 m	Varies	Varies
Offshore Drilling	Exploration, appraisal and production drilling.	All petroleum titles in Figure 3.1	Gas condensate	93 km	80 m	60 mins Tooradin	16 hrs Geelong

4 Quick Reference Information



4.1 Hydrocarbon Types

There are two types of hydrocarbons that are associated with the Beach's offshore activities:

- Marine diesel
- Gas condensate

4.1.1 Marine Diesel Oil

Marine Diesel Oil (MDO) is a light petroleum distillate. At the environmental conditions experienced in Otway and Bass Basins, marine diesel is predicted to undergo rapid evaporative loss and slicks are expected to break up rapidly. Characteristics of the MDO are detailed in Table 4-1 and Table 4-2.

Table 4-1: Marine Diesel Physical Characteristics

Parameter	MDO
Density (kg/m^3)	829 at 15°C
API	37.6
Dynamic viscosity (cP)	4.0 at 25°C
Pour point (°C)	-14
Oil category	Group II
Oil persistence classification	Light-persistent oil

Table 4-2: Marine Diesel Boiling Point Ranges

Parameter	Volatiles (%)	Semi-volatiles (%)	Low-volatiles (%)	Residual (%)
Boiling point (°C)	<180	180-265	265-380	>380
MDO	6.0	34.6	54.4	5
	⇦	Non-Persistent	⇨	⇦ Persistent ⇨

4.1.2 Gas Condensate

The target reservoirs within the Otway and Bass Basins are gas condensate. As a result, no heavy oil will be present during extraction or drilling activities. The fields of the Otway and Bass Basins have slightly different condensate characteristics and potential flow rates (pressures). Characteristics of the gas condensate are detailed in Table 4-3.

Condensate characteristics indicate that spills of these fluids are likely to spread rapidly, and residual hydrocarbons potentially distributed over a large area. Any slicks will break up readily as a result of weathering processes.

Table 4-3: Condensate Otway and Bass Basin

Parameter	Geographe	Thylacine	Yolla	Trefoil
Density (kg/m^3)	751 at 15°C	805 at 15°C	770.16 at 15°C	794.1 at 15°C
API	56.9	44.3	-	46.7
Dynamic viscosity (cP)	0,500 at 25°C	0.875 at 20°C	0.14 at 25°C	0.14 at 25°C
Pour point (°C)	-50	-50	-	-3
Oil category	Group I	Group I	Group I	Group II
Oil persistence classification	Non-persistent oil	Non-persistent oil	Non-persistent oil	Light-persistent oil
Volatiles %	78.4	64.0	80	41.9
Semi-volatiles %	13.4	19.0	12	30.2
Low-volatiles %	7.2	16.0	6.55	16.95
Suggested Adios Library Analogue Guide (https://adios.orr.noaa.gov/oils/)	Erawan, (Mobil Oil Australia)	Kutubu Light (Mobil Oil Australia)	Gorgon	Gippsland BHP Petroleum

4.2 Potential Worst-Case Spill Scenarios

The potential worst-case hydrocarbon spill scenarios relating to the offshore activities are:

- Uncontrolled loss of well control (LOWC) whilst drilling.
- Well release from a production well.
- Pipeline rupture.
- Release of marine diesel from vessel activities in the Otway or Bass Basin.

These hypothetical worst-case discharges have been subject to modelling via an OILMAP stochastic module used to quantify the probability of sea surface exposure, contact to shorelines, largest shoreline loading, time to shoreline loading, in-water dissolved aromatic and entrained hydrocarbon concentrations. This involved simulating multiple spill trajectories with randomly varying metocean conditions to represent varying annual conditions.

A summary of the modelling results for visual and actionable surface and shoreline exposure, minimum time to shoreline contact and maximum shoreline loading is presented in Table 4-4 for activities within the Otway Basin and Table 4-5 for activities within the Bass Basin. Further detail relating to spill modelling results and potential environmental impacts can be found within activity-specific EPs.

4.3 Spill Modelling Analysis

Table 4-4: Summary of Otway Basin Spill Modelling

Spill Scenario	LOWC (Drilling 8-1/2" open-hole)[1]	LOWC[4]	LOWC[5]	LOWC (Producing Wells)[5]	Pipeline Rupture[3]	Vessel Spill[5]	Vessel Spill[2]	Vessel Spill[4]	Vessel Spill[5]
Location	Artisan-1	Bellerive/Release Location South	Doris/Northern Release Location	Thylacine Field (TW1)	13 nm from shore	Thylacine Field (TW1)	Thylacine Field	Bellerive/Release Location South	Doris/Northern Release Location
Product	Thylacine condensate	Thylacine condensate	Thylacine condensate	Thylacine condensate	Thylacine condensate	MDO	MDO	MDO	MDO
Release Volume	2,584 bbl/day	7,106 bbl/day	5,055 bbl/day	1,198 bbl/day	265 m^3	603.7 m^3	300 m^3	603.7 m^3	603.7 m^3
Duration	86 days	86 days	86 days	86 days	0.27 hours	6 hours	6 hours	6 hours	6 hours
Sea Surface >10 g/m^2 (Actionable)	Up to 4 km and 3 km under summer and winter conditions, respectively. Dissipates in <1 day.	Up to 20 km and 19 km under summer and winter conditions, respectively.	Up to 3.9 km and 5.8 km under summer and winter conditions, respectively.	Nil	Up to 17.8 km under annualised conditions.	Up to 28.6 km and 49 km under summer and winter conditions, respectively.	Up to 11.7 km and 15.3 km under summer and winter conditions, respectively.	Up to 24 km and 48 km under summer and winter conditions, respectively.	Up to 17.0 km and 19.9 km under summer and winter conditions, respectively.
Shoreline >100 g/m^2 (Actionable)	Up to 4 km and 8 km under summer and winter conditions, respectively.	Up to 16 km and 44 km under summer and winter conditions, respectively.	Up to 15.2 km and 22.9 km under summer and winter conditions, respectively.	Nil	Up to 0.5 km under annualised conditions.	Nil	Nil	Nil in summer. Up to 6 km in winter.	Up to 10.2 km and 12.7 km under summer and winter conditions, respectively.

Spill Scenario	LOWC (Drilling 8-1/2" open-hole)[1]	LOWC[4]	LOWC[5]	LOWC (Producing Wells)[5]	Pipeline Rupture[3]	Vessel Spill[5]	Vessel Spill[2]	Vessel Spill[4]	Vessel Spill[5]
Shoreline >1000 g/m^2 (High loading)	Nil	Nil in summer. Up to 3 km in winter.	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Shoreline Minimum Time to Contact	3 days in summer 5 days in winter	10 days in summer 5 days in winter	5.7 days in summer 3.7 days in winter	25.4 days in summer* 21.9 days in winter	29 hours under annualised conditions	Nil in summer. 15 days in winter	Nil in summer. 7.6 days in winter	8 days in summer 4 days in winter	4.5 days in summer 2.0 days in winter
Shoreline Maximum Loading m^3	15 m^3 in summer 33 m^3 in winter	99 m^3 in summer 193 m^3 in winter	67.9 m^3 in summer 87.5 m^3 in winter	6.2 m^3 in summer* 8.4 m^3 in winter	2.8 m^3 in annualised conditions	Nil in summer. 9.7 m^3 in winter	4.3 m^3 winter	5 m^3 in summer 29 m^3 in winter	30.1 m^3 in summer 58.3 m^3 in winter
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Source 1: Beach Energy Artisan-1 Exploration Well Oil Spill Modelling (Rev 1). No: MAQ0828J. (13 June 2019).
Source 2: Thylacine Installation and Commissioning – Phase 5 Oil Spill Modelling – Variation 1. No: MAQ1217J. (02 November 2022)
Source 3: Beach Energy Otway Operations EP Update – Oil Spill Modelling. No: MAQ1041J. (26 July 2021).
Source 4: Beach Energy Offshore Gas Victoria - Oil Spill Modelling. (Rev 1). No: MAQ1296J (2023).
Source 5: Beach Energy Offshore Gas Victoria – Oil Spill Modelling (Rev 1). No: GOC365512 (17 October 2024).

Table 4-5: Summary of Bass Basin Spill Modelling

Spill Scenario	LOWC[1]	LOWC[2]	Pipeline Rupture[1]	Vessel Spill[1]	LOWC[3]	Vessel Spill[3]	Pipeline Rupture[3]	Vessel Spill[2]
Location	Yolla wells	Bass	3 nm from shore	3 nm from shore	Yolla wells Subsea (70m)	Bass	Subsea (50m)	Bass
Product	Condensate	Trefoil Condensate	Condensate	MDO	Yolla Condensate	MDO	Yolla Condensate	MDO
Release Volume	204,250 bbl	1,177,496 bbl	3,144.9 bbl	300 m^3	70,489 bbl	300 m^3	14,500 bbl	603.7 m^3
Duration	86 days	86 days	57.6 minutes	6 hours	100 days	30 days	10 days	6 hours
1 -10 g/m^2 (Barely Visible)	Up to 17.3 km from release site	Up to 304 km and 307 km under summer and winter conditions, respectively.	Up to 9.4 km from release site	Up to 26.6 km from release site	Up to 3 km (West-Northwest)	Up to 49.27 km (east-southeast, winter), 8.21 km (west, summer) and 4.45 km (west-southwest, winter).	Up to 13.03 km (south-southwest, summer) and 4.58 km (west-northwest, summer) and 0.46 km (southwest, both seasons).	Up to 27 km and 42 km under summer and winter conditions, respectively.
10 - 50 g/m^2 (Actionable)	Nil	Up to 57 km and 88 km under summer and	Up to 3 km from release site	Up to 10.7 km from	No exposure	Up to 49.27 km (east-southeast,	Up to 13.03 km (south-southwest,	Up to 25 km and 21 km under summer

Spill Scenario	LOWC[1]	LOWC[2]	Pipeline Rupture[1]	Vessel Spill[1]	LOWC[3]	Vessel Spill[3]	Pipeline Rupture[3]	Vessel Spill[2]
		winter conditions, respectively.		release site		winter), 8.21 km (west, summer) and 4.45 km (west-southwest, winter).	summer) and 4.58 km (west-northwest, summer) and 0.46 km (southwest, both seasons).	and winter conditions, respectively.
≥ 50 g/m^2 (Actionable)	Nil	Up to 16 km and 17 km under summer and winter conditions, respectively.	Up to 0.7 km from release site	Up to 2.5 km from release site	No exposure	Up to 49.27 km (east-southeast, winter), 8.21 km (west, summer) and 4.45 km (west-southwest, winter).	Up to 13.03 km (south-southwest, summer) and 4.58 km (west-northwest, summer) and 0.46 km (southwest, both seasons).	Up to 11 km and 10 km under summer and winter conditions, respectively.
Maximum length of shoreline contacted >100 g/m^2 (Actionable)	No contact	Up to 2 km in summer and 1 km in winter.	4 km	7 km	No contact	No contact	No contact	No contact
Maximum length of	No contact	No contact	No contact	4 km	No contact	No contact	No contact	No contact

Spill Scenario	LOWC[1]	LOWC[2]	Pipeline Rupture[1]	Vessel Spill[1]	LOWC[3]	Vessel Spill[3]	Pipeline Rupture[3]	Vessel Spill[2]
shoreline contacted >1,000 g/m^2 (High loading)								
Absolute minimum time before contact at or above the low threshold	No contact	5 days in summer 6 days in winter	12 hours	10 hours	No contact	Summer – 0.51 days Winter – 0.48 days	Summer – 0.52 days Winter – 0.59 days	5 days in summer 9 days in winter
Mean maximum volume on shoreline	No contact	50 m^3 in summer 50 m^3 in winter	6.8 m^3	24 m^3	No Contact	Kilkunda, 93.0 m^3 - winter	Kilkunda, 24.7 m^3 - summer	3 m^3 in summer 6 m^3 in winter

Source 1: Beach Energy – Yolla Platform Oil Spill Modelling Reprocessing Report (Rev 0). No: MAQ0925J. (25 February 2020).

Source 2: Beach Energy Bass Strait Oil Spill Modelling. No: MAQ1313J. (2023) / Beach Energy Bass Strait Oil Spill Modelling Report No. MAQ131J (8 July 2024).

Source 3: Beach Energy Yolla Oil Spill Modelling Report No. GOC376530 (12 March 2025).

4.4 Response Areas

To identify areas where a response may be actionable the following oil exposures were used from NP–GUI–025: National Plan response, assessment, and termination of cleaning for oil contaminated foreshores (AMSA 2015):

- A sea surface oil exposure of 10 g/m^2 as this represents the practical limit for surface response options; below this thickness, oil containment, recovery, and chemical treatment (dispersant) become ineffective.
- A shoreline contact exposure of 100 g/m^2 as this represents the minimum thickness that does not inhibit the potential for recovery and is best remediated by natural coastal processes alone.

It is noted that within NOPSEMA Bulletin #1 Oil spill modelling (A652993) (NOPSEMA 2019) that exposures >50 g/m^2 for sea surface oil is the level to inform response planning, and therefore the use of >10 g/m^2 from stochastic modelling results is considered conservative. Refer to Section 4.3 for the spill modelling analysis, including the sea surface and shoreline extent for each potential spill scenario.

For the worst-case drilling LOWC, pipeline rupture, production well LOC and MDO spill scenarios identified in Section 4.2, the response areas, where a spill response could be undertaken to; protect, deflect, or mount a shoreline clean-up operation, have been identified based on the stochastic modelling outcomes for the Otway Basin (Figure 4-1 to Figure 4-32) and Bass Basin (Figure 4-33 to Figure 4-40) activities.

In the Otway Basin, no shoreline contact with exposure of >100 g/m^2 was predicted under the annual conditions modelled for the following scenarios:

- 1,198 bbl/day LOWC (Producing Wells) at Thylacine Field
- 265 m^3 Pipeline Rupture (13 nm from shore)
- 603.7 m^3 Vessel Spill at Thylacine Field
- 300 m^3 Vessel Spill at Thylacine Field

All other modelled Otway scenarios feature shoreline contact >100 g/m^2 threshold (refer Table 4-4).

In the Bass Basin, no shoreline contact with exposure of >100 g/m^2 was predicted under the annual conditions modelled for the following scenarios:

- 204,250 bbl LOWC at Yolla
- 70,489 bbl LOWC at Yolla
- 300 m^3 Vessel Spill
- 14,500 bbl Pipeline Rupture
- 603.7 m^3 Vessel Spill

All other modelled Bass scenarios feature shoreline contact >100 g/m^2 threshold (refer Table 4-5).

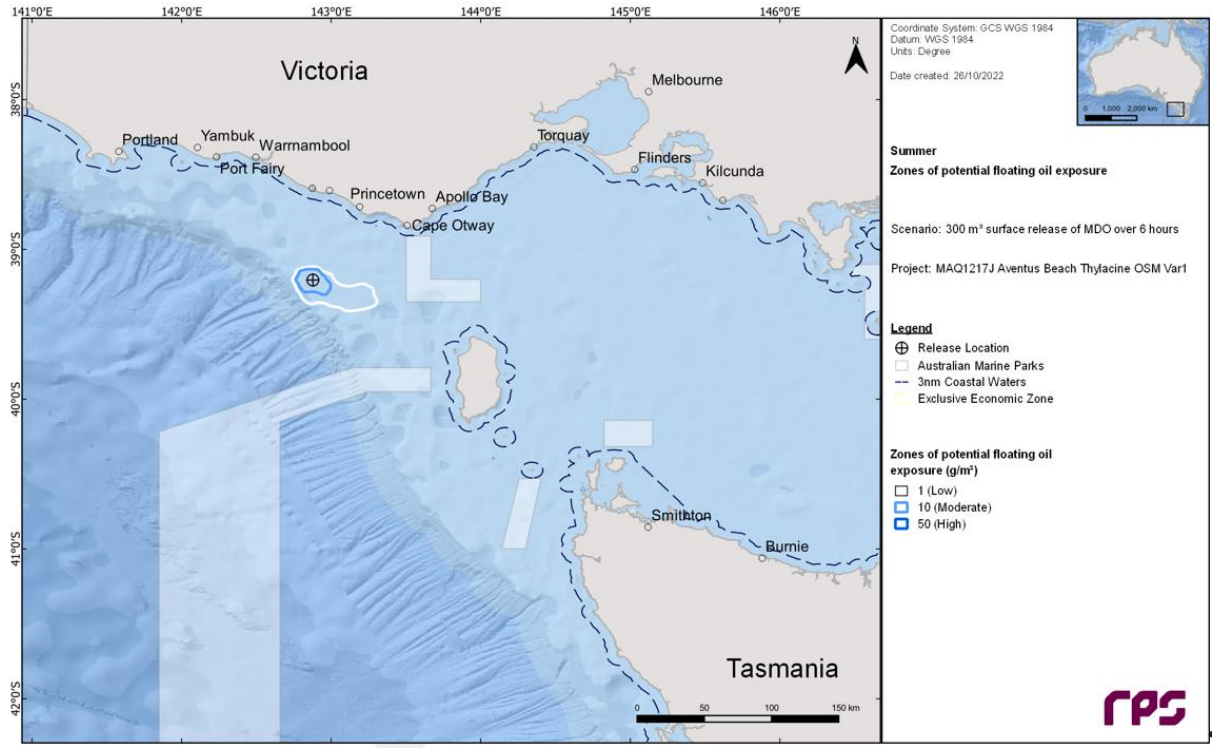


Figure 4-1: 300m^3 Vessel Spill (MDO) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Thylacine Field) Summer (RPS 2022; Report MAQ1217J)

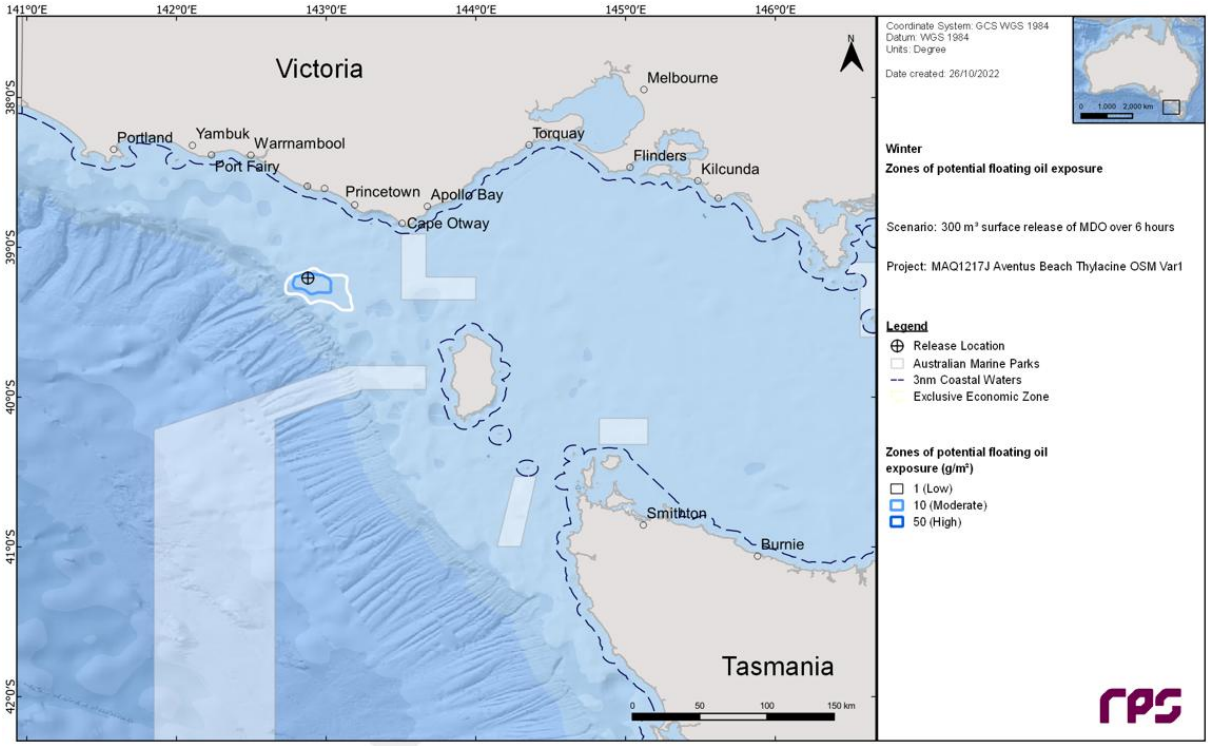


Figure 4-2: 300m^3 Vessel Spill (MDO) Floating Oil Actionable Response Areas (10 g/m^2 floating oil) Otway Basin (Thylacine Field) Winter (RPS 2022; Report MAQ1217J)

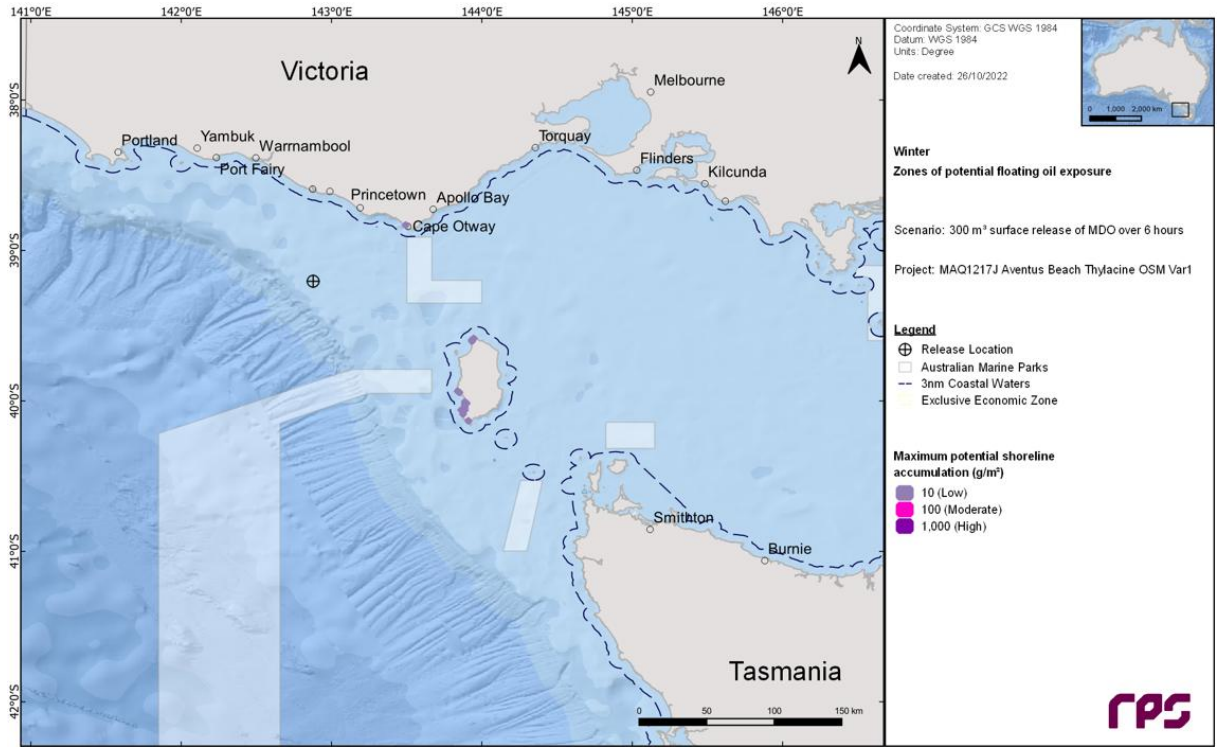


Figure 4-3: 300m^3 Vessel Spill (MDO) Shoreline Loading Actionable Response Areas (100 g/m^2 shoreline accumulation – **not reached in this scenario**) Otway Basin (Thylacine Field) Winter (RPS 2022; Report MAQ1217J)

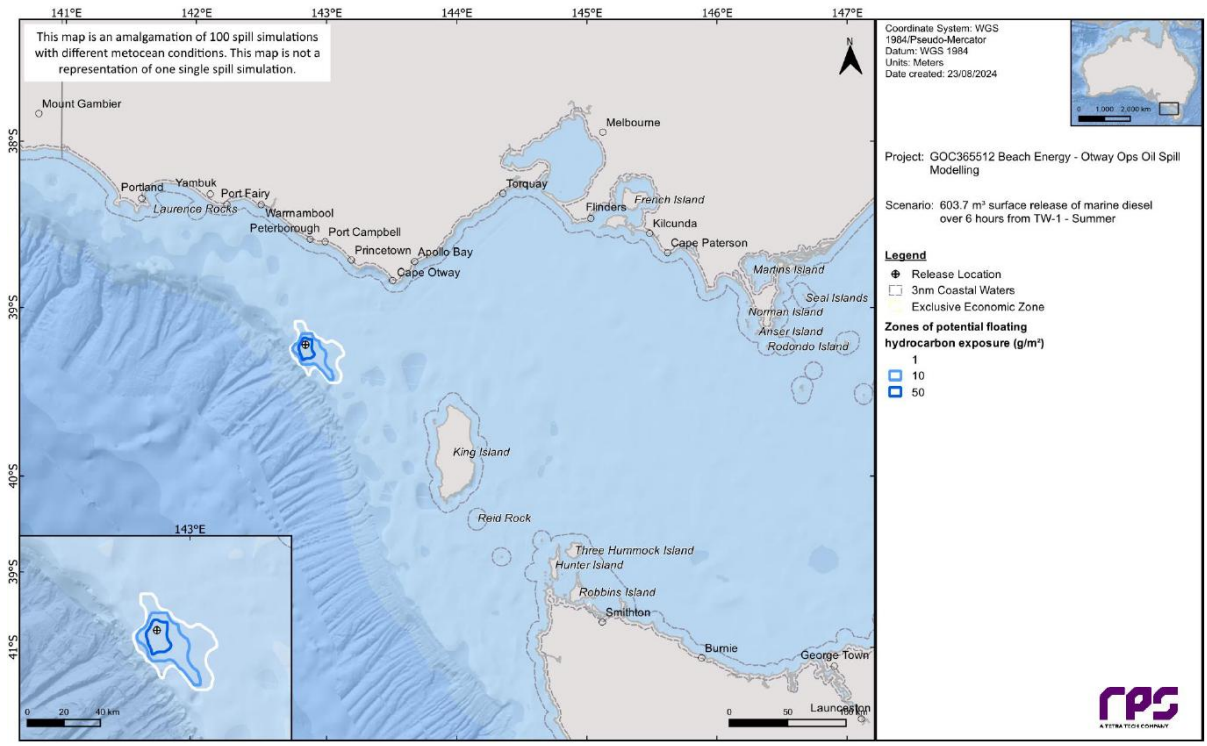


Figure 4-4: 603.7 m^3 Vessel spill (MDO) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Thylacine Field/TW1) Summer (RPS, 2024; Report GOC365512)

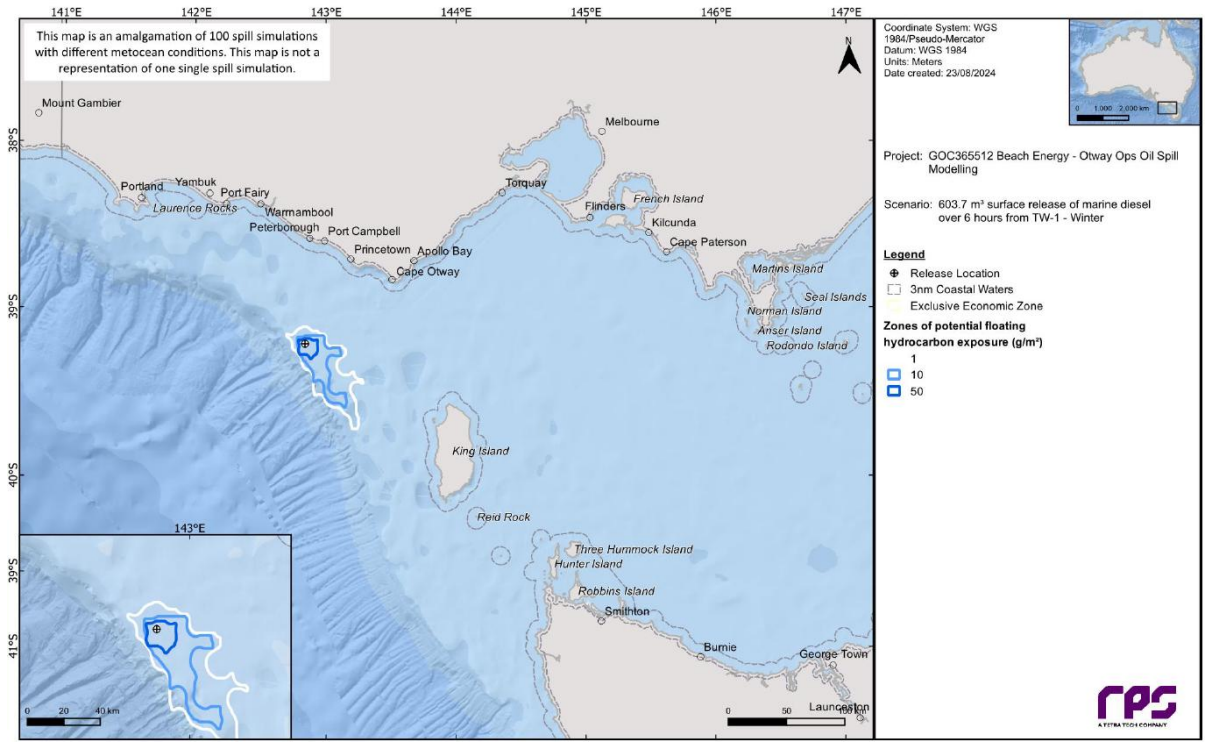


Figure 4-5: 603.7 m^3 Vessel spill (MDO) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Thylacine Field/TW1) Winter (RPS, 2024; Report GOC365512)

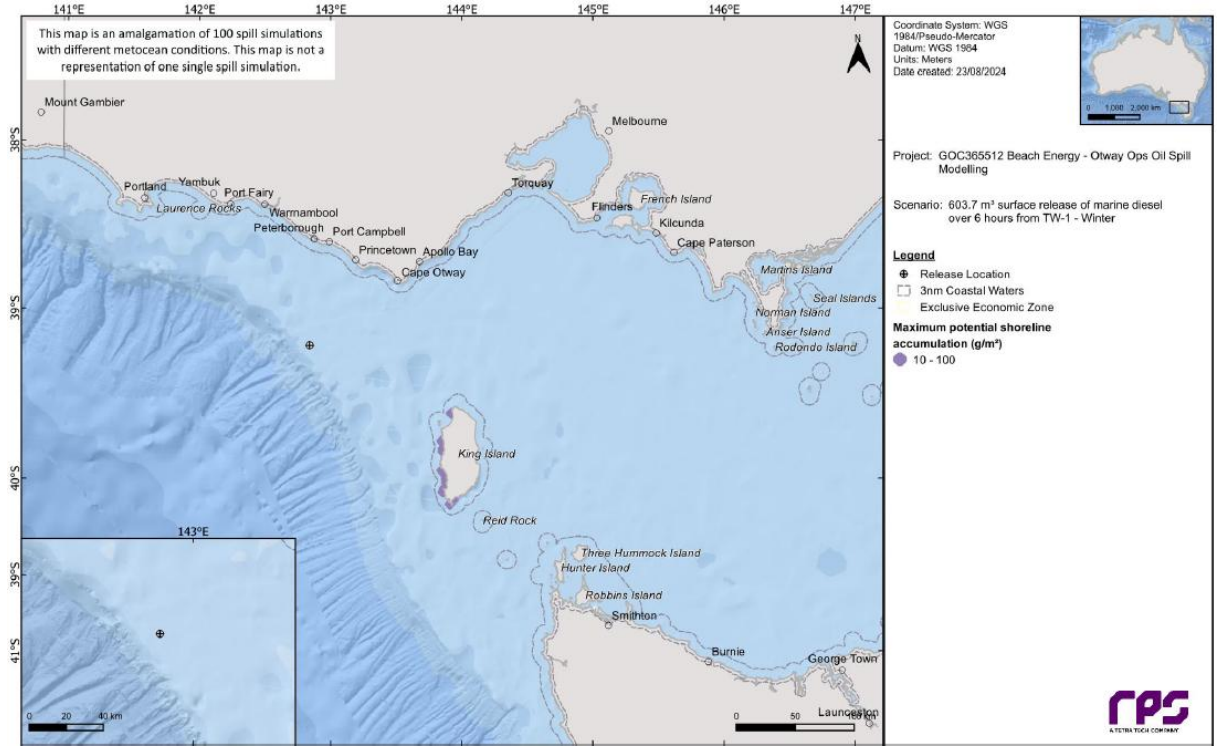


Figure 4-6: 603.7 m^3 Vessel spill (MDO) Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation – **not reached in this scenario**) Otway Basin (Thylacine Field/TW1)) Winter (RPS, 2024; Report GOC365512)

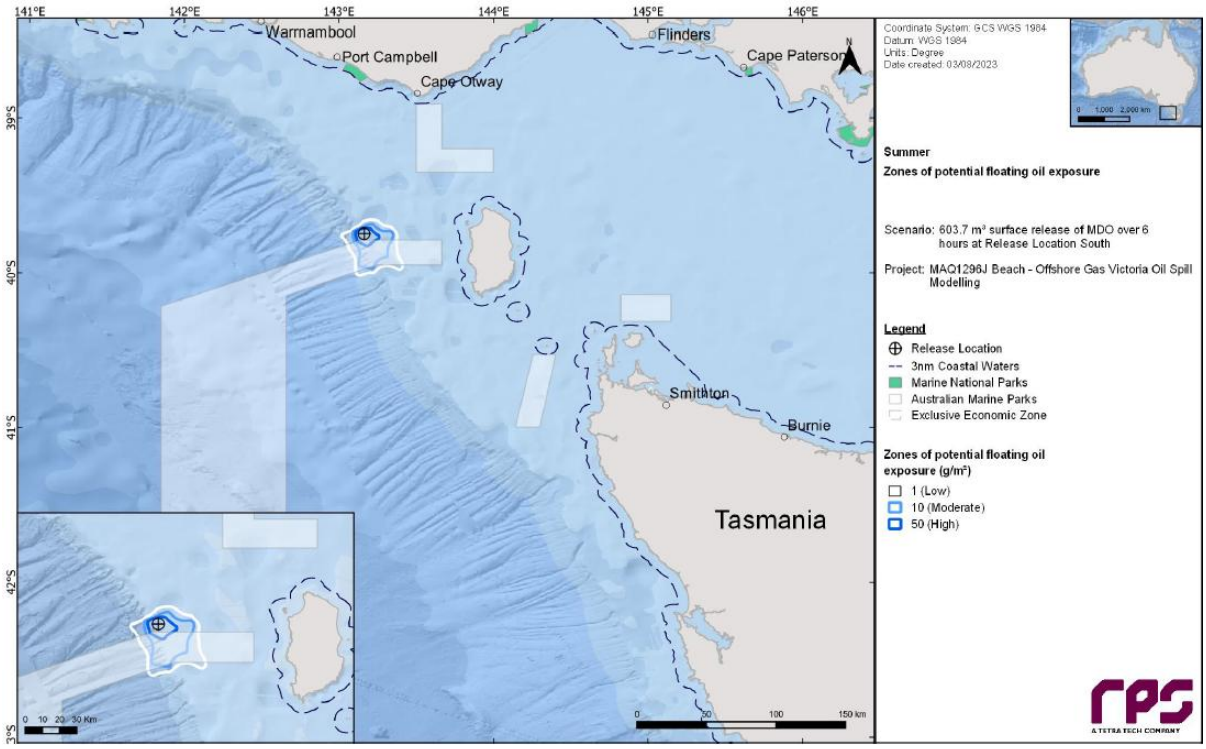


Figure 4-7: 603.7 m^3 Vessel spill (MDO) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Bellerive/Release Location South) Summer (RPS 2023; Report MAQ1296J Rev 1)

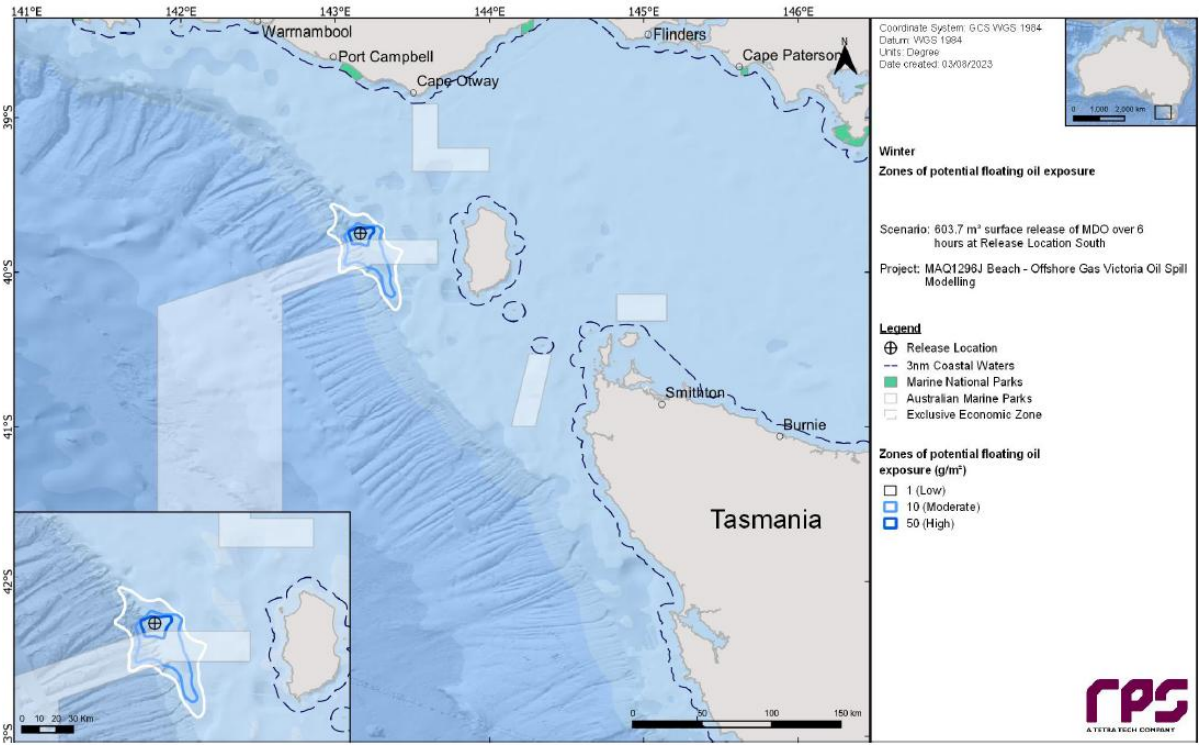


Figure 4-8: 603.7 m^3 Vessel spill (MDO) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Bellerive/Release Location South) Winter (RPS 2023; Report MAQ1296J Rev 1)

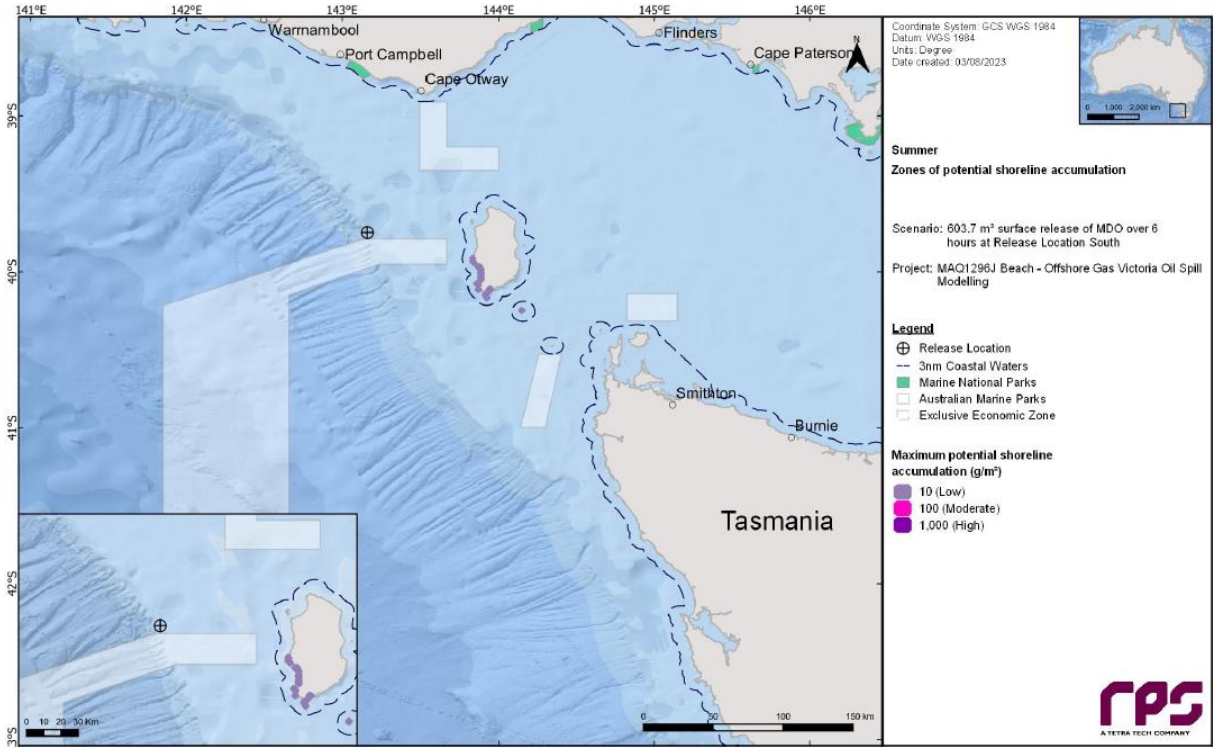


Figure 4-9: 603.7 m^3 Vessel spill (MDO) Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation – **not reached in this scenario**) Otway Basin (Bellerive/Release Location South) Summer (RPS 2023; Report MAQ1296J Rev 1)

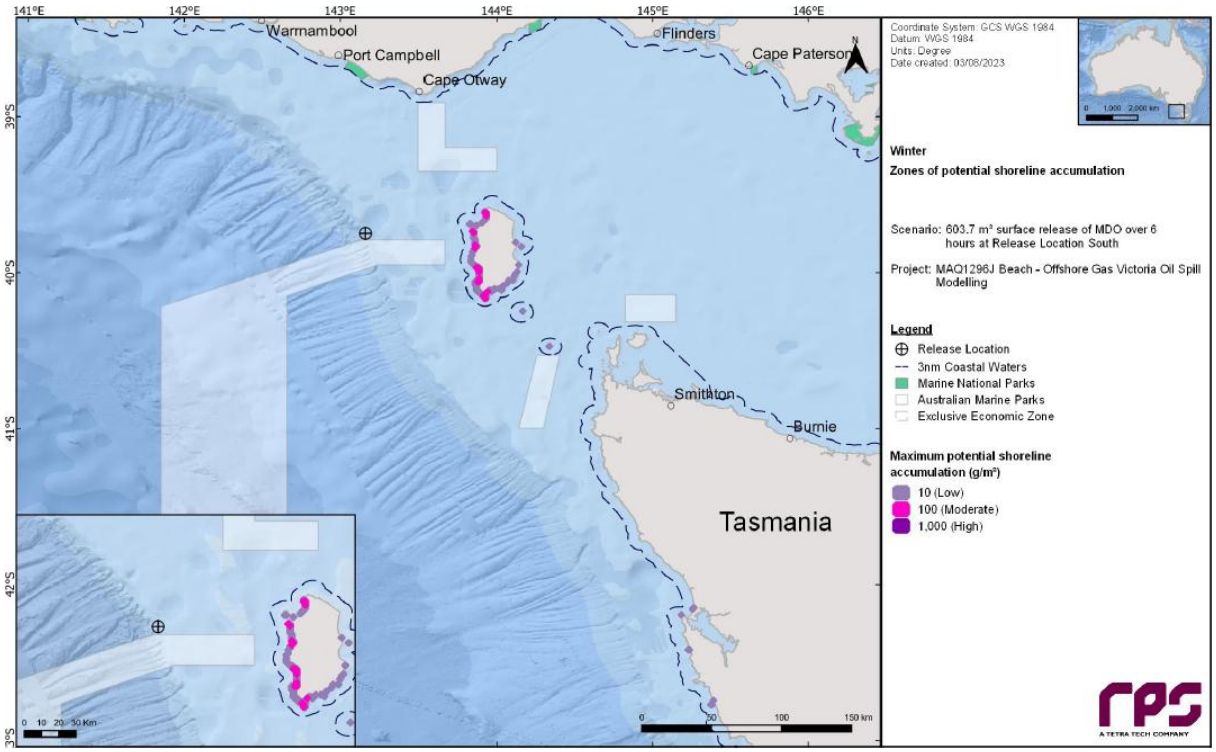


Figure 4-10: 603.7 m^3 Vessel spill (MDO) Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation) Otway Basin (Bellerive/Release Location South) Winter (RPS 2023; Report MAQ1296J Rev 1)

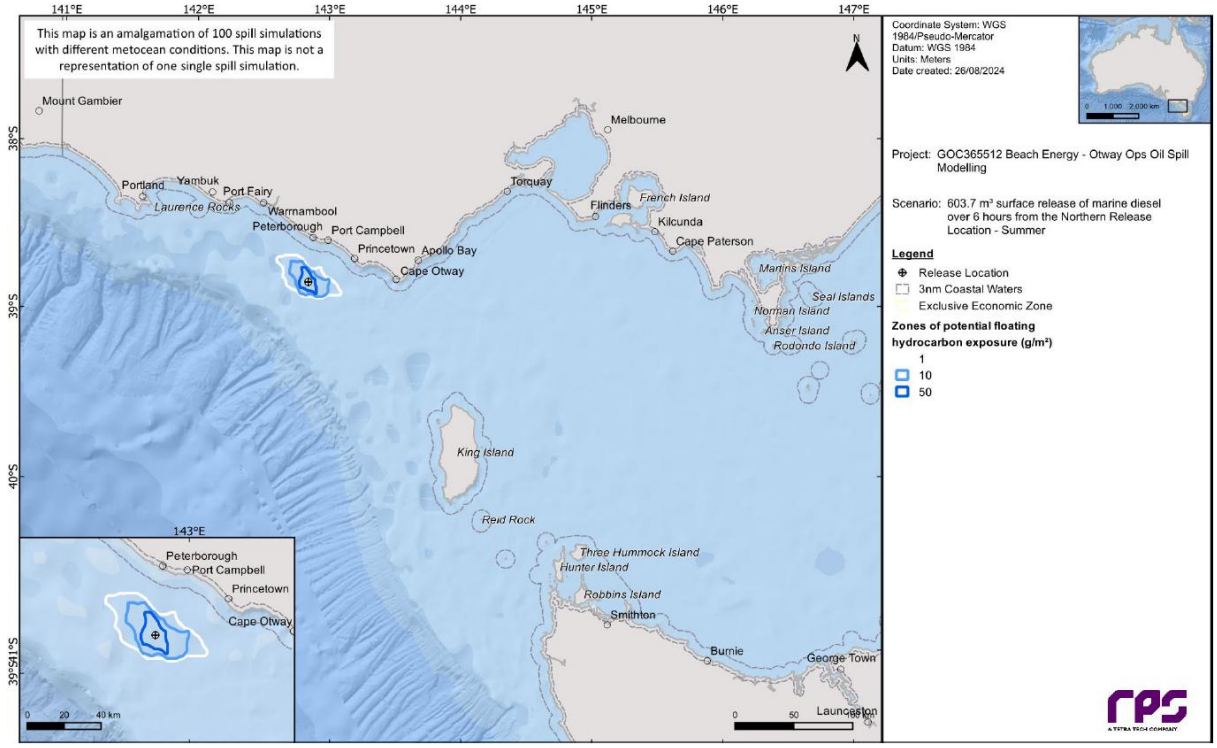


Figure 4-11: 603.7 m^3 Vessel spill (MDO) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Doris/Release Location North) Summer (RPS, 2024; Report GOC365512)

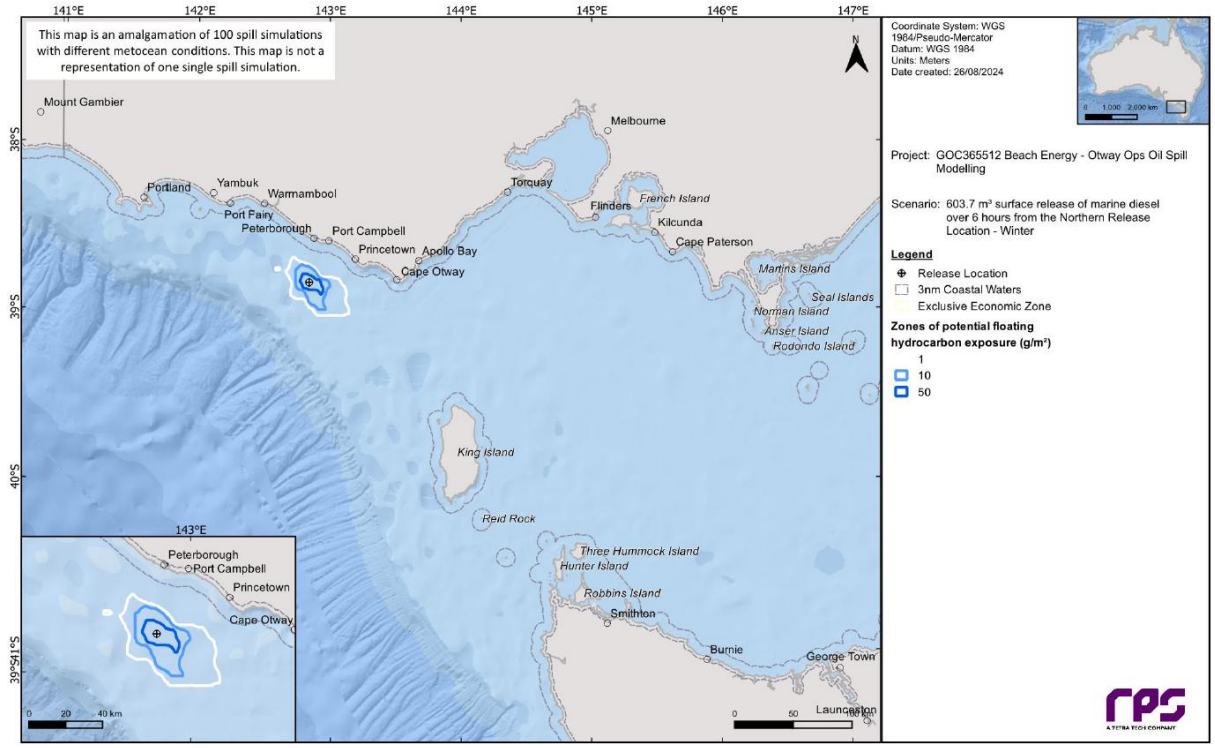


Figure 4-12: 603.7 m^3 Vessel spill (MDO) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Doris/Release Location North) Winter (RPS, 2024; Report GOC365512)

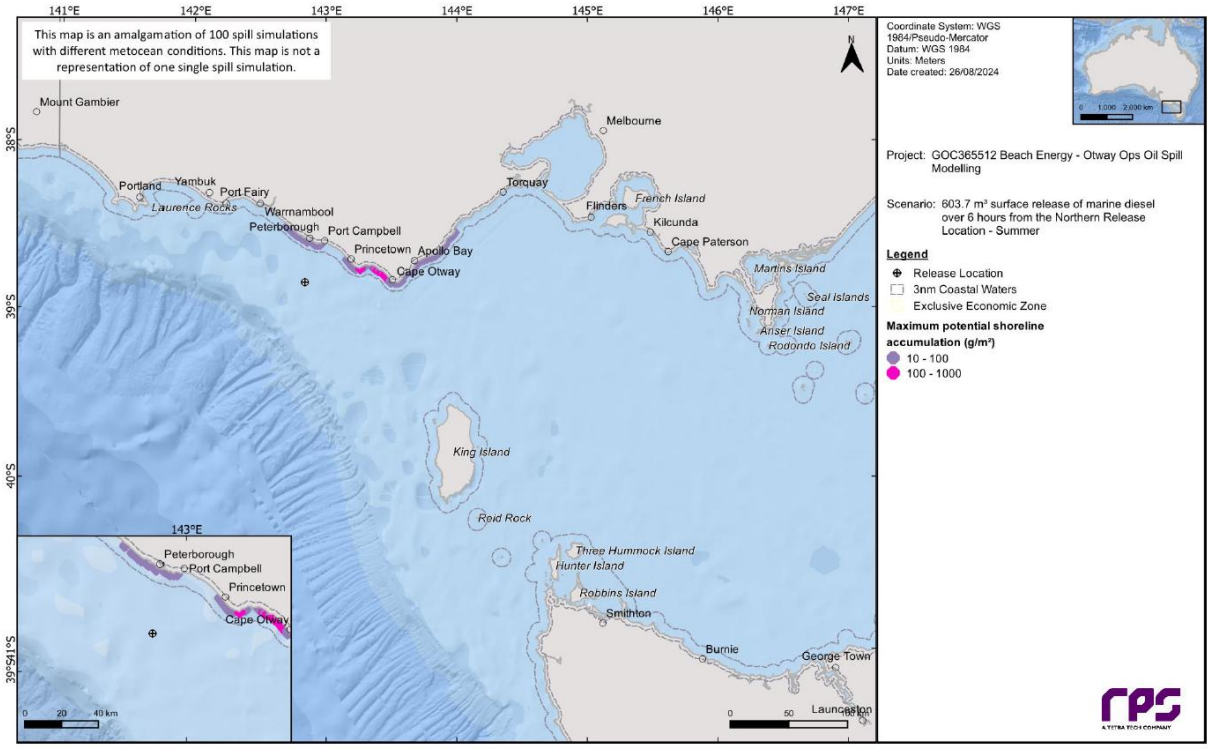


Figure 4-13: 603.7 m^3 Vessel spill (MDO) Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation) Otway Basin (Doris/Release Location North) Summer (RPS, 2024; Report GOC365512)

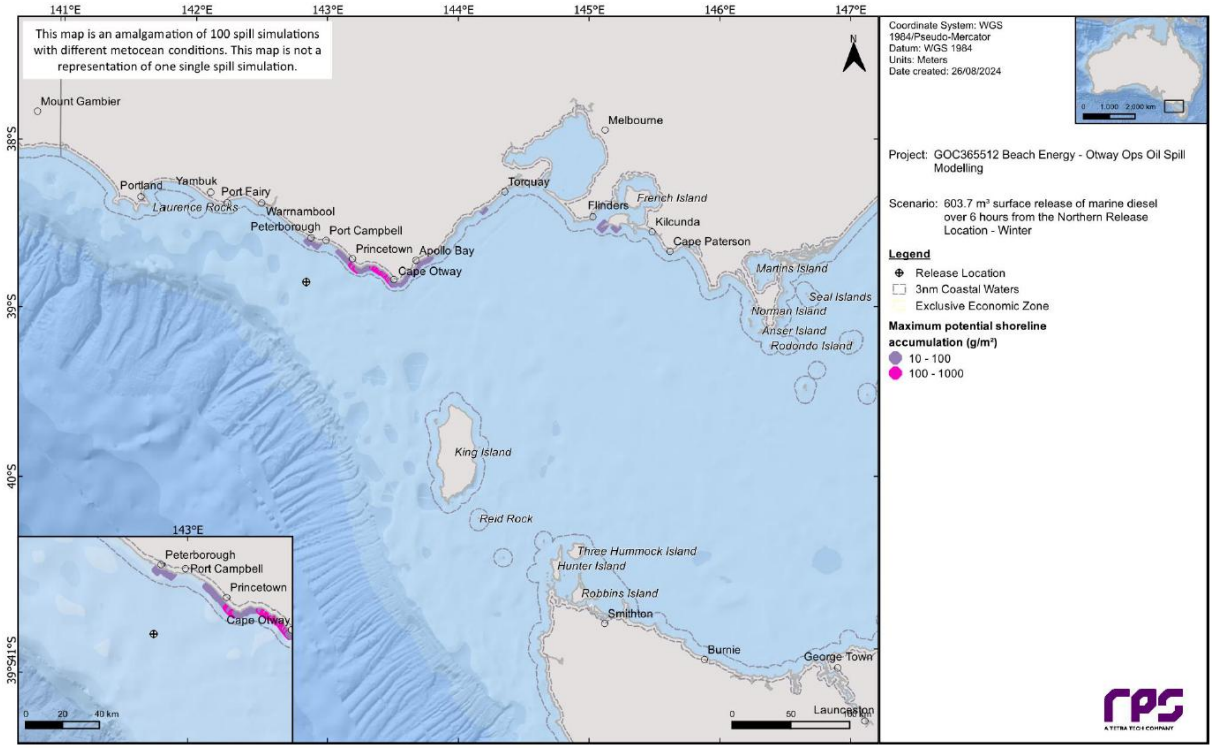


Figure 4-14: 603.7 m^3 Vessel spill (MDO) Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation) Otway Basin (Doris/Release Location North) Winter (RPS, 2024; Report GOC365512)

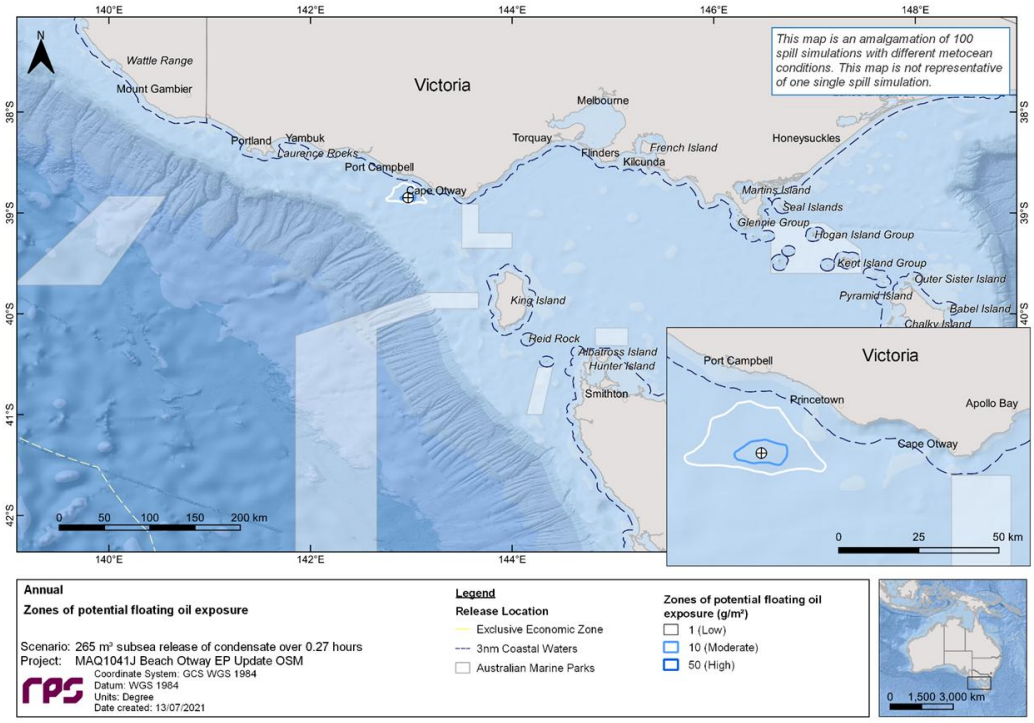


Figure 4-15: 265 m^3 Pipeline Rupture Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (13 nm from shore) Annualised Conditions (RPS, 2021; Report MAQ1041J)

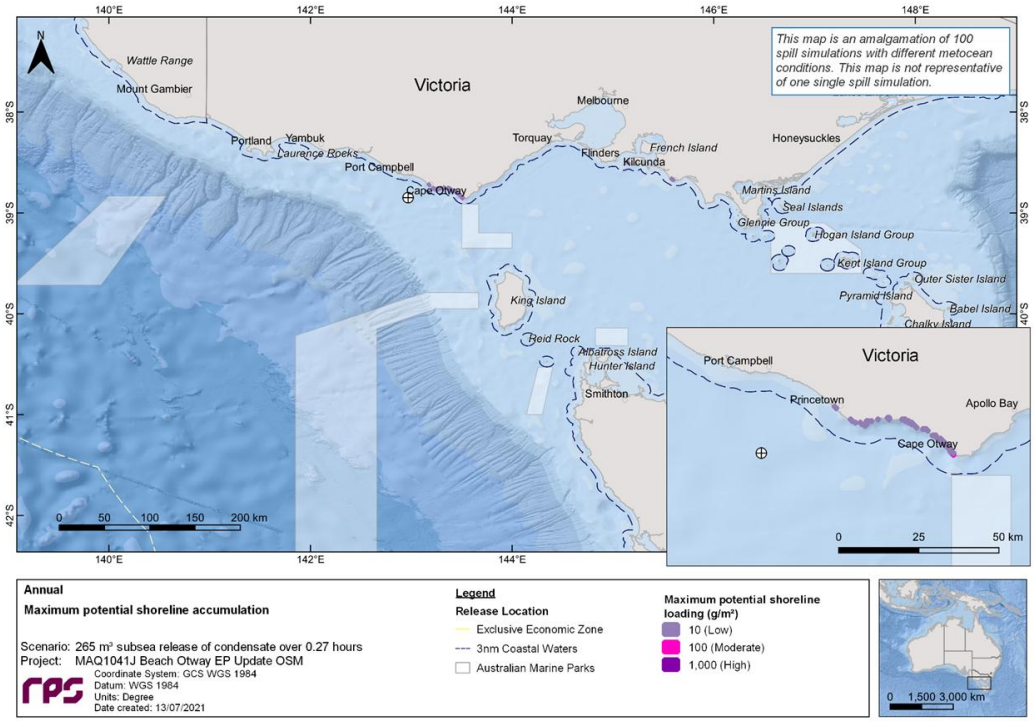


Figure 4-16: 265 m^3 Pipeline Rupture Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation – **not reached in this scenario**) Otway Basin (13 nm from shore) Annualised Conditions (RPS, 2021; Report MAQ1041J)

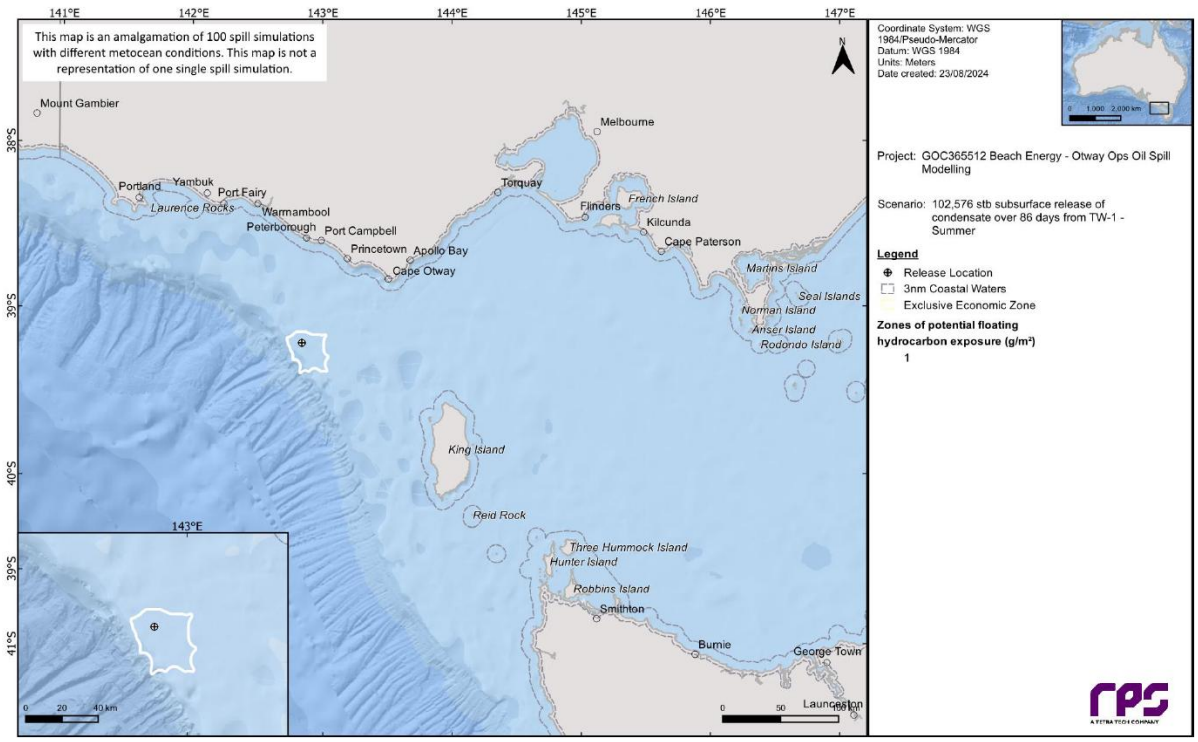


Figure 4-17: 1,198 bbl/day LOWC (Producing Wells) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Thylacine Field (TW1)) Summer (RPS, 2024; Report GOC365512)

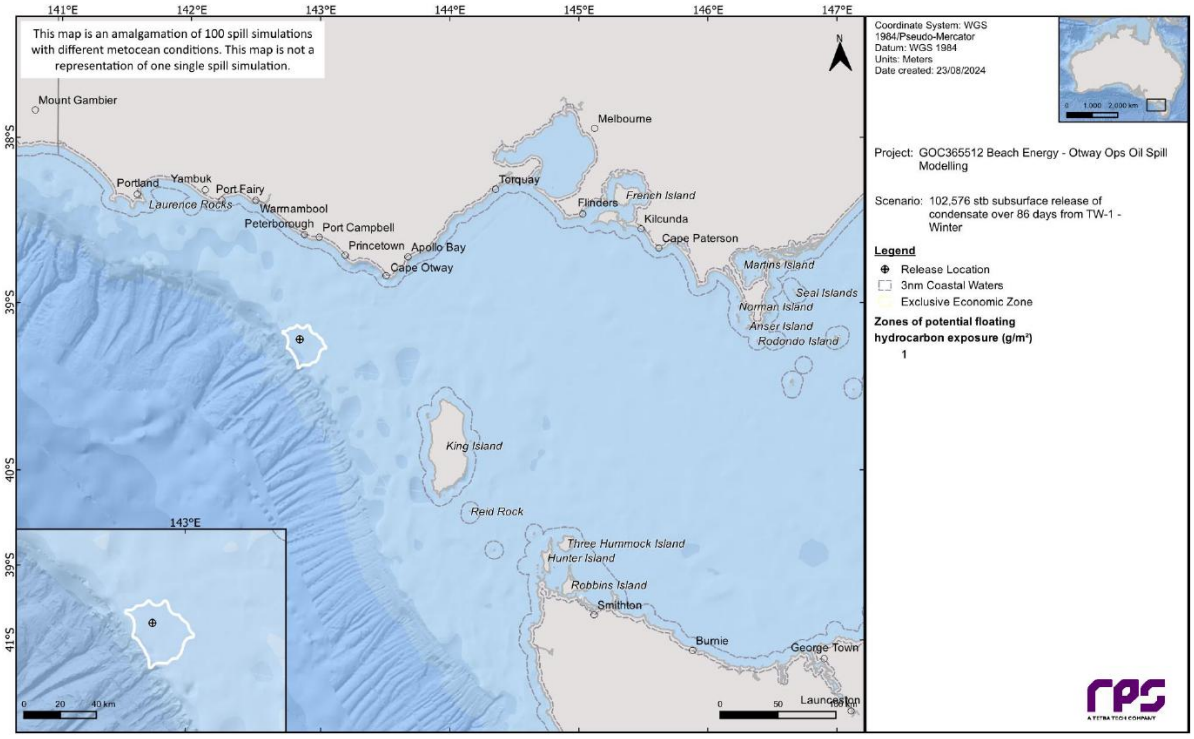


Figure 4-18: 1,198 bbl/day LOWC (Producing Wells) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Thylacine Field (TW1)) Winter (RPS, 2024; Report GOC365512)

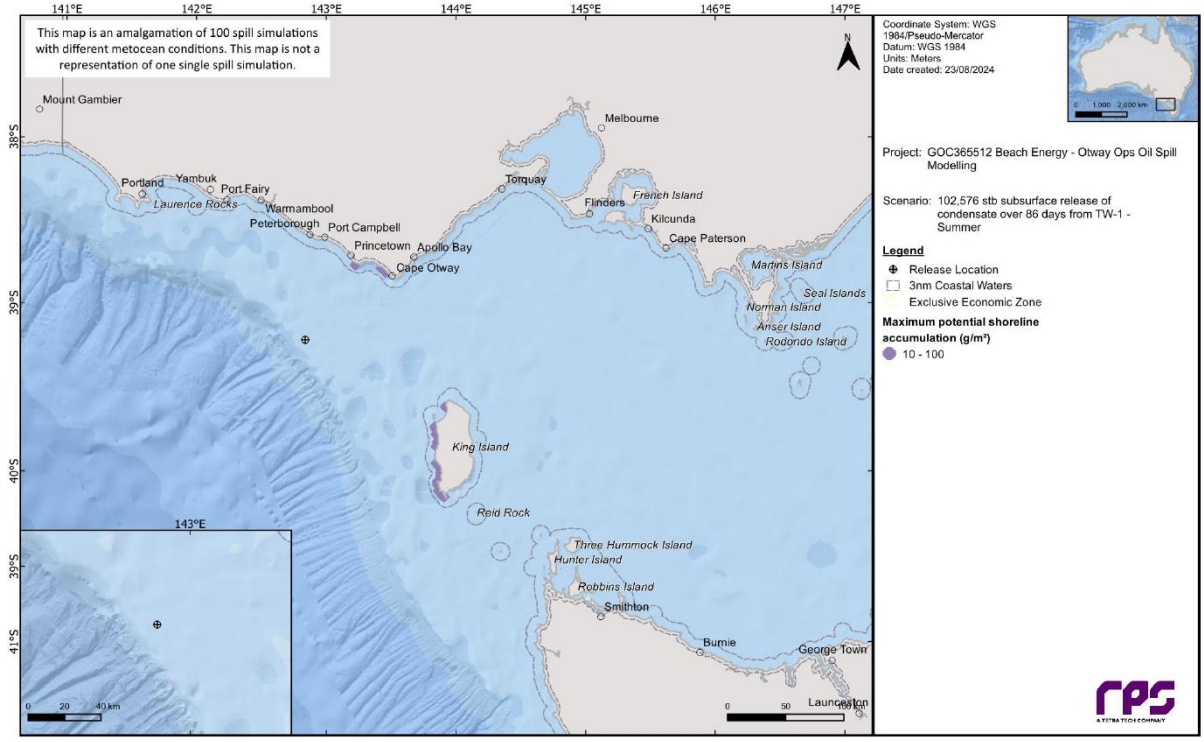


Figure 4-19: 1,198 bbl/day LOWC (Producing Wells) Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation **– not reached in this scenario**) Otway Basin (Thylacine Field (TW1)) Summer (RPS, 2024; Report GOC365512)

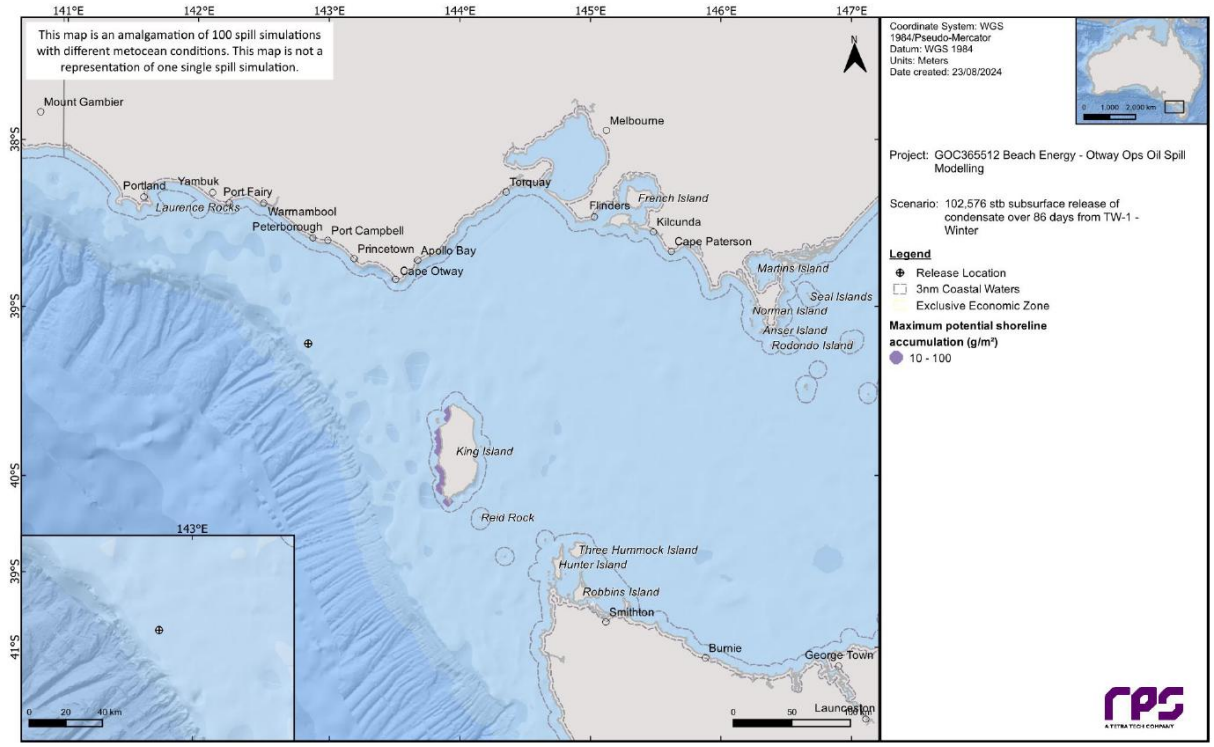


Figure 4-20: 1,198 bbl/day LOWC (Producing Wells) Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation **– not reached in this scenario**) Otway Basin (Thylacine Field (TW1)) Winter (RPS, 2024; Report GOC365512)

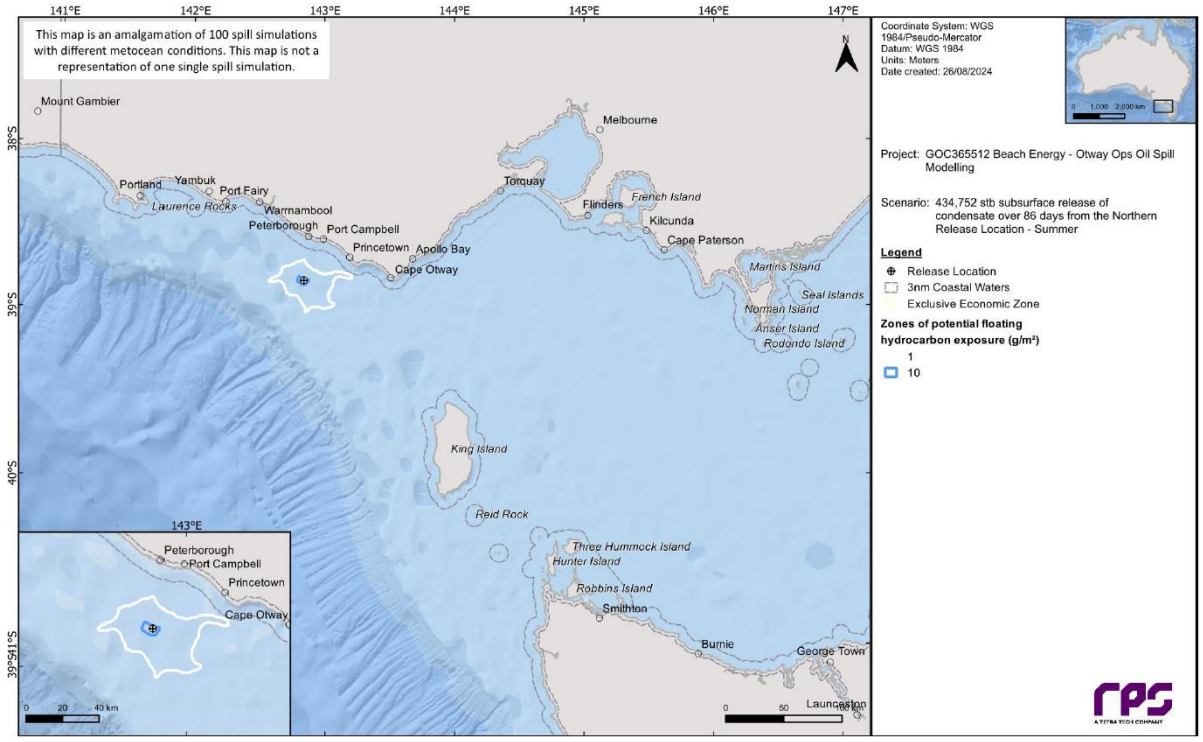


Figure 4-21: 5,055 bbl/day LOWC Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Doris/Northern Release Location) Summer (RPS, 2024; Report GOC365512)

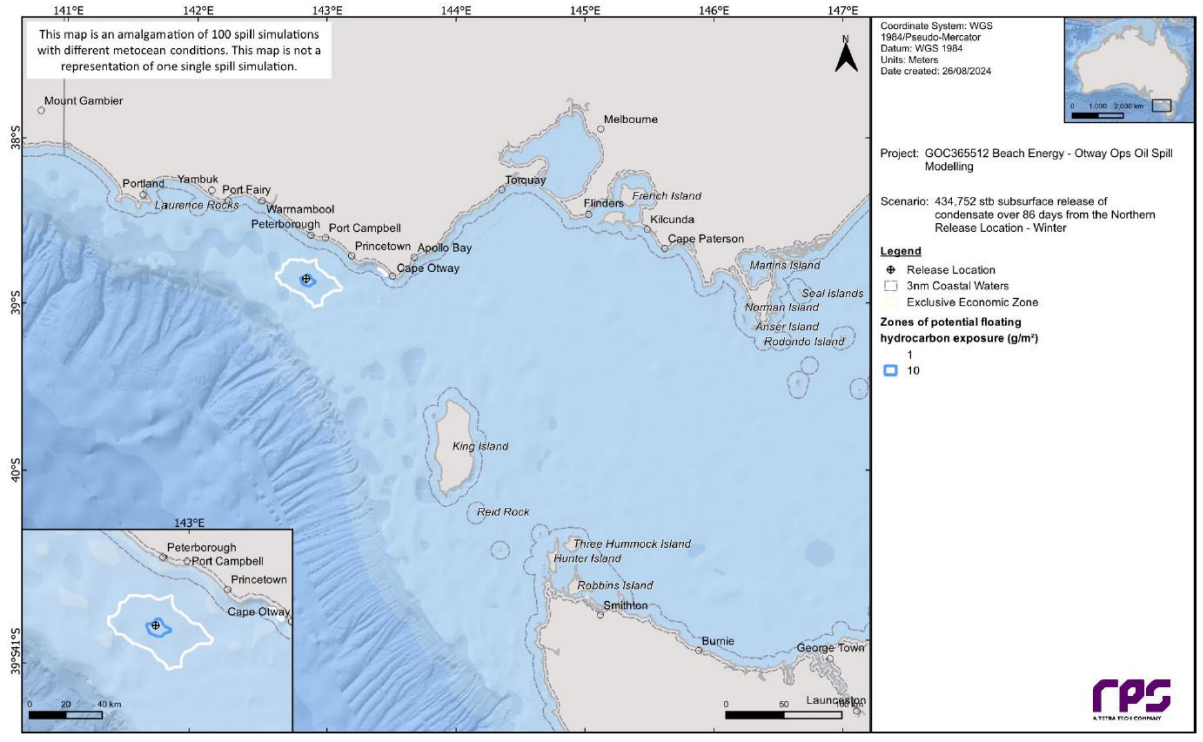


Figure 4-22: 5,055 bbl/day LOWC Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Doris/Northern Release Location) Winter (RPS, 2024; Report GOC365512)

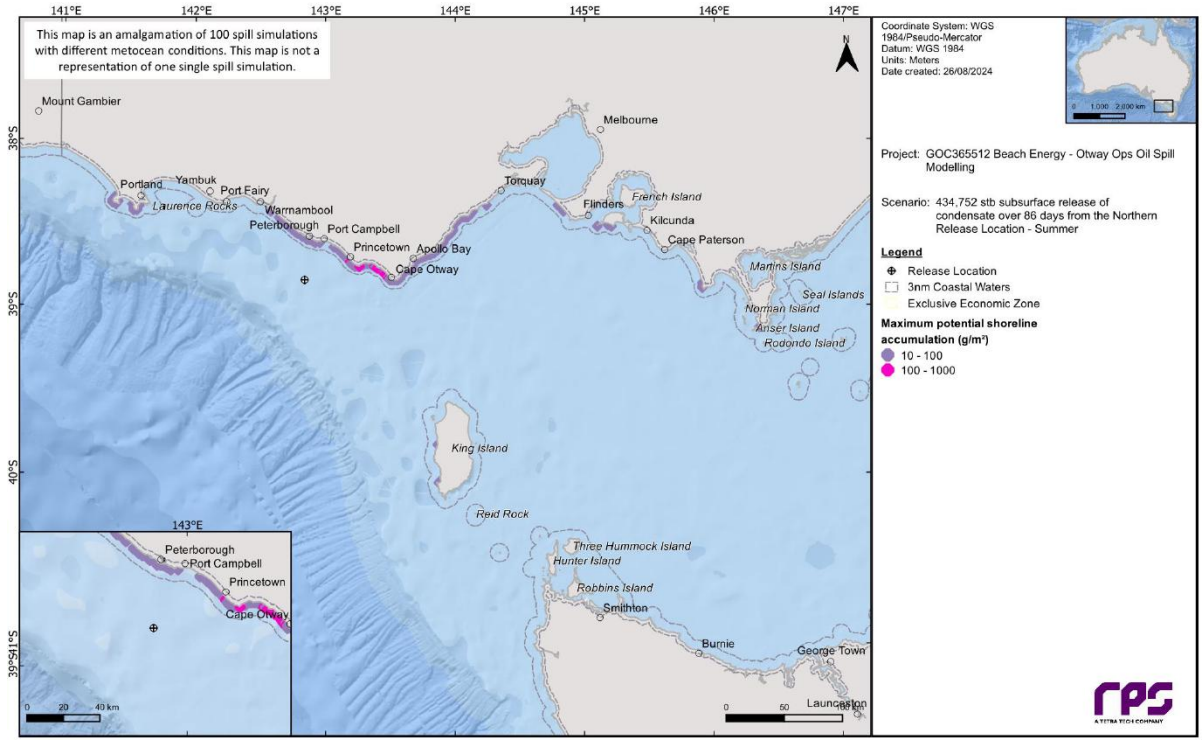


Figure 4-23: 5,055 bbl/day LOWC Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation) Otway Basin (Doris/Northern Release Location) Summer (RPS, 2024; Report GOC365512)

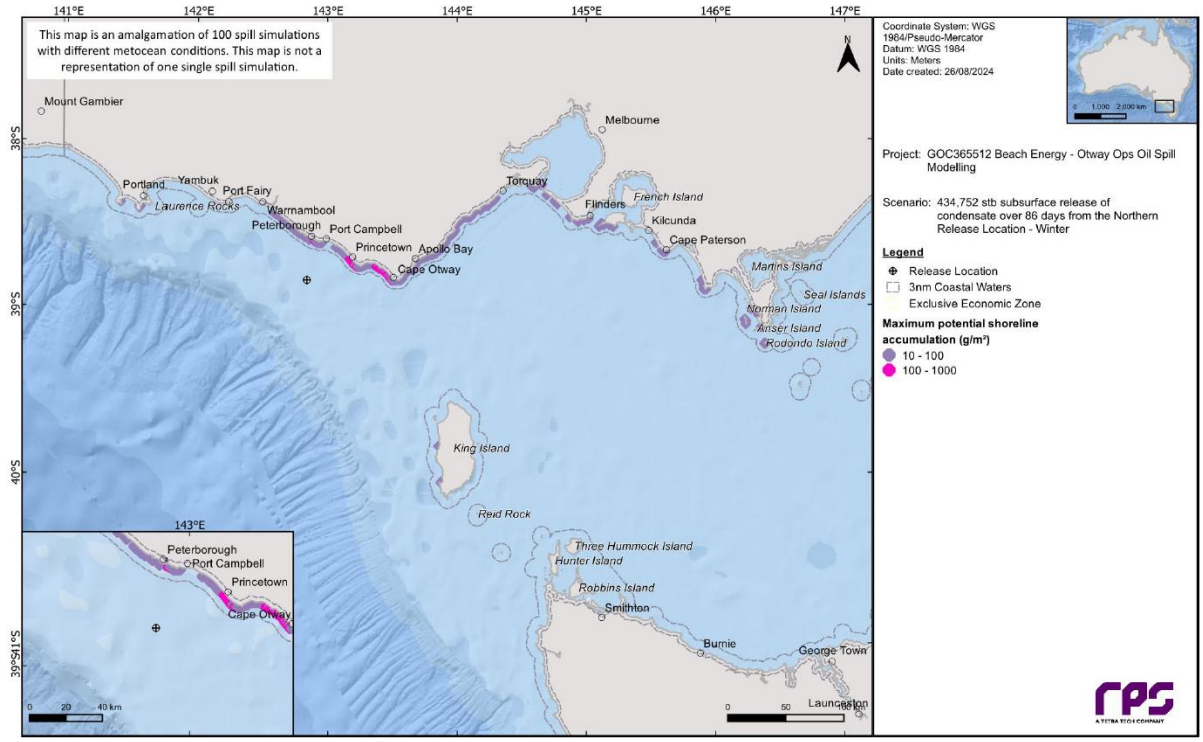


Figure 4-24: 5,055 bbl/day LOWC Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation) Otway Basin (Doris/Northern Release Location) Winter (RPS, 2024; Report GOC365512)

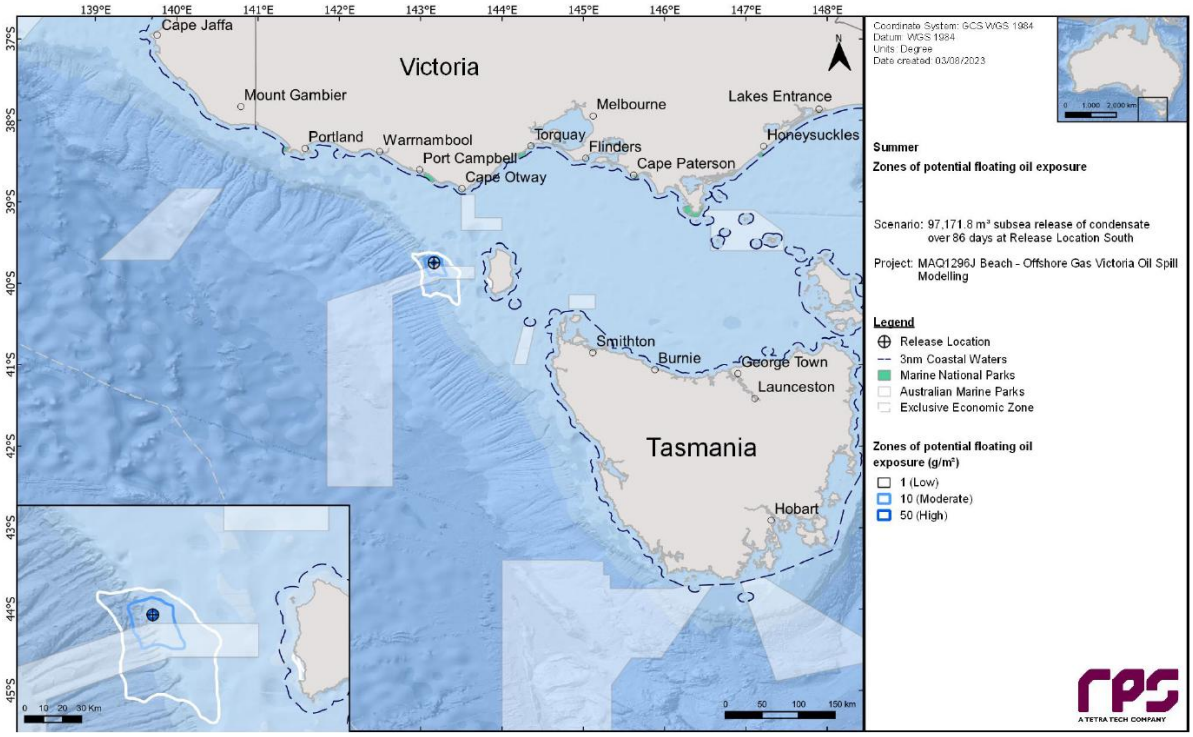


Figure 4-25: 7,106 bbl/day LOWC Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Bellerive/Southern Release Location) Summer (RPS 2023; Report MAQ1296J Rev 1)

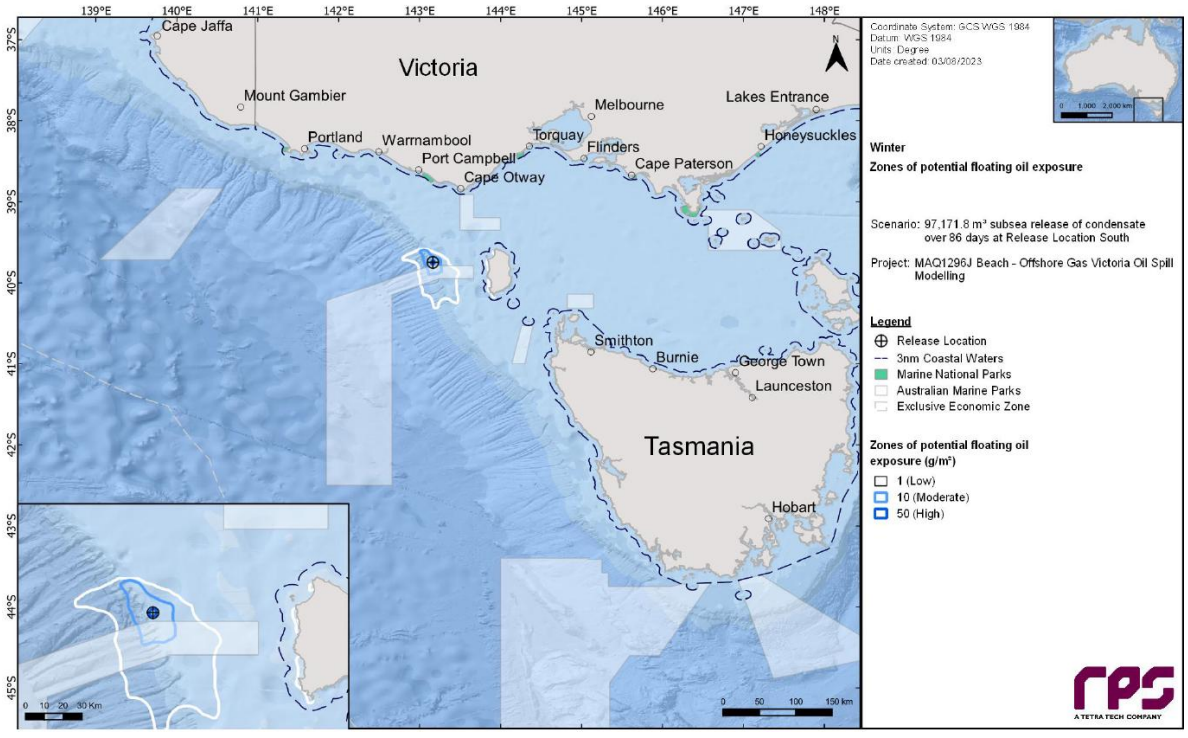


Figure 4-26: 7,106 bbl/day LOWC Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Bellerive/Southern Release Location) Winter (RPS 2023; Report MAQ1296J Rev 1)

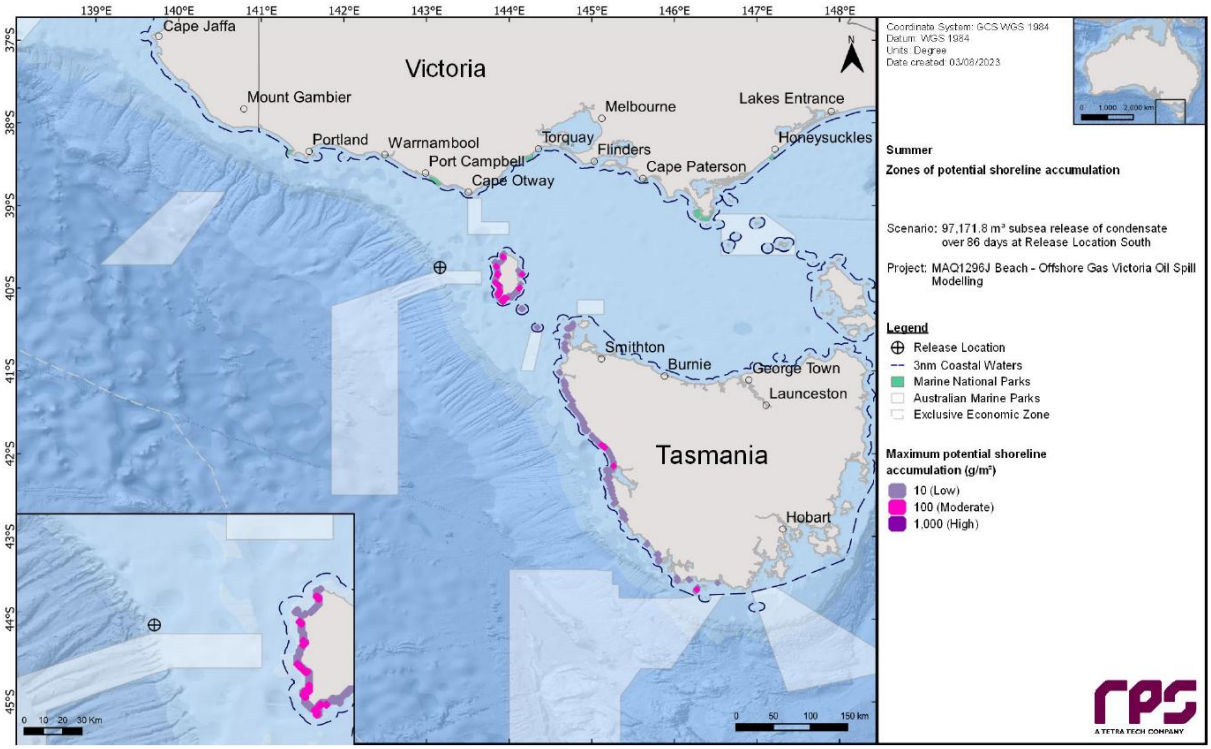


Figure 4-27: 7,106 bbl/day LOWC Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation) Otway Basin (Bellerive/Release Location South) Summer (RPS 2023; Report MAQ1296J Rev 1)

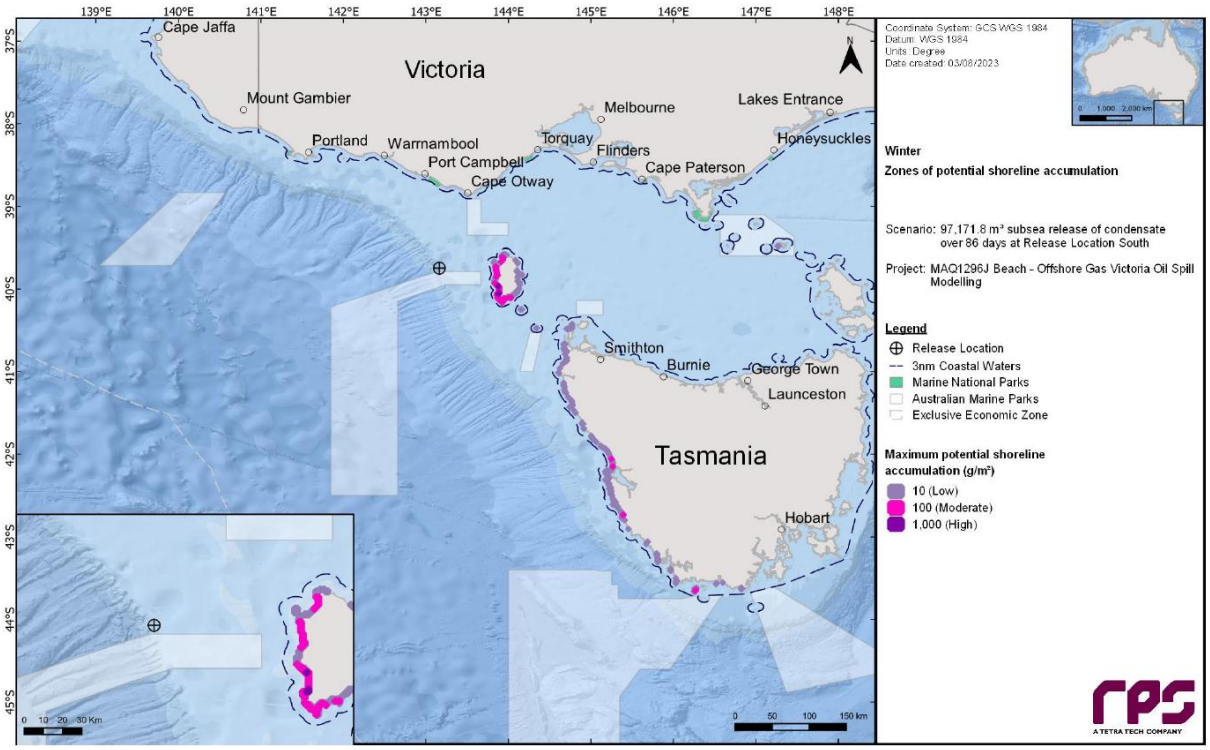


Figure 4-28: 7,106 bbl/day LOWC Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation) Otway Basin (Bellerive/Release Location South) Winter (RPS 2023; Report MAQ1296J Rev 1)

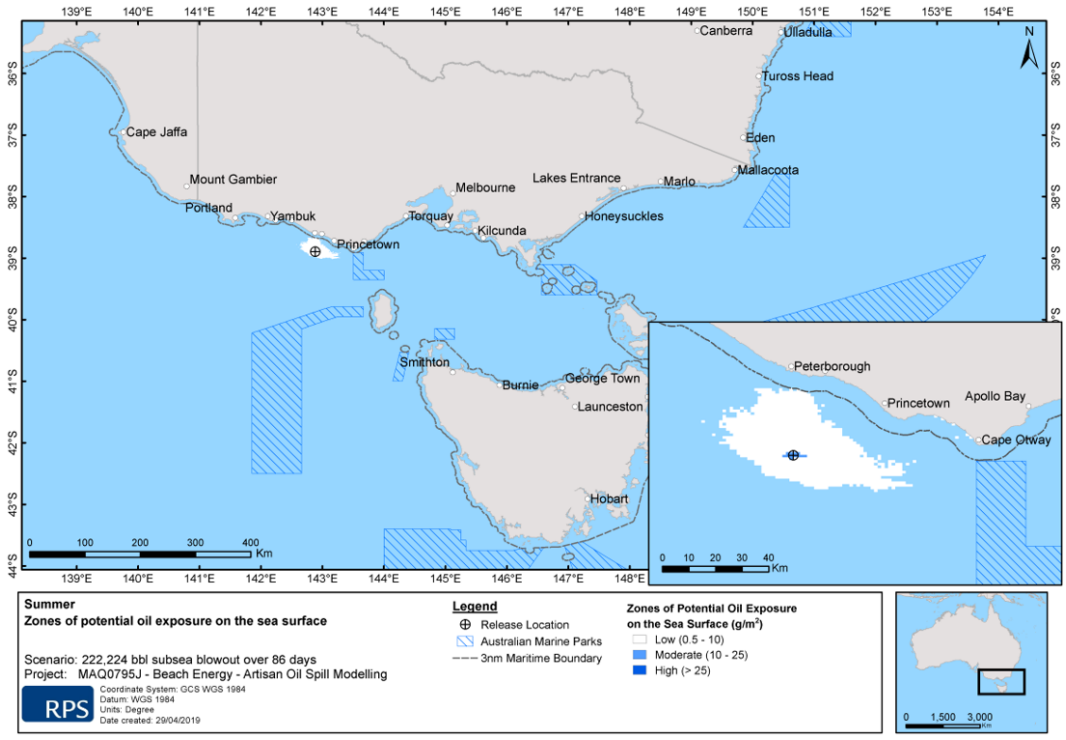


Figure 4-29: 2,584 bbl/day LOWC (Drilling 8-1/2" open-hole) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Artisan-1 Location) Summer (RPS 2019; Report MAQ0828J Rev 1)

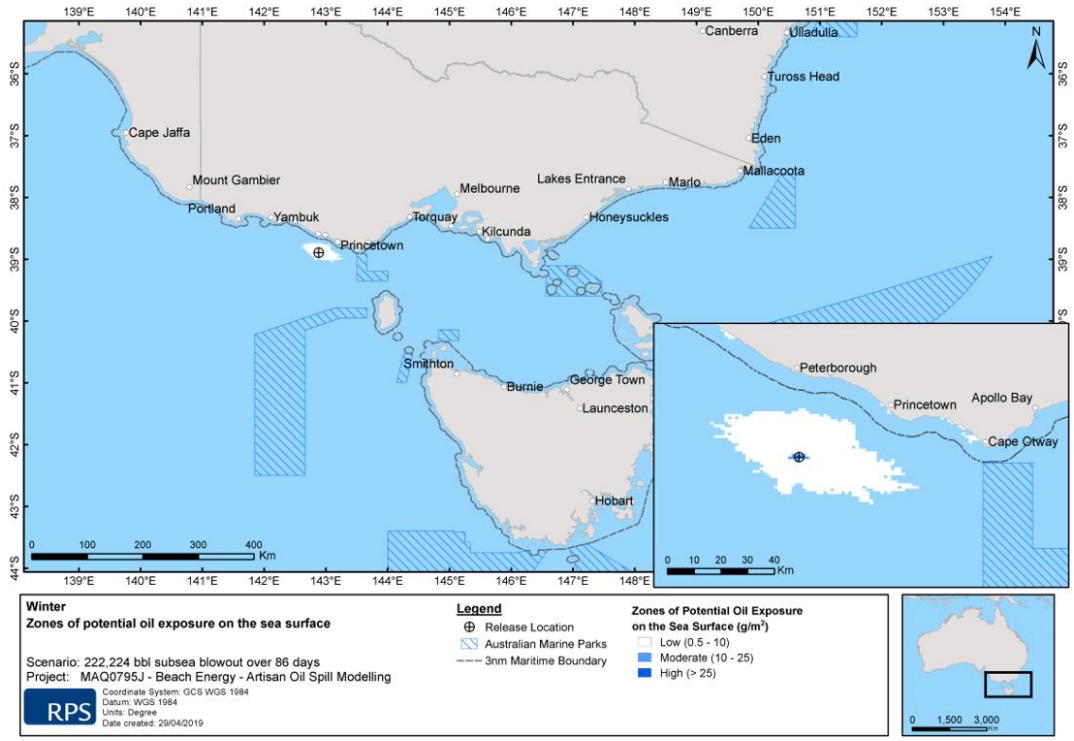


Figure 4-30: 2,584 bbl/day LOWC (Drilling 8-1/2" open-hole) Floating Oil Actionable Response Areas (>10 g/m^2 floating oil) Otway Basin (Artisan-1 Location) Summer (RPS 2019; Report MAQ0828J Rev 1)

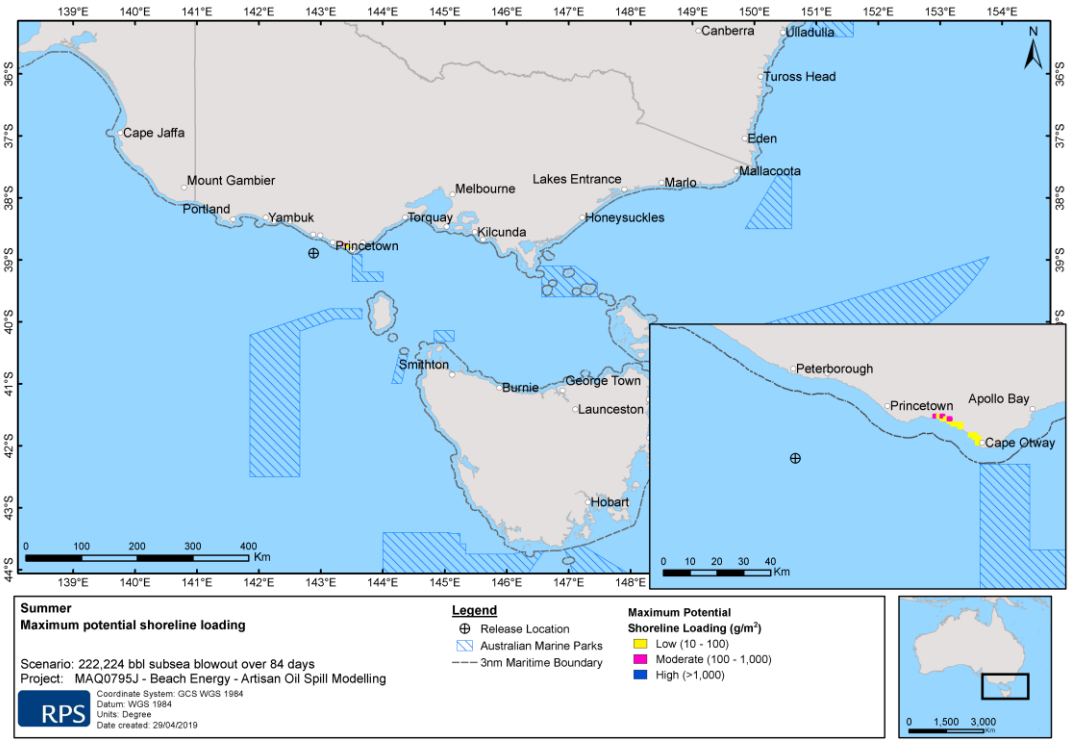


Figure 4-31: 2,584 bbl/day LOWC (Drilling 8-1/2" open-hole) Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation) Otway Basin (Artisan-1 Location) Summer (RPS 2019; Report MAQ0828J Rev 1)

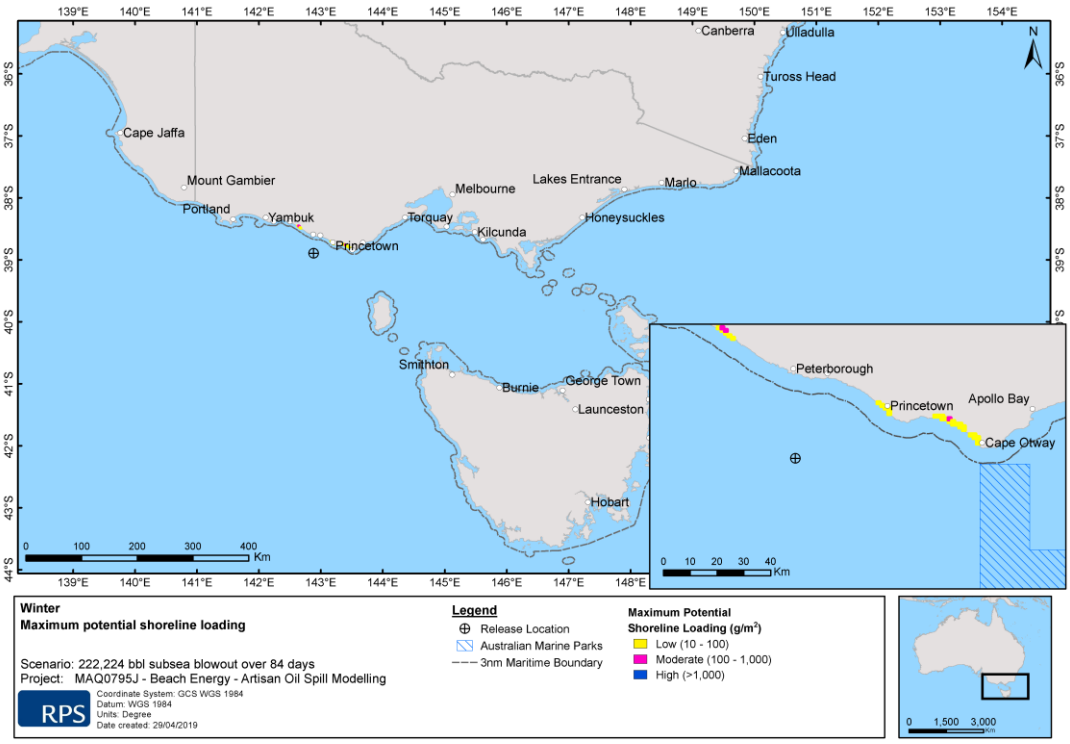


Figure 4-32: 2,584 bbl/day LOWC (Drilling 8-1/2" open-hole) Shoreline Loading Actionable Response Areas (>100 g/m^2 shoreline accumulation) Otway Basin (Artisan-1 Location) Winter (RPS 2019; Report MAQ0828J Rev 1)

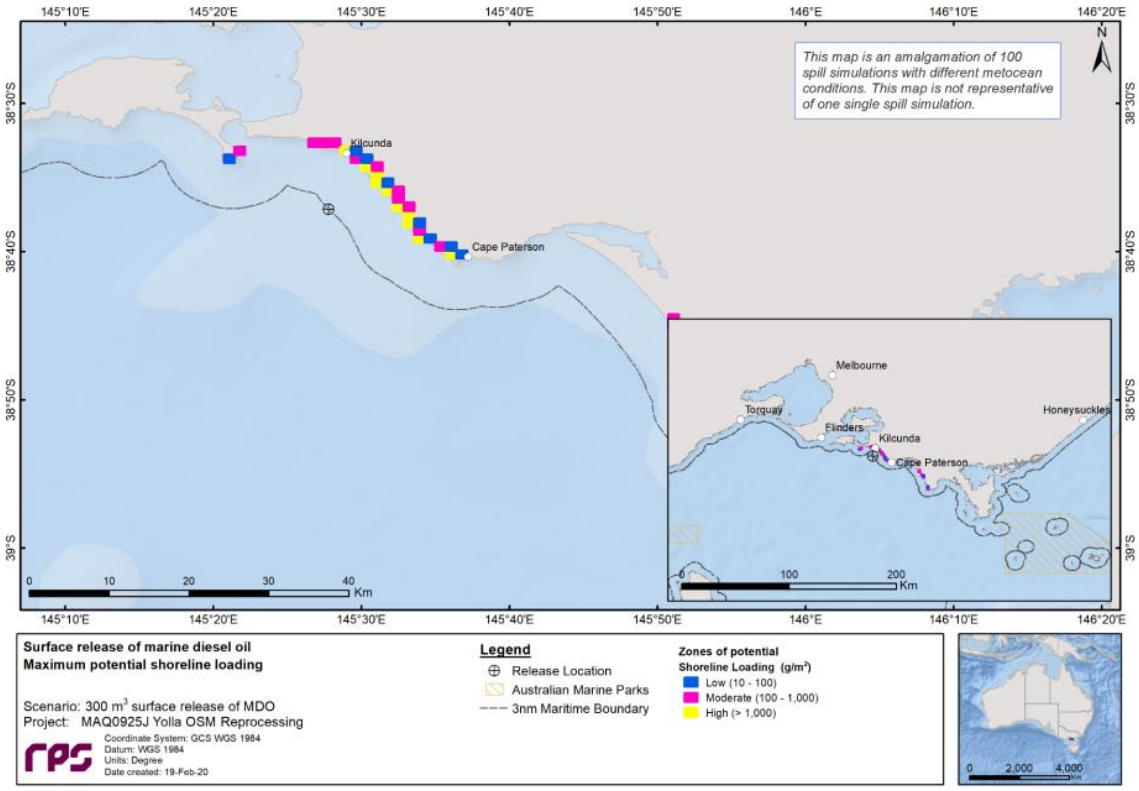


Figure 4-33: 300 m^3 Vessel spill (MDO) at 3 nm Maritime Boundary Actionable Response Areas Bass Basin (RPS 2020; Report MAQ0925J)

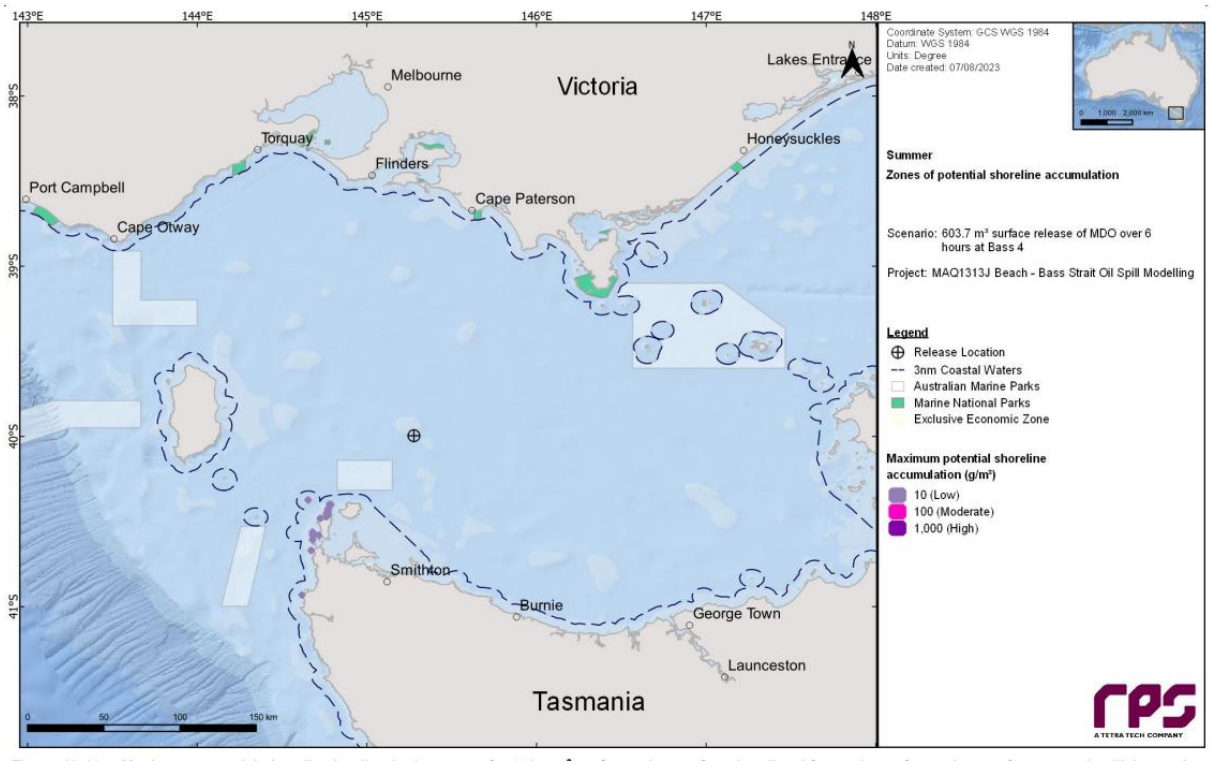


Figure 4-34: 603.7 m^3 Vessel Spill (MDO) Actionable Response Areas Bass Basin Summer (RPS 2023; Report MAQ1313J)

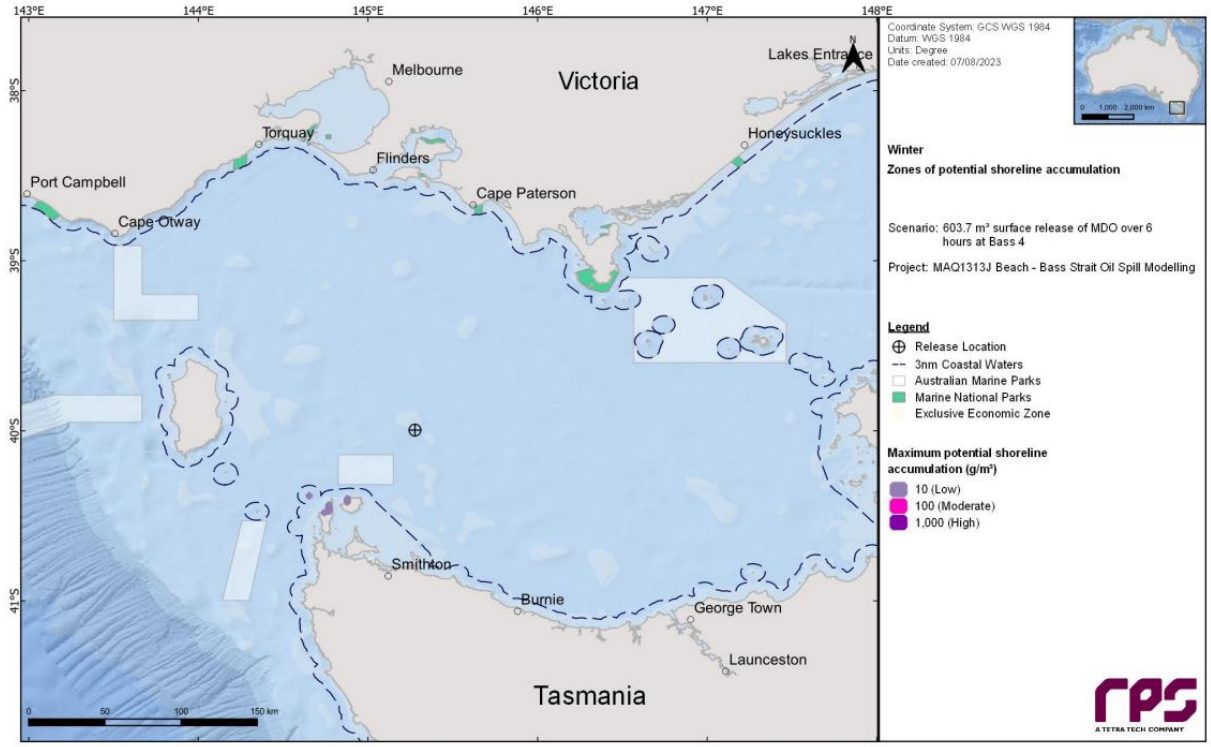


Figure 4-35: 603.7 m^3 Vessel Spill (MDO) Actionable Response Areas Bass Basin Winter (RPS 2023; MAQ1313J)

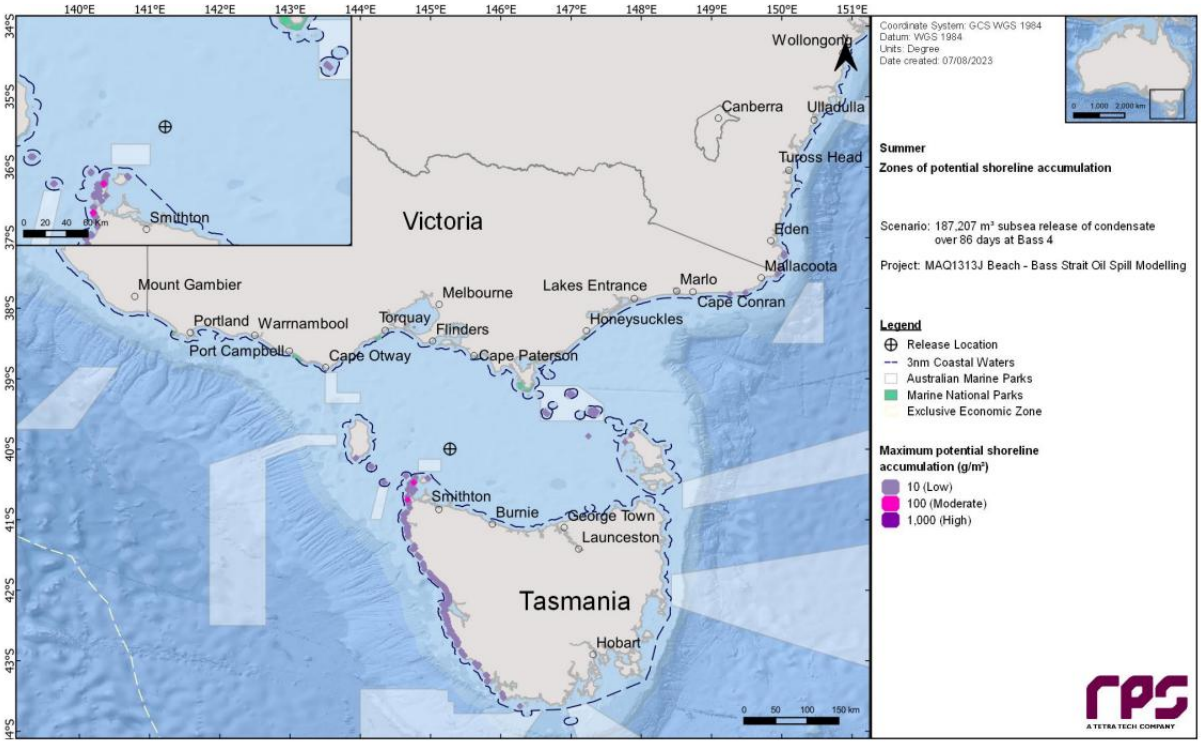


Figure 4-36: 1,177,496 bbl Condensate LOWC Actionable Response Areas Bass Basin Summer (RPS 2023; MAQ1313J)

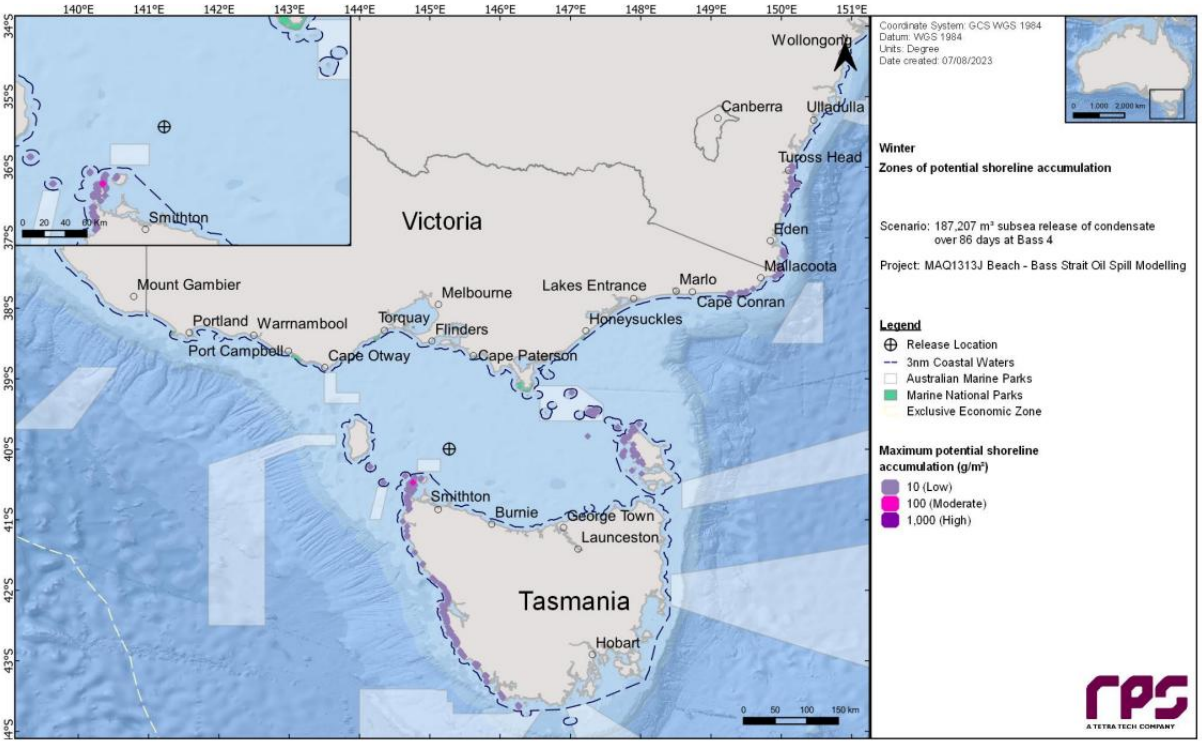


Figure 4-37: 1,177,496 bbl Condensate LOWC Actionable Response Areas Bass Basin Winter (RPS 2023; MAQ1313J)

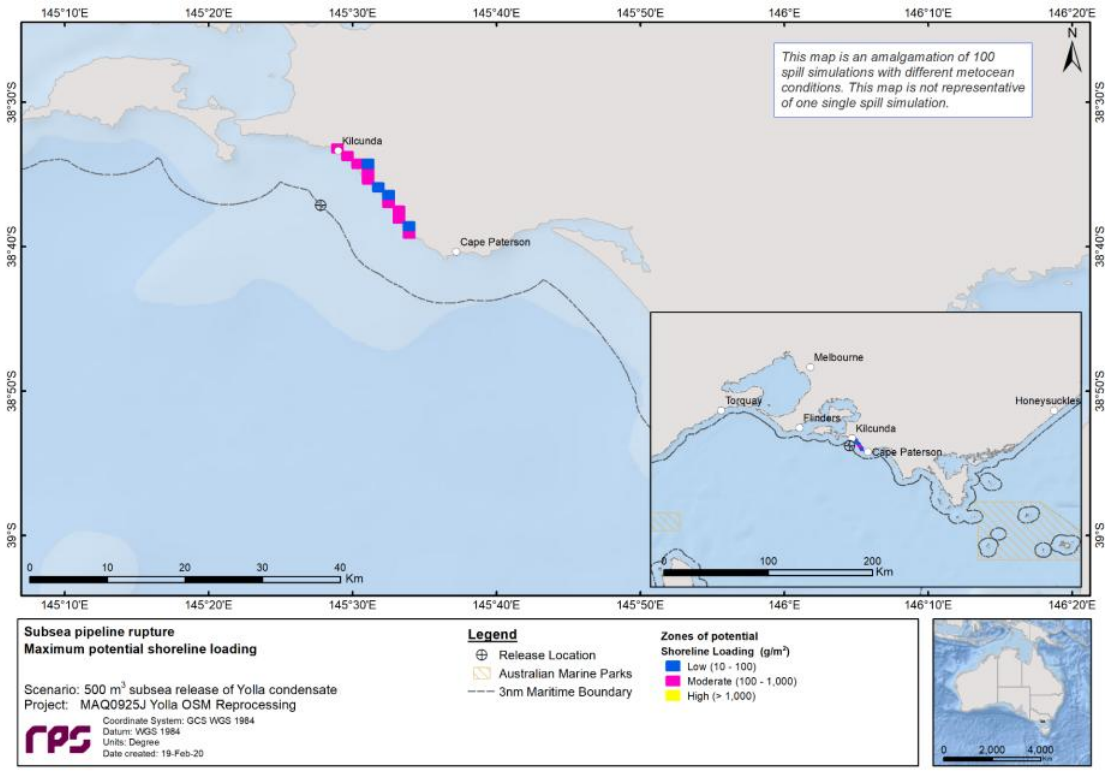


Figure 4-38: Pipeline (condensate) Actionable Response Areas Bass Basin Annual (RPS 2020; MAQ0925J)

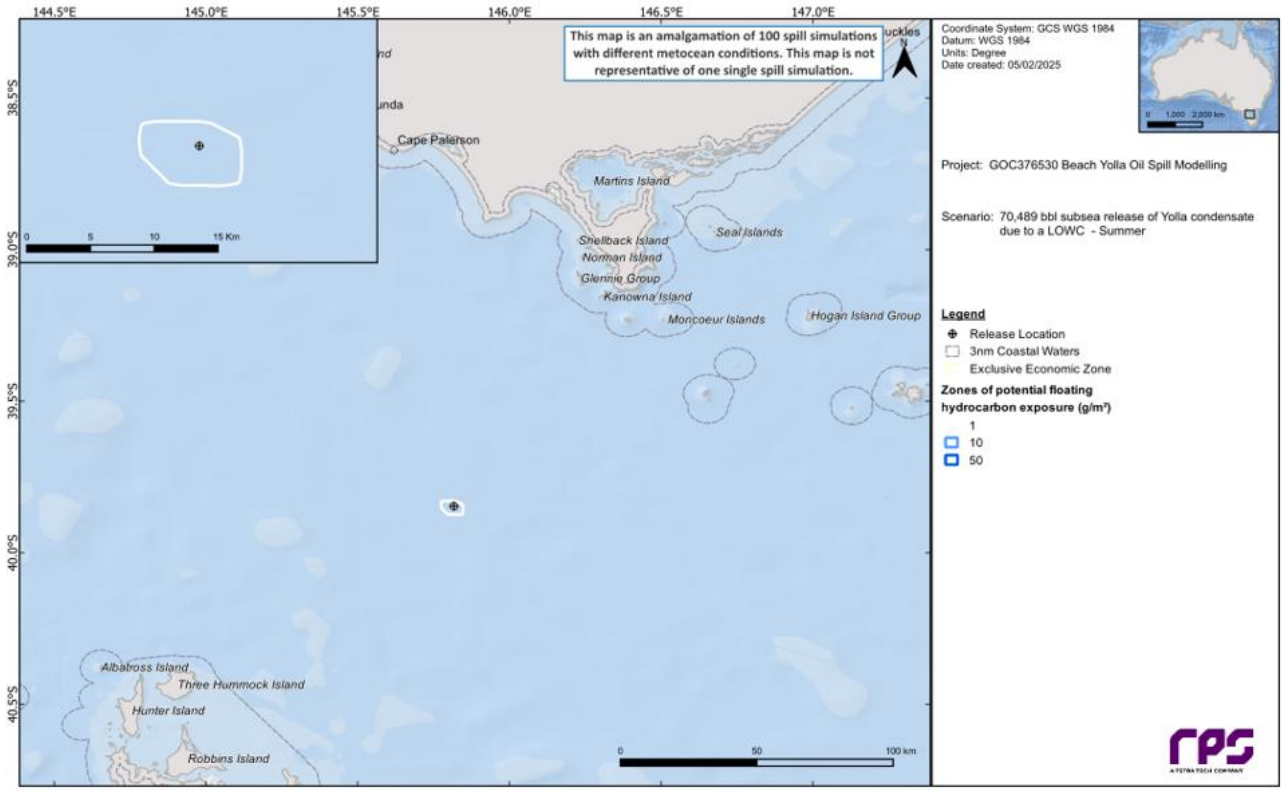


Figure 4-39: Zones of potential floating oil exposure in the event of a 70,489 bbl subsea release of condensate over 86 days (Summer) from a loss of well control at the Yolla Well Head (RPS 2025; Report GOC376530)

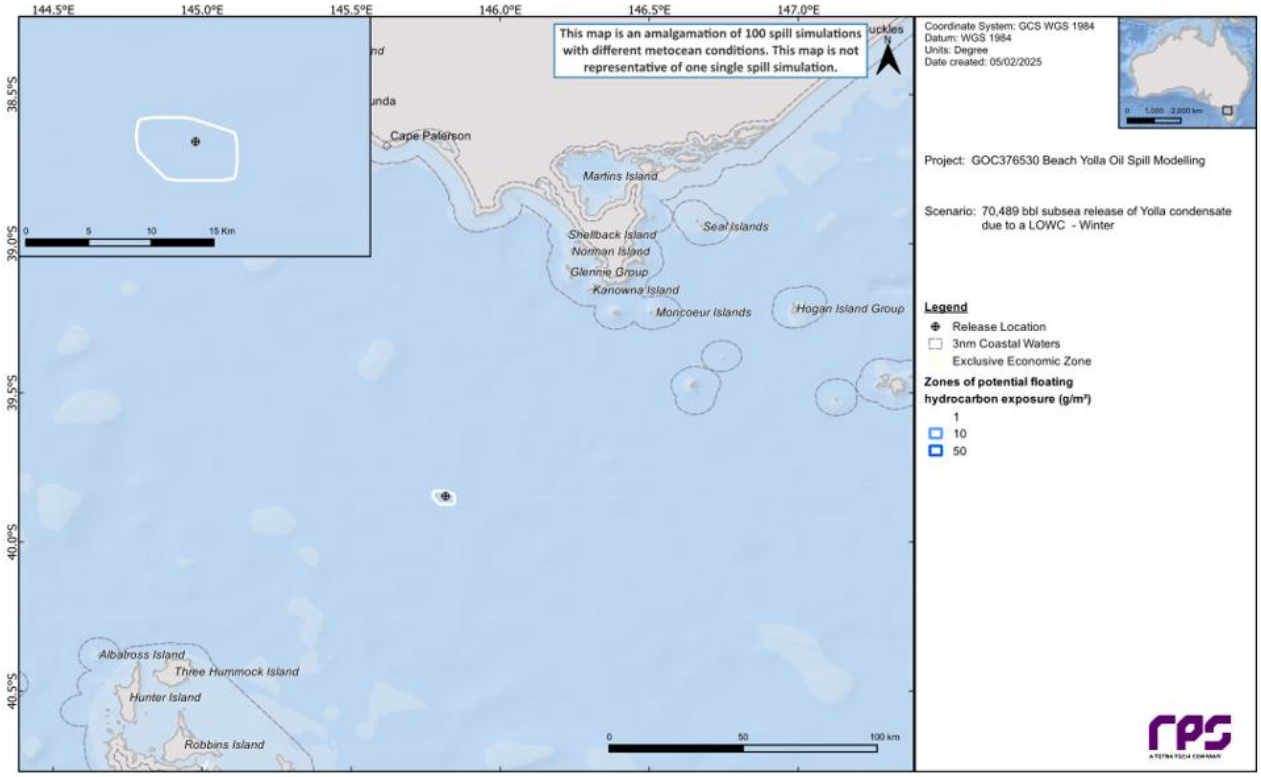


Figure 4-40: Zones of potential floating oil exposure in the event of a 70,489 bbl subsea release of condensate over 86 days (Winter) from a loss of well control at the Yolla Well Head (RPS 2025; Report GOC376530)

4.4.1 Onshore Priority Planning Areas

Within the onshore actionable response areas (shoreline contact exposure of 100 g/m^2 or more), priority planning areas have been identified where the following two criteria are met:

- Predicted time to shoreline exposure (100 g/m^2 or more) is less than 7-days.
- Sensitive environmental receptors are present in the intertidal/coastal zone:
  - National or international important wetlands.
  - Sheltered tidal flats.
  - Mangrove or saltmarsh habitat.
  - Known breeding/calving/nesting aggregation areas for protected (threatened or migratory) fauna.
  - Known breeding/haul-out areas for pinnipeds.
  - Threatened ecological communities.
  - High level of recreation and/or tourism.
  - Cultural heritage including First Nations.

Note, the requirement for time to exposure is based upon the time required to plan and implement a response in this area, i.e. it is estimated to take approximately 5 days to develop and ground truth a tactical response plan (TRP) and 24-48 hours to mobilise equipment and personnel to location.

The priority planning areas identified for spill scenarios that are relevant to the Otway and Bass Basin assets and activities are detailed in Table 4-6. A series of TRPs have been developed for these priority protection areas to assist in implementing a rapid response.

Table 4-6: Otway and Bass Basin Priority Response Planning Areas

Priority response planning area – Otway Basin	**Sensitive environmental receptors**
Aire River	• Wetland of national importance • Saltmarsh habitat • Coastal TECs (Coastal Saltmarsh, Salt-wedge Estuary Communities)
Curdies Inlet	• Saltmarsh habitat • Coastal TECs (Coastal Saltmarsh, Salt-wedge Estuary Communities
Great Ocean Road and Scenic Environs	• High level of recreation and tourism.
Port Campbell Bay	• Coastal TECs (Coastal Saltmarsh, Salt-wedge Estuary Communities)
Princetown/Gellibrand River	• Wetland of national importance • Saltmarsh habitat • Coastal TECs (Coastal Saltmarsh, Salt-wedge Estuary Communities)
Sherbrook River Inlet	• Ecological: Sandy beaches; wetlands; shorebird nesting areas; estuarine fish habitats, Salt Marsh. • Socio-economic: Popular hiking location, Popular tourist location
Warrnambool	• Ecological: Dunes, shorebird/seabird colonies, estuarine habitats, marine and whale sanctuaries. • Socio-economic: Amenity beach, commercial and recreational fishing/boating, tourism.
King Island	• Wetland of national importance • Saltmarsh habitat • Coastal TECs (Coastal Saltmarsh) • Seal Rocks (off King Island) known New Zealand fur-seal breeding colony
Priority response planning area – Bass Basin	**Sensitive environmental receptors**
Powlett River	• Victorian Desalination Plant • Wetland of environmental significance • Saltmarsh habitat • Coastal TECs (Coastal Saltmarsh, Salt-wedge Estuary Communities)
Shoreline San Remo to Cape Patterson	• Saltmarsh habitat • Coastal TECs (Coastal Saltmarsh, Salt-wedge Estuary Communities)

4.5 Immediate Actions and Notification Requirements

Refer to the **Emergency Contacts Directory** (Appendix A) for all internal and external contact details.

Table 4-7 details the immediate action plan and Table 4-8 details the initial notifications required for a vessel, pipeline, platform or LOWC spill.

Table 4-7: Immediate Action Plan

Item	Action	Vessel Spill Responsibility	Platform/Pipeline Spill Responsibility	Loss of Well Control Responsibility	Timing
1.	**Initial Emergency Actions**				
1.1	Implement the relevant emergency response procedures/plans to protect human life, the environment and reducing the risk of fire or explosion.	Vessel Master	PIC	MODU OIM	Immediate
1.2	If possible / safe to do so, identify any potential fire risks and attempt to isolate the supply of oil to the spillage.	Vessel Master	PIC	MODU OIM	Immediate
1.3	Notify **Production Manager / Rig Drilling Supervisor (Offshore**)	Vessel Master	PIC	MODU OIM	Immediate
1.4	Notify **General Manager (GM) Vic Operations / Drilling Manager**	Production Manager / Rig Drilling Supervisor (Offshore)	Production Manager	Rig Drilling Supervisor (Offshore)	ASAP
1.5	If possible / safe to do so, identify the extent of spillage and the weather/sea conditions in the area using initial oil spill report. (Appendix C.3 or C.4) and provide to **Production Manager / Drilling Manager**	Vessel Master	PIC	Rig Drilling Supervisor (Offshore)	ASAP
1.6	If possible / safe to do so, deploy oil spill tracking buoy from Yolla Platform or MODU.	NA	PIC	Rig Drilling Supervisor (Offshore)	ASAP
1.7	Notify **EMT Leader** via Beach National Response Centre (NRC) and if required activate:		Production Manager Drilling Manager		ASAP

Item	Action	Vessel Spill Responsibility	Platform/Pipeline Spill Responsibility	Loss of Well Control Responsibility	Timing
	• Source Control Incident Management Team (SCIMT). • Emergency Management Team (EMT). • Crisis Management Team (CMT) • Emergency Management Liaison Officer (EMLO)				
2.	**Initial Emergency Management Actions**				
2.1	Level 1 Spills: • Complete Level 1 Incident Report (Appendix C. 3) • Notify and escalate to EMT if required Level 2/3 Spills: • Complete Level 2/3 Incident Report (Appendix C. 4) • Notify and escalate to CMT if Level 3 response required		Level 1: Production Manager / Drilling Manager Level 2/3: EMT Leader		ASAP
2.2	Confirm Control Agency as per Table 5.1 and process for handover of incident control if Control Agency is not Beach.		Level 1: Production Manager / Drilling Manager Level 2/3: EMT Leader		ASAP
2.3	If required, initiate AMOSC via execution of Service Contract using Service Request for Mutual Aid and engage AMSA to initiate National Response Team (NRT) and National Response Support Team (NRST). **AMSA** via the Rescue Coordination Centre (RCC) Or **AMOSC DO**		EMT Leader		Within 2 hours

Item	Action	Vessel Spill Responsibility	Platform/Pipeline Spill Responsibility	Loss of Well Control Responsibility	Timing
2.4	Implement Team Meeting and Operational Planning Cycle (**Section 6.1**) and establish CMT / EMT / SCIMT personnel roster providing 24-hour coverage as required.		EMT Leader		ASAP
2.5	Complete role-specific checklists as outlined in **Appendix A. 3**.		All EMT Members and specialist teams		ASAP
2.6	Provide support and information to the Control Agency as directed where Beach is not the Control Agency.		EMT Leader via EMLO		As directed
2.7	Manage the safety of all responders – activate the development of a Safety Management Plan.		EMT Leader		Within 12 hours
3.	**Initiate Source Control Actions**				
3.1	Assess the feasibility and safety risks to implement source control. Develop source control strategy and implement when safe to do so.	Vessel Master and /or Vessel Contracting Company	EMT Leader		ASAP
3.2	For loss of integrity from subsea wells prepare to control the source. Activate the Offshore well-specific Source Control Contingency Plan (SCCP) inclusive of well-specific Relief Well Plan: • SCIMT Leader mobilises relief well planning group. • SCIMT Leader engage Well Control Specialists and prepare for mobilisation to Adelaide.	NA	NA	SCIMT Leader with SC IMT	Within 2 hours

Item	Action	Vessel Spill Responsibility	Platform/Pipeline Spill Responsibility	Loss of Well Control Responsibility	Timing
	• Rig / Vessel Broker contacted for procuring suitable rig and support vessels. • Initiate AEP Memorandum of Understanding: Mutual Assistance to facilitate the transfer of alternate drilling unit and well site services from alternate Operator(s).				
3.3	For a LOWC BOP closure attempts with ROV initiated within 24 hrs.	NA	NA	SCIMT Leader	Within 24 hours
3.4	Deploy MODU and commence drilling relief well in accordance with Source Control Contingency Plan inclusive of Relief Well Plan.	NA	NA	SCIMT Leader / SC IMT Operations	Within 8 weeks
4.	**Level 2 / 3 Monitoring and Evaluation**				
4.1	Request monitoring assistance from AMOSC via execution of Service Contract using Service Request for Mutual Aid.		EMT Leader		Within 2 hours
4.2	Mobilise surveillance by helicopter via service provider (**Appendix D, Appendix E, Appendix F**) as directed by Control Agency.		EMT Logistics		ASAP
4.3	Deploy oil spill tracking buoy if one has not been able to be deployed from Yolla Platform or MODU as per Item 1.6.		EMT Logistics		ASAP
4.4	Initiate oil spill trajectory modelling as directed by Control Agency via: **AMOSC DO** (who will contact the service provider)		EMT HSE		ASAP

Item	Action	Vessel Spill Responsibility	Platform/Pipeline Spill Responsibility	Loss of Well Control Responsibility	Timing
4.5	Instruct project support vessels to perform support and surveillance function and engage Vessel Broker to source additional support / surveillance vessels.	NA	EMT Logistics		ASAP
5.	**Level 2 / 3 Oil Pollution Response**				
5.1	Determine offshore and onshore response options and request assistance from AMOSC via execution of Service Contract using Service Request for Mutual Aid and/or AMSA as directed by Control Agency: **AMSA via the Rescue Coordination Centre (RCC)** **AMOSC DO**	EMT Leader			As directed
5.2	Assess and monitor shoreline and intertidal zones to identify areas exposed to hydrocarbons and to determine the nature of the impact (**Appendix G**) as directed by Control Agency.	EMT Leader			As directed
5.3	Validate and agree implementation of relevant Tactical Response Plan(s) with Control Agency (if required).	EMT HSE			ASAP
6.	**Level 2 / 3 Ongoing Monitoring**				
6.1	Activate Beach Offshore OSMP as directed by Control Agency. Contact: **RPS**	EMT Leader / Monitoring Provider			As required

Table 4-8: Initial Notifications

Notification	Vessel Spill Responsibility	Platform/Pipeline Spill Responsibility	Loss of Well Control Responsibility	Timing
All spills to sea from a vessel contact: **AMSA** via the Rescue Coordination Centre (RCC)	Vessel Master	NA	NA	Verbal: ASAP but not later than 2 hours after collision / spill. Written: POLREP to be completed ASAP. Written updates: as requested, or every 24 hours.
Within Commonwealth waters (>3 nm): • Vessel collision with or near a facility or MODU. • Hydrocarbon spill >80 L. • LOWC event. • Spill that has the potential to cause moderate to significant environmental damage. Contact: **NOPSEMA**	Level 1: Production Manager / Drilling Manager Level 2/3: EMT HSE			Verbal: ASAP but not later than 2 hours after collision / spill. Written: as soon as practicable (no later than 3 days).
Any spills reportable to NOPSEMA contact: **NOPTA**	Level 1: Production Manager / Drilling Manager Level 2/3: EMT HSE			Written: Copy of the report within 7 days of sending to NOPSEMA
Potential for impacts with Victorian State waters (<3 nm) contact: **Victorian DTP – Resilience and Emergency Coordination (REC) - Operational Duty Officer**	Level 1: Production Manager / Drilling Manager Level 2/3: EMT HSE			Verbal: ASAP within 2 hours after becoming aware of spill. Written: ASAP, following verbal notification

Notification	Vessel Spill Responsibility	Platform/Pipeline Spill Responsibility	Loss of Well Control Responsibility	Timing
A release or potential release from pipeline within 3 nm Victorian State waters - – refer to activity-specific EP for clarification. Contact: **Victorian DEECA ERR**	NA	Level 1: Production Manager Level 2/ 3: EMT HSE	NA	ASAP
Potential for impact to wildlife contact: **Victorian DEECA State Agency Commander**	Level 1: Production Manager / Drilling Manager Level 2/3: EMT HSE			Verbal: Immediately, or when identified that wildlife in Victoria may be impacted
Potential for spill to cause, or may cause, environmental harm or environmental nuisance in Tasmanian State waters (<3 nm) – refer to activity-specific EP for clarification. Contact: **Environment Protection Authority (EPA) Tasmania** For wildlife incidents within Tasmania contact: **Department of Natural Resources and Environment Tasmania (NRET)**	Level 1: Production Manager / Drilling Manager Level 2/3: EMT HSE			Verbal: as soon as practicable or when identified that Tasmanian jurisdiction may be impacted
Spills within State waters and Commonwealth waters adjacent to NSW State waters (< 3 nm) – refer to activity-specific EP for clarification – contact: **Roads and Maritime Services (NSW Maritime)**	NA	NA	EMT HSE	Verbal: as soon as practicable or when identified that NSW jurisdiction may be impacted

Notification	Vessel Spill Responsibility	Platform/Pipeline Spill Responsibility	Loss of Well Control Responsibility	Timing
All pollution incidents that are causing or threatening material harm to the environment contact: **NSW EPA** For wildlife incidents within NSW contact: **NSW Department of Primary Industries (DPI)** For incidents shown to occur in or potentially impede estuaries and inland waters contact: **Fire & Rescue NSW**				
Within state waters, or potential to impact state waters – notify relevant State and Port Authorities	Level 1: Vessel Master Level 2/3: EMT HSE	NA	NA	Verbal: Immediate, no later than 2 hours
Notify AMSA and request: • Pipeline/Platform: 500 m exclusion zone from location of the pipeline/platform. • LOWC: 2 km exclusion zone from the well location. Request notification to marine traffic to avoid the area. Contact: **AMSA via the Rescue Coordination Centre (RCC)**	NA	Level 2/3: EMT HSE		Verbal: within 24hrs

Notification	Vessel Spill Responsibility	Platform/Pipeline Spill Responsibility	Loss of Well Control Responsibility	Timing
Spill with potential to impact Australian Marine Park(s) or impact matters of national environmental significance (including potential for oiled wildlife) contact: **Director of National Parks** via Marine Compliance Duty Officer	Level 1: Production Manager / Drilling Manager Level 2/3: EMT HSE			Verbal: ASAP
Potential for damage of national environmental significance (NES) – including protected and migratory species, Commonwealth marine reserves and Ramsar wetlands contact: **Department of Climate Change, Energy, the Environment and Water (DCCEEW)**	Level 1 and Level 2/3: EMT HSE			Verbal: ASAP following the discovery of NES, no later than 7 days / when directed by State Authority
Potential for impact to Gunaikurnai Country (from Warragul in the west to the Snowy River in the east, and from the Great Divide in the north to the coast in the south). **Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) Reception**	Level 1: Community Team Level 2/3: EMT HSE			Verbal: within 24hrs

5 Response Arrangements

5.1 Response Levels and Control Agencies

5.1.1 Level of Incident

The National Plan classifies incidents to provide direction on the potential consequence and impact of an incident. This assists in guiding agency readiness levels, incident notifications, response actions and potential response escalations. Beach's response plan is based on those identified by the National Plan and consists of three levels, which are based on the size and/or complexity of the incident.

Level 1 Incidents are generally able to be resolved through the application of local or initial resources only (first strike capability).

Level 2 Incidents are more complex in size, duration, resource management and risk and may require deployment of jurisdiction resources beyond the initial response.

Level 3 Incidents are generally characterised by a degree of complexity that requires the Incident Controller (EMT Leader) to delegate all incident management functions to focus on strategic leadership and response coordination and may be supported by national and international resources.

5.1.2 Statutory and Control Agencies

Under existing Commonwealth and State Intergovernmental Agreements, authorities have been nominated with statutory and control responsibility for incidents within harbours, State waters and Commonwealth waters around Australia.

While Beach remains accountable for spills relating to its petroleum operations, the nominated Control Agency will vary depending on source, size and location of the spill as defined in Table 5-1.

State agencies such as the Victorian Department of Transport and Planning (DTP), the Tasmanian Environment Protection Authority (EPA) under the management of the Tasmanian Emergency Management (TEM), or NSW Maritime may assume Incident Control in state waters under the following circumstances:

- The incident is greater than a Level 1 spill in state waters and requires immediate escalation.
- The incident occurred in Commonwealth waters but has impacted on State waters.
- The Control Agency has requested State assistance.
- The State believes that Beach is not implementing an appropriate response to the incident.

5.1.2.1 Victorian State Arrangements

If an incident occurs in Commonwealth waters and impacts Victorian State waters (spreading oil slick for example), DTP will assume Incident Control over the impacted area in State Waters. The Control Agency in Commonwealth Waters will remain responsible for managing the spill outside Victorian coastal waters in consultation with the State.

Whilst DTP is the Control Agency for marine pollution in Victorian State waters, Beach shall conduct initial necessary response actions in State waters, in accordance with this OPEP and continue to manage those operations until formal incident control can be established by DTP.

Upon establishment of incident control by DTP, Beach shall continue to provide planning and resources as required by the EMT Leader Beach will make available to DTP an Emergency Management Liaison Officer (EMLO) who can mobilise to the incident control centre.

If an incident affecting wildlife occurs in Commonwealth waters close to Victorian State waters, the Control Agency may request support from Department of Energy, Environment, and Climate Action (DEECA) to assess and lead a wildlife response.

Additional detail on the management of a cross-jurisdiction marine pollution incident that originates in Commonwealth waters and results in DTP exercising its control agency obligations in State waters is provided in Section 5.1.3.

5.1.2.2 Tasmanian State Arrangements

The Tasmanian Environmental Protection Authority (EPA) is the advisory agency and management authority for prevention and mitigation, preparedness, and response for marine pollution incidents within Tasmania under the management of the Tasmanian Emergency Management (TEM).

If an incident occurs in Commonwealth waters and has an impact on Tasmanian State waters, EPA Tasmania will assume Incident Control over the impacted area in State waters while the Commonwealth Waters Control Agency will remain responsible for managing the spill outside Tasmanian coastal waters in consultation with the State. If the marine spill incident goes outside the scope, authority and/or capacity of the EPA, TEM emergency management arrangements will be applied.

When under direction of EPA, a Beach EMLO an IMO2 qualified person, shall be allocated to EPA.

The Tasmanian Oiled Wildlife Response Plan (WildPlan) is administered by Wildlife Health and Marine (WHAM) division of the Department of Natural Resources and Environment Tasmania (NRET) (formerly DPIPWE) and outlines priorities and procedures for the rescue and rehabilitation of oiled wildlife within Tasmania.

5.1.2.3 New South Wales State Arrangements

The NSW Roads and Maritime Services (or relevant Port Authority) will assume the responsibility in the event of a Level 2/3 spill incident, originating from either vessel or MODU activities, and entering NSW State Waters, under arrangements stated within the NSW State Waters Marine Oil and Chemical Spill Contingency Plan.

Whilst a terminal operator is expected to respond to Level 1 incidents within State Waters; the relevant Port Authority or NSW Maritime will be the Control Agency for all incidents in State waters in NSW (National Plan 2020).

AMSA will request via the Marine Pollution Controller that NSW assume responsibility for responding to the maritime incident. The Marine Pollution Controller will consult with the relevant Port Authority or NSW Maritime and determine which agency will assume the Control Agency role (known as Combat Agency in the NSW plan).

The NSW DPI is responsible for coordinating agriculture and animal services, including oiled wildlife response and recovery, to support the oil/chemical spill lead agency as stated under the NSW State Emergency Management Plan and State Waters Marine Oil and Chemical Spill Plan. NSW DPI has a MOU with multiple organisations that will provide animal services resources to assist in an emergency response under the coordination of NSW DPI.

Table 5-1: Statutory and Control Agencies

Spill Location	Spill Source	Statutory Agency	Control Agency	
			Level 1	Level 2/3
Impact to Commonwealth Waters (>3nm)	Petroleum activities	NOPSEMA	Beach	
	Vessel activities	AMSA	Vessel Operator	AMSA
	Vessel activities *within 500m platform exclusion zone*	NOPSEMA	Vessel Operator / Operator	
Impact to State Waters (<3nm)	Petroleum activities (condensate)	Vic DTP / Tas EPA / NSW Maritime	Beach*	
	Vessel activities (diesel)	Vic DTP / Tas EPA / NSW Maritime**	Vessel Owner / Operator	Vic DTP / Tas EPA / NSW Maritime / Relevant Port Authority***

*Supporting: Port of Hastings (Wilsons Promontory to Cape Schanck) and Port of Portland (Cape Otway to SA Border)
** Whilst a terminal operator is expected to respond to Level 1 incidents; the Port Authority or Roads and Maritime Services (NSW Maritime) is the Control Agency for all incidents in State waters in NSW (National Plan 2020).
***Within Port Waters

5.1.3 Joint Strategic Coordination Committee (Victoria)

The following section has been adapted from DTP (formerly DoT) guidance.

Transboundary arrangements from state to state is covered by the National Plan. Where Victorian State waters are impacted by cross-jurisdictional marine pollution incidents, DTP will only assume the role of control agency for response activities occurring in Victorian State waters, in accordance with the State Maritime Emergencies (non-search and rescue) Plan. In this instance, Beach and DTP shall work collaboratively, sharing response resources and providing qualified personnel to the DTP IMT. To facilitate effective coordination between the two control agencies and their respective IMT, a Joint Strategic Coordination Committee (JSCC) shall be established. The control and coordination arrangements for cross-jurisdictional maritime emergencies is outlined in Figure 5-1.

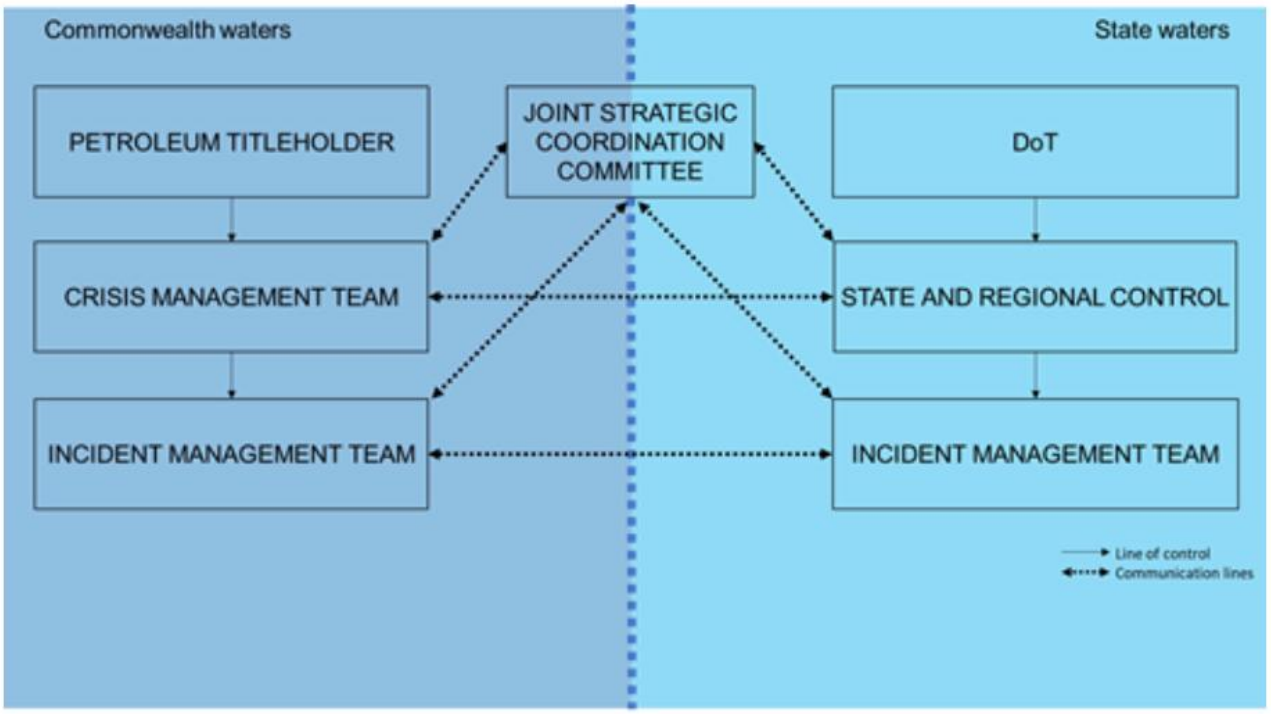


Figure 5-1: Joint Strategic Coordination Committee structure (Victoria). Note: Victorian Department of Transport (DoT) has been superseded by Department of Transport and Planning (DTP) on the 1st of January 2023.

The role of the JSCC is to ensure appropriate coordination between the respective IMTs established by multiple control agencies. The key functions of the JSCC include:

- Ensuring key objectives set by multiple IMTs in relation to the marine pollution incident are consistent and focused on achieving an effective coordinated response.
- Resolving competing priorities between multiple IMTs.
- Resolving competing requests for resources between the multiple IMTs, including those managed by Australian Maritime Safety Authority (AMSA), such as national stockpile equipment, dispersant aircraft, and the National Response Team.
- Resolution of significant strategic issues as they arise during the incident response.
- Ensuring that there is a shared understanding of the incident situation and its meaning amongst all key stakeholders.
- Ensuring there is agreement on how information is communicated to the public, particularly those issues that have actual or perceived public health implications.
- Ensuring adequate coordination and consistency is achieved in relation to access and interpretation of intelligence, information, and spill modelling to promote a common operating picture.

The JSCC will be administered by DTP and the inaugural JSCC meeting will be convened by the State Controller Maritime Emergencies (SCME) once both Beach and DTP formally assume the role of control agency in respective jurisdictions.

The JSCC will be jointly chaired by the SCME and the Beach CMT/EMT Leader, who will determine whom will sit in the committee for a coordinated response. As the relevant jurisdictional authority in Commonwealth waters, NOPSEMA may opt to participate in the JSCC as they see fit.

In a cross-jurisdictional marine pollution incident, DTP and Beach shall each deploy an EMLO to corresponding IMTs for effective communication between DTP and Beach. The role of the DTP EMLO includes, but is not limited to:

- Represent DTP and provide the primary contact for Beach, inter-agency and/or inter-State coordination.
- Facilitate effective communications between DTP's SCME and Incident Controller and the Beach CMT / EMT Leader.
- Provide enhanced situational awareness to DTP of the incident and the potential impact on State waters.
- Facilitate the delivery of technical advice from DTP to the Beach EMT Leader as required.

The Beach EMLO will work under the direction of the DTP and will be responsible for supplying additional resources to the Control Agency as required. This would be via internal Beach resources, AMSA (NRT & NRST), and/or AMOSC service contract.

5.2 Beach Crisis and Emergency Management (CEM) Framework

The Beach emergency management structure consists of a three-tiered approach. With teams that have specific roles regarding response to and management of emergency and crisis events. This visual overview clearly depicts this framework and associated protocols for the effective management and coordination of all levels of emergency and crisis events impacting on the Beach organisation. The framework is depicted in Figure 5-2.

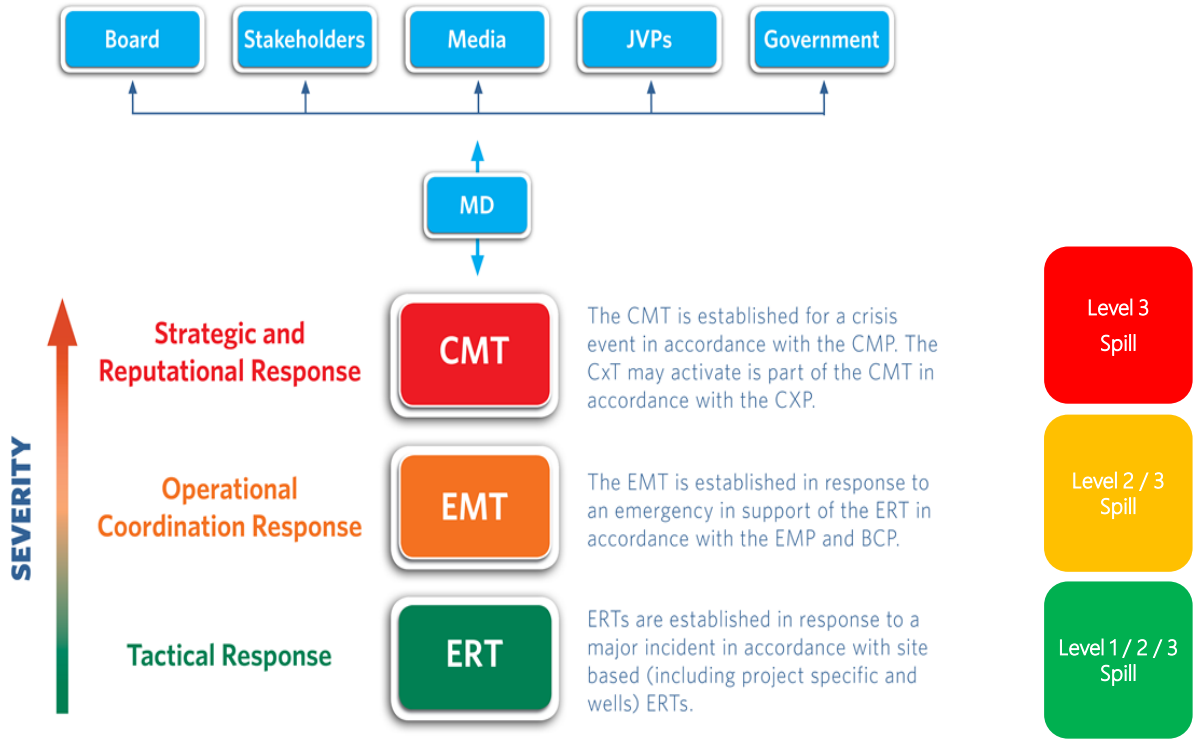


Figure 5-2: Beach Crisis and Emergency Management Framework

In summary:

- Site-based ERT carry out emergency response activities at the site of the emergency.
- Adelaide and Melbourne based EMTs – provide operational management support to the site-based ERT, facilitate planning and liaise with external parties for all events, Australia wide.
- Oil spill/oil pollution response capability lives within the EMT (with IMO3 trained on-call representatives to ensure expedience of access to all company-wide resources required).

- During a spill event, the IMO3 becomes the EMT Leader.
- Adelaide-based SCIMT interface with the MODU and implement Beach source control procedures in the event of a LOWC.
- Adelaide-based CMT undertakes crisis management operations and direct strategic actions at the corporate level, addresses implications of the crisis on the employees, is concerned with the company's reputation, relationships with external parties and joint venture partners.
- CMT is activated for a crisis event or as directed by the Managing Director (MD) or the CMT Leader.

The extent of the response structure will be dictated by the size of the incident and the required response.

5.2.1 Alignment with National ICS

The structure of Beach's Crisis and Emergency Management system is aligned with the Australasian Inter-service Incident Management System (AIIMS) but modified enough to allow for established corporate processes and reporting during emergency events. The main nuance is the role change from the on-call EMT Leader to the IMO3 representative to become the EMT Leader in the event of an off-shore oil pollution event.

5.2.2 Managing Director

The Beach Managing Director (MD) will be the critical interface between the CMT and senior external stakeholders, including, but not limited to the Beach Board of Directors, the media and government.

The CMT Leader will keep the MD apprised of the incident and will discuss decisions of the CMT with the MD and render advice as required. However, the MD may assume the role of CMT Leader.

5.2.3 Crisis Management Team (CMT)

Leadership of the Crisis Management Team (CMT) is empowered by the Beach MD to assume responsibility for providing strategic support in the event of a Level 3 emergency spill incident from Beach operations. A roster is maintained for the full CMT to ensure 24/7 coverage.

Figure 5-3 provides an example of a CMT structure.

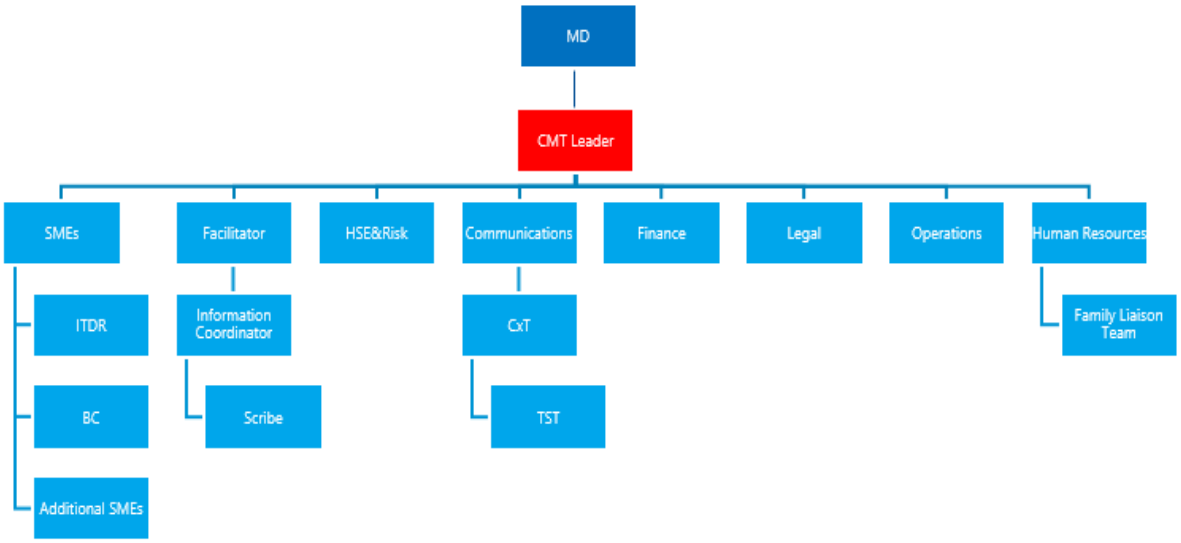


Figure 5-3: Composition example of the Crisis Management Team

5.2.4 Emergency Management Team (EMT)

The EMT for all level offshore oil spill/oil pollution events is led by the IMO trained EMT Leader. In the event of an offshore oil spill/pollution event, the EMT Leader assumes responsibility for implementing this OPEP and the OSMP (under the direction of State regulators within 3nm). The implementation of the Source Control Contingency Plan (SCCP) specific to the well, remains the responsibility of Operations – Wells.

An Emergency Management Liaison Officer (EMLO) is embedded within the EMT and acts as the key interface between the EMT and the relevant State Control Agency Incident Management Teams (IMT).

The Deputy EMT Leader is the conduit of information from the EMT to the CMT (CMT Leader or CMT Operations).

The EMT Operations section will act as the liaison between the EMT and the ERT.

A roster is maintained for both the CMT and EMT to ensure 24/7 coverage. The NRC will activate the on-call teams, when required, as directed.

See Section 11 for details on the training and competency requirements of the EMT.

Figure 5-34 details the key roles required for an EMT.

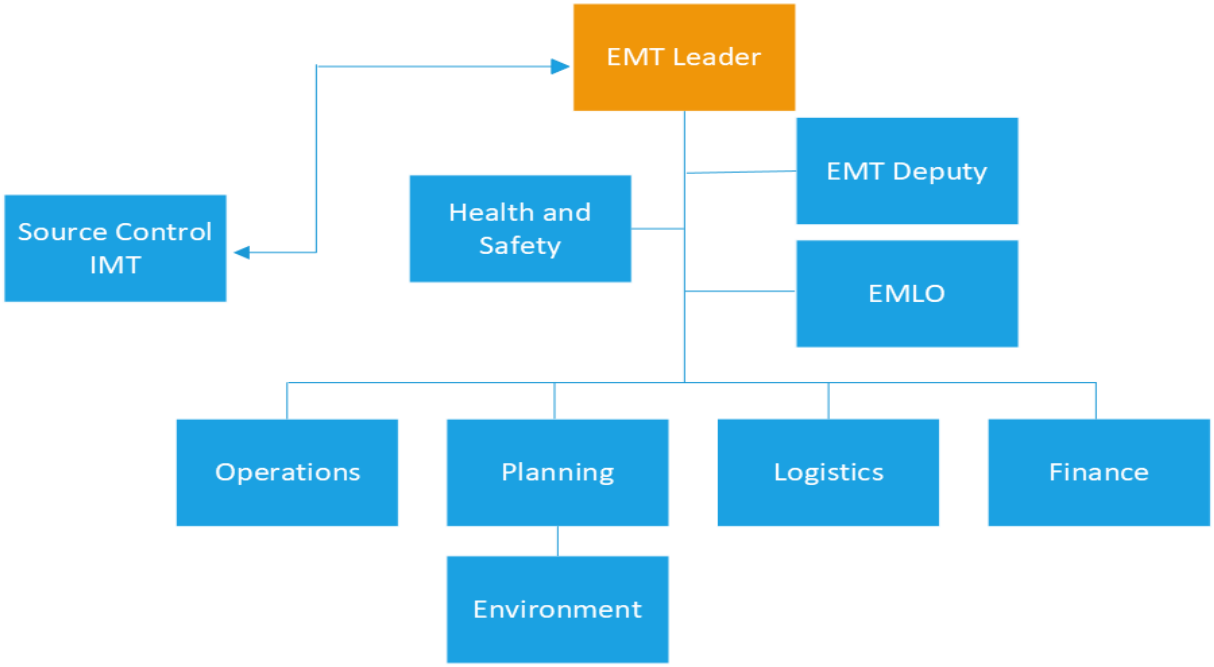


Figure 5-4: Composition of the Emergency Management Team

5.2.5 Source Control Incident Management Team (SCIMT)

In the event of an offshore well control incident, the Operations – Wells function becomes the SCIMT Leader and activates the SCIMT. If the situation requires activation of the Source Control Contingency Plan, a Source Control IMT will be established. The SCIMT Leader will lead the Source Control IMT but continues to report through to the EMT Leader. The primary function of the SCIMT is to bring the well under control, in compliance with ER priorities of PEARL.

The organisation structure and responsibilities of the SCIMT are detailed within the SCCPs and WOMPs that are produced and maintained by the asset or project owner for all wells. The structure of the SCIMT once activated for source control events is identical for all offshore incidents.

A roster is maintained for the full SCIMT to ensure 24/7 coverage.

5.2.6 Emergency Response Team (ERT)

Each site has a site, project, or area-specific Emergency Response Plan (ERP) and an ERT that is typically a Beach team led by the ERT Leader. Offshore vessels and rigs operating under contract to Beach have bridging ERPs to ensure adequacy of response and will respond to all Level 1 incidents. All plans and responses require notification to the Beach's EMT via the NRC.

The ERT is responsible for managing all site / field incidents and coordinating the incident response. The composition of the ERT will comprise of the ERT Leader, who liaises with the Operations Leader with the EMT or directly with the EMT Leader. Various subsections will exist depending on the response strategies that have been selection. For example, typical teams of the ERT often include a source control team, aerial response team, shoreline response teams, environmental monitoring team, and the wildlife response teams. These teams will liaise with relevant subject matter experts where required. The ERT are responsible for notification to the EMT for any ERT activation, regardless of level.

All vessels and rigs are required to undertake emergency exercises prior to mobilising to Beach's permit area to ensure that communications work and that roles and responsibilities are clearly understood. These exercises are stored in Beach's incident and action reporting software (CMO) – Beach's incident and action management tracking software.

5.3 External Support and Arrangements

5.3.1 Australian Maritime Safety Authority

Upon notification of an incident involving a ship, the Australian Maritime Safety Authority (AMSA)'s National Response Team (NRT) and the National Response Support Team (NRST) will assume control of the incident and response in accordance with AMSA's Marine Pollution Response Plan. AMSA's Marine Pollution Response Plan is the operational response plan for the management of ship-source incidents. AMSA is to be notified immediately of all ship-source incidents through the AMSA Rescue Coordination Centre (RCC) Australia (see 14Appendix A for contact details).

A MoU has been established between Beach and AMSA, outlining the respective roles and responsibilities when responding to a vessel-sourced marine pollution incidents and petroleum activity related marine pollution incidents.

AMSA manages the National Plan for Maritime Environmental Emergencies (National Plan), Australia's key maritime emergency contingency and response plan. AMSA manages the trained National Response Team (NRT) and the National Response Support Team (NRST) trained to provide support to control agencies in the event of a major marine oil pollution incident. All resources under the National Plan, including the NRT and NRST, are available to Beach through request to AMSA under the arrangements of the MoU. For any oil pollution event, Beach agrees to notify AMSA immediately in the interests of facilitating the most efficient and effective response to the incident.

The Guideline on Accessing National Plan Support Arrangements sets out the initial notification of AMSA regarding the mobilisation of National Plan equipment and personnel. Once the initial notification has been given to AMSA via the Control Agency, the Incident Controller or one of the Incident Management Team will liaise with AMSA to request and manage personnel from the NRT, NRST and AMOSC Core Group (see below). Requests for personnel should be made to AMSA by telephone request or email to the AMSA Environment Protection Duty Officer or another nominated AMSA person. A verbal request must be confirmed within three (3) hours by an email.

5.3.2 Australian Marine Oil Spill Centre

Beach has a Master Service contract with Australian Marine Oil Spill Centre (AMOSC). Under this contract:

- AMOSC will use its best endeavours to provide training and response services – generally (but not limited to) three AMOSC personnel or one third of AMOSC's store of equipment or consumables.
- AMOSC may request that an AMOSC Member provide equipment, consumables, or personnel in response to a request for services made by another AMOSC member. As such, Beach has potential access to external resources from other AMOSC Members, both locally and regionally. The personnel available under this mutual aid arrangement form the

AMOSC Core Group. The minimum number of AMOSC Core Group members is 84; normally there are more than 100 in the group. AMOSC funds the training, revalidation, and management for this number of Core Group members.

Whilst AMOSC provide a supporting role within the EMT, Beach are responsible for the direction and control of all activity and matters during the Deployment Period and all activity and matters at the deployment locations in consultation and agreement with the relevant Control Agency.

6 Crisis and Emergency Management System (CEMS)

This section describes how to implement a response to an incident using the Beach Crisis and Emergency Management System (CEMS). Regardless of the size of the incident, the response process begins with incident detection, notification and activation of response personnel and other resources, and for L2 / L3 spills the establishment of the incident command, in the form of the EMT and Leader. The IMO3 EMT Leader is the 'Incident Commander' and as the response develops, the CEMS organisational structure and cyclical planning process are established.

For larger, more complex incidents (L2 / L3 spills), the EMT will expand in staffing (resourcing sought from within Beach or external SMEs) and the planning cycle becomes increasingly critical. All oil pollution response activities will include a written Incident Action Plan (IAP) which includes tactics and resource assignments to accomplish the response objectives established by the EMT Leader. The response is typically divided into operational periods, and the IAP is reviewed and revised during each operational period to reflect current objectives, strategies, and response tactics to meet evolving incident conditions.

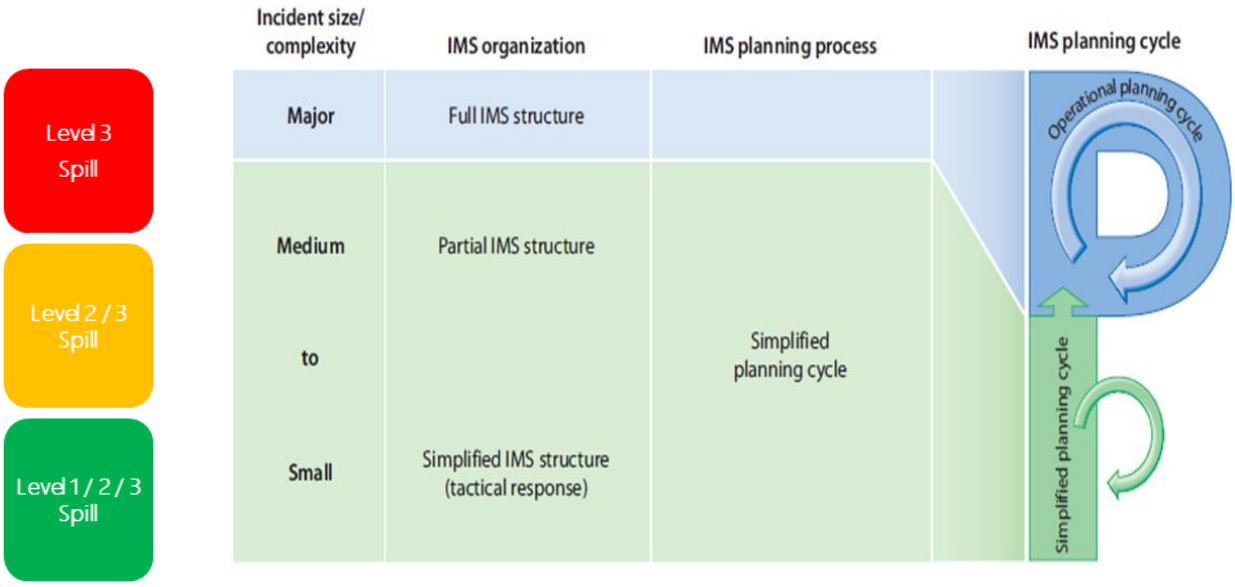


Figure 6-1: Application of the Beach Incident Management System for Level 1 /2 / 3 spills.

6.1 Team Meeting and Operational Planning Cycle

Emergency Management (EM) is a 'team' orientated process: the EMT Leader, through the Deputy, will have reporting requirements to the CMT Leader and will need to receive updates from the site based ERT and/or the SCIMT Leader.

Once the team is activated and following an initial assessment of the specific circumstances of the oil spill/pollution emergency, the EMT Leader will lead and guide the EMT through a defined response process for emergency oil spill/oil pollution scenarios and responses, as outlined in Figure 6-2 and Table 6-1.

In order for this to occur with all participants receiving and giving information at the same briefing, the 'Team Process' has been adopted by Beach EMTs and the CMT. The team meeting and operational planning cycle is to be implemented until each of the strategy-specific termination criteria have been met. The structure of the EMT and frequency of the operational periods is relative to the scale and stage of the spill event.

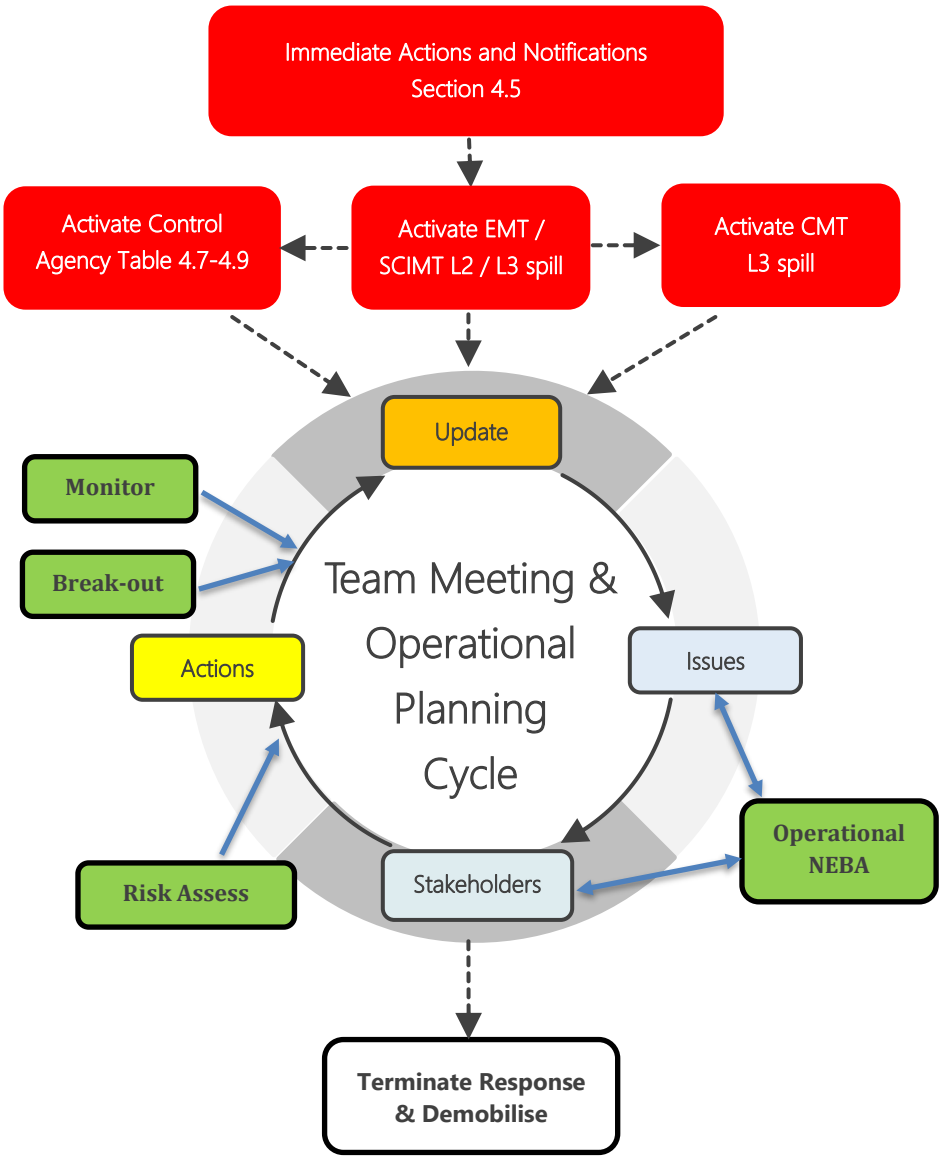


Figure 6-2: Team Meeting and Operational Planning Cycle

Table 6-1: Team Meeting and Operational Planning Cycle Components

Immediate Actions and Notifications	First Responders: Implement Immediate Action Plan and make notifications relevant to spill scenario as per Section 4.5 for either: • Vessel spill / collision (L1 / L2 / L3). • Loss of integrity – platform or pipeline (L1 / L2 / L3). • LOWC (L2 / L3). Provide EMT Leader with initial oil spill report (Appendix C.3 and C.4).
Activate	• EMT Leader: Assess event against the initial site situation report from First Responders and Activate EMT Planning and team for any L2 or L3 spill. • EMT Leader: assessing event, clarify roles and tasks required, including communication protocols with CMT. • Notify SCIMT Leader for any LOWC event (if notification did not come from SCIMT). • Notify the CMT Leader upon activation and immediately for any L3 spill. • Notify the State Control Agency for any spill impacting or potentially impacting State waters. • Determine team composition and commence callout (through the NRC) (see 14Appendix A). • Establish the Crisis Comms Network and reporting frequency with the ERT and CMT . • EMT Members and SCIMT Members: Attend EM Room and access Role Boxes. • Conduct initial assessment. • Commence objective setting with Planning and Control Agency (when relevant). • Clarify issues and/or concerns. • Develop initial plan of action based upon feasible response strategies (Section 8). • Prepare for team briefing.
Update	• Conduct team briefing – Establish 'rules' and chain of command (see ERP). • Gather current event information, utilising initial report (Appendix C.3 and C.4) / team's knowledge / damage assessments. • Assess current event status and severity / potential severity – informed by operational monitoring. • Establish response priorities. • Identify response areas and onshore priority planning areas (Section 4.4). • List and agree outcomes and strategic objectives. • Assign roles and responsibilities. • Resolve issue / concerns. • Review team objectives – display prominently in the EM Room. • Establish operational periods based upon spill risk profile (6/12/24/48 hours).
Issues	• For each outcome and objective, identify and list response issues and potential limiters. • Commence scenario planning based on feasible response strategies (Section 9). • Draft Operational NEBA (Section 8.1) in collaboration and to the agreement of relevant Control Agency. • Confirm protection priorities and key protection outcomes in collaboration and to the agreement of relevant Control Agency. • Team members should consider issues specific to their role.
Stakeholders	• Identify stakeholders – internal and external based upon assessment of potential hydrocarbon exposure. Use issues list as a prompt. • Consider prioritising stakeholder list. • EMLO to undertake stakeholder liaison. • Engage relevant stakeholders and validate draft Operational NEBA (where relevant to stakeholders). • Record stakeholder interactions and consider stakeholder objections or claims. • Form and approve key messaging ASAP.
Actions	• Undertake risk assessment considering, asset integrity / safety / health / quality / environment (considering outcomes of operational NEBA and relevant Stakeholder objections or claims). • Develop and agree strategy specific IAPs with Control Agency (inclusive of Tactical Response Plans) and establish monitoring, evaluation, and surveillance program. • Identify and allocate tasks – including who is responsible and when they are due. • EMT members clearly briefed on strategy specific IAPs, roles and responsibilities defined, and tasks allocated. • Record and track progress and completion in Teams.

Break-out	• All team members as needed, can break out to execute actions in accordance with strategy specific IAPs. • Deputy to brief CMT (Leader or Operations, as decided). • All teams to monitor and record response effectiveness. • All members are to return at the agreed operational period interval, ready to update on actions executed.
Terminate Response & Demobilise	• Strategy-specific termination criteria must be achieved prior to terminating response: • **Source Control:** controls successfully implemented to stop the source of the spill and no further risk from release from vessel, facility or infrastructure. • **Monitoring & Evaluation:** source control successfully implemented and released hydrocarbon no longer posing risk to receptors at actionable thresholds as agreed with State Control Agency. • **Protection and Deflection:** Monitoring evaluation and surveillance indicates shoreline(s) no longer at risk from actionable thresholds of hydrocarbon and no net benefit gained by continuing protection and deflection as agreed with State Control Agency. • **Shoreline Clean-up:** Shorelines affected by actionable thresholds of stranded oil cleaned until no net benefit gained by continuing clean-up operations as agreed with State Control Agency. N.B. shoreline monitoring continues following termination of clean-up operations as agreed with State Control Agency. • **Oiled Wildlife**: No affected wildlife detected and affected individuals that have been (where possible) captured, triaged, and rehabilitated as agreed with State Control Agency and / or Commonwealth Department of the Environment and Energy.

7 Responsibilities/Accountabilities

For Level 1 spills, the site ERT Leader has responsibility for oil spill/oil pollution response and implementation of this OPEP.

For Level 2/3 spills, the Beach EMT Leader has responsibility for oil spill/oil pollution response and implementation of this OPEP in parallel with the Emergency Management Plan (EMP) (INT 1000 SAF PLN, CDN/ID 18025990).

For any LOWC event, the SCIMT Leader has the responsibility for the implementation of the well-specific Source Control Contingency Plan (SCCP) inclusive of relief well planning. Roles and responsibilities for the SCIMT members (Section 5.5) are detailed within the well-specific SCCP.

Individual role checklists for the EMT can be found Appendix A.3.

Role-specific responsibilities for an offshore oil pollution emergency are detailed in the immediate actions and notifications (Section 4.5) of this OPEP.

For Level 3 spills, the CMT has responsibility for implementation of the CMP. CMT individual role checklists can be found in Appendix B of the CMP.

8 Response Strategy Selection and Implementation

There are several response strategies which can be utilised in response to hydrocarbon spills, including:

- Source control
- Monitoring and evaluation
- Assisted natural dispersion
- Chemical dispersants
- Containment and recovery
- Protection and deflection
- Shoreline assessment and clean-up
- Oiled wildlife response.

Table 8-1 summarises the response options that are feasible and effective in response to the hydrocarbon types associated with the Otway and Bass Basin offshore activities.

Table 8-1: Response Option Feasibility and Effectiveness by Hydrocarbon Type

Response Strategy	Hydrocarbon Type	Feasibility / Effectiveness	Implement	Justification
Source control	Gas Condensate & MDO	Feasible & effective	Yes	Always primary spill response strategy. Reduction in release volume has direct environmental benefit. N.B. Relief well is the primary strategy for responding to a LOWC event. Well capping / capping stack is not technically feasible.
Monitor & evaluate	Gas Condensate & MDO	Feasible & effective	Yes	Both gas condensate and MDO will largely evaporate and disperse rapidly, a residual fraction of the hydrocarbon may spread to sensitive receptors. Monitoring and evaluation of the spill trajectory will provide information to inform other response strategies and monitoring requirements.
Assisted natural dispersion	Gas Condensate	Not feasible & not effective	No	Gas condensate will evaporate and disperse rapidly, therefore assisted natural dispersion will present no net environment benefit.
	MDO	Feasible but partially effective	Pending Operational NEBA	MDO will evaporate and disperse rapidly. Depending on weather conditions, thickness of surface slick proximity to sensitive receptors this response may present a net environmental benefit.
Chemical dispersants	Gas Condensate & MDO	Feasible but not effective	No	Not recommended for Group I oils such as condensate due to the very low viscosity and high volatility – generally no environmental benefit gained by the application of dispersant on Group I oils. Subsea dispersant injection (SSDI) may reduce volatile organic compounds (VOCs) at sea surface within the response area, therefore creating a safer work environment for responders. However, given capping stack system (CSS) are not feasible to deploy, SSDI is not considered for this application. If the SCIMT determine that is a benefit to safe offshore operations, then it may be considered with a separate risk assessment. **Confirmation for emergency use must be obtained from NOPSEMA – see External Contacts Directory (Appendix A)**

Response Strategy	Hydrocarbon Type	Feasibility / Effectiveness	Implement	Justification
	MDO	Feasible but not effective	No	Although "conditional" for Group II oil, the size of potential spill volume and the natural tendency of spreading into very thin films is evidence that dispersant application will be an ineffective response. The dispersant droplets will penetrate through the thin oil layer and cause 'herding' of the oil which creates areas of clear water and should not be mistaken for successful dispersion (see ITOPF – Technical Information Paper No. 4: the use of chemical dispersants to treat oil spill/oil pollution).
Containment & recovery	Gas Condensate	Not feasible & not effective	No	High volatility of condensate creates inherent safety risks when attempting to recover mechanically. Logistically, gas condensate will evaporate faster than the collection rate of a thin surface film present. To be of value, contain and recover techniques are dependent on adequate oil thickness (generally in excess of 10 g/m^2)
	MDO	Not feasible & not effective	No	Low viscosity property allows for efficient containment by boom and recovery by oleophilic skimmers (i.e. komara disc skimmer) with ~90% hydrocarbon to water recovery rate. To be of value, contain and recover techniques are dependent on adequate oil thickness (generally in excess of 10 g/m^2). The normal sea state of the Otway and Bass Basins does not provide significant opportunities to utilise this equipment.
Protection & deflection	Gas Condensate	Potentially feasible & partially effective	Pending Operational NEBA	High volatility of condensate creates inherent safety risks when attempting to deflect mechanically. The normal sea state of the Otway and Bass Basins does not provide significant opportunities to utilise this equipment efficiently.

Response Strategy	Hydrocarbon Type	Feasibility / Effectiveness	Implement	Justification
	MDO	Potentially feasible & partially effective	Pending Operational NEBA	Low viscosity property allows for efficient protection and deflection with boom such as absorbent, zoom boom and beach guardian. The normal sea state of the Otway and Bass Basins does not provide significant opportunities to utilise this equipment efficiently.
Shoreline assessment & clean-up	Gas Condensate	Potentially feasible & partially effective	Pending Operational NEBA	Condensate is highly volatile and will evaporate naturally even if shoreline impact occurred. Potentially, more environmental impact would occur during clean-up operations depending on the shoreline type and sensitivities present. Shoreline assessment activities would occur if shoreline impact occurred.
	MDO	Potentially feasible & partially effective	Pending Operational NEBA	The normal sea state of the Otway and Bass Basins encourages natural processes with high energy wave action, wind and regular storm events. Potentially, more environmental impact would occur during clean-up operations depending on the shoreline type and sensitivities present. Shoreline assessment activities would occur if shoreline impact occurred.
Oiled wildlife response	Gas Condensate	Potentially feasible & partially effective	Yes	If oiling occurs in areas above the conservative environmental exposure threshold of >10 g/m^2 for surface & >100 g/m^2 for shoreline, oiled wildlife response may be effective. At the direction of State Control Agency, impacts to wildlife shall be monitored and oiled wildlife response implemented to affected wildlife as appropriate. Effectiveness of response option depends on affected species and habitat type.
	MDO	Potentially feasible & partially effective	Yes	

8.1 Net Environmental Benefit Analysis (NEBA)

The NEBA process is used to compare the likely positive and negative outcomes of various oil spill response options with respect to environmental sensitivities at risk from the spill or response activities. NEBA recognises that certain clean-up options may cause a net negative environmental impact in comparison to the impact of leaving the spill to disperse and weather naturally or alternative response options. The key objective is to identify the response options that will result in minimal impacts and maximum recovery of the environment, considering the specific sensitivities of the resources that have been prioritised for protection. The NEBA will be undertaken by the Control Agency or under the direction of the EMT for spills in Commonwealth waters.

A NEBA may be either 'strategic' (pre-spill event) or 'operational' (post-spill event).

The following steps allow for an effective NEBA to be conducted:

Step 1

a. Identify potential spill impact area based on incident specifics, trajectory modelling and observations. Within the predicted impact area, identify the key characteristics of the habitats. This can be based on field observation, aerial photos and local knowledge.

Step 2

a. Identify resources (human, ecological, economic, cultural etc) at risk at each of the different habitats within the impact area. During the NEBA, specific consideration must be given to formally managed environment receptors and relevant formal management advice:

- South-east Commonwealth Marine Reserves Network Management Plan 2013-23 (Director of National Parks 2013). Response activities will not be conducted in a manner inconsistent with the objectives of the respective zones of the AMPs and the principles of the IUCN Area Categories applicable to the values of the AMPs.
- State protected areas management plans – see relevant EP.
- Conservation Advice / Recovery Plans (see relevant EP) that:
    - Identify pollution as a key threat.
    - Identify habitats degradation/modification as threat, which may be consequence of accidental release of hydrocarbon.
    - Identify the following conservation actions:
        - Minimise chemical and terrestrial discharge.
        - Ensure spill risk strategies and response programs include management for turtles and their habitats, particularly in reference to 'slow to recover habitats', e.g. nesting habitat, seagrass meadows or coral reefs.
        - Ensure appropriate oil-spill contingency plans are in place for the subspecies' breeding sites which are vulnerable to oil spills.
        - Implement measures to reduce adverse impacts of habitat degradation and/or modification.
- Cultural heritage including First Nations – see relevant EP.

Step 3

a. Assess the potential impact from the spill on each of the resources at risk based on severity of impact and predicted recovery time. This is assuming no response to the spill.

b. A precautionary approach should be adopted, assuming that the entire site will be impacted by oil and that this will persist at the site for at least 24 hours. However, in certain situations the behaviour of the spill may be more

accurately predicted, and this information should be used when assessing potential impacts. The second assumption that must be agreed is whether the percentage of a species or resource impacted relates to the local (site), regional or even global (in the case of endangered species) population. This does not necessarily need to be consistently applied to all resources at the site. For example, it may be considered that if a resource is very abundant regionally then it is not significant enough at a particular site to warrant a high level of concern even though it may be seriously impacted at that site.

Step 4

a. Review the site-specific advantages and disadvantages of the different response options available, using natural recovery as a baseline. The predicted effect, likely impact, and recovery time of the various response options on each of the resources must be assessed.

b. In the case of a hydrocarbon spill from Beach activities or operations impacting State waters and/or lands, it is expected that the Control Agency would undertake an operational NEBA, with support from Beach as requested, in determining the most appropriate response actions in accordance with the National Plan or State plan as applicable. Under the National Plan, Environmental Science Coordinators contribute advice on likely environmental outcomes of each response option to the spill planning team based on a NEBA approach.

c. As part of the response planning process, Beach has conducted a strategic NEBA (Table 8-2). As part of the due diligence process, Beach shall also conduct an operational NEBA in consultation and agreement with the Control Agency regarding the results of that assessment and recommendations for response activities. Additionally, information from the NEBA may be used to help inform requirements for environmental monitoring relating to anticipated impacts from the spill and any response activities. Beach's operational NEBA assessment would be conducted by an environmental professional with experience in oil spill planning and response.

8.2 Strategic NEBA

Table 8-2 summarises the response strategies that are relevant (based upon the extent of hydrocarbon exposure) and feasible or potentially feasible to implement for hypothetical spill scenarios associated with the Otway Offshore activities and a strategic pre-spill NEBA.

Table 8-2 : Response Feasibility and Strategic NEBA

Scenario	Hydrocarbon Type	Response	Strategic NEBA	Key Operational Considerations
Vessel Spill	MDO	Source Control	Yes, source control always considered to provide net environmental benefit by virtue of reducing the overall spill volume.	Other marine users Other petroleum Operations / Titleholders
		Monitor & Evaluate	Indirect benefit by informing response strategies. Aerial and vessel surveillance to be mobilised to determine the extent and direction of L2/L3 spill.	EPBC Regulations 2000 – Part 8 Division 8.1 interacting with cetaceans Wildlife (Marine Mammals) Regulations 2019 (Vic) Relevant Conservation Advice, Conservation Plans, Conservation Management Plans and Recovery Plans for nearshore and shoreline MNES. Include management for turtles and their habitats, particularly in reference to 'slow to recover habitats', e.g. nesting habitat, seagrass meadows or coral reefs. Consider breeding sites which are vulnerable to oil pollution. Implement measures to reduce adverse impacts of habitat degradation and/or modification. Other marine users and coastal communities Refer to Tactical Response Plans
		Assisted Natural Dispersion	No, value of the potential environmental benefit does not outweigh the operational logistics and safety requirements needed to implement the response.	
		Protect & Deflect	Yes, potential net environmental benefit to coastal habitats, coastal ecology, and socio-economic receptors. Site-specific operational NEBA required prior to undertaking response option.	
		Shoreline Clean-up	Yes, potential net environmental benefit to coastal habitats: sandy beaches & intertidal rocky platforms. Potential net benefit to shoreline birds and socio-economic receptors. Potential negative impact for coastal habitats: saltmarsh / seagrass & wetlands. Site-specific operational NEBA required prior to undertaking response option.	

Scenario	Hydrocarbon Type	Response	Strategic NEBA	Key Operational Considerations
		Oiled Wildlife Response	Will occur (at the direction of State Control Agency) for all impacted species: cetaceans, pinnipeds, turtles & sea birds. Coastal ecology: shoreline birds, pinniped haul-out sites & penguin colonies.	
Loss of Integrity Platform or Pipeline	Gas Condensate	Source Control	Yes, source control always considered to provide net environmental benefit by virtue of reducing the overall spill volume.	
		Monitor & Evaluate	Yes. Indirect benefit by informing response strategies. Aerial and vessel surveillance to be mobilised to determine the extent and direction of L2/L3 spill.	
Loss of Well Control	Gas Condensate	Source Control	Yes. Source control always considered to provide net environmental benefit by virtue of reducing the overall spill volume. N.B. does not apply to CSS as this is not a feasible response option for well within the Otway and Bass Basins.	Other marine users Other petroleum Operations / Titleholders
		Monitor & Evaluate	Yes. Indirect benefit by informing response strategies. Aerial and vessel surveillance to be mobilised to determine the extent and direction of L2/L3 spill.	EPBC Regulations 2000 – Part 8 Division 8.1 interacting with cetaceans Wildlife (Marine Mammals) Regulations 2019 (Vic) Relevant Conservation Advice, Conservation Plans, Conservation Management Plans and Recovery Plans for nearshore and shoreline MNES. Include management for turtles and their habitats, particularly in reference to 'slow to recover habitats', e.g. nesting habitat, seagrass meadows or coral reefs. Consider breeding sites which are vulnerable to oil pollution.
		Protect & Deflect	Yes, potential net environmental benefit to coastal habitats, coastal ecology and socio-economic receptors. Site-specific operational NEBA required prior to undertaking response option.	
		Shoreline Clean-up	Yes, potential net environmental benefit to coastal habitats: sandy beaches & intertidal rocky platforms. Potential net benefit to shoreline birds and socio-economic receptors. Potential negative impact for coastal habitats: saltmarsh / seagrass & wetlands. Site-specific operational NEBA required prior to undertaking response option.	

Scenario	Hydrocarbon Type	Response	Strategic NEBA	Key Operational Considerations
		Oiled Wildlife Response	Will occur (at the direction of State Control Agency) for all impacted species: cetaceans, pinnipeds, turtles & sea birds. Coastal ecology: shoreline birds, pinniped haul-out sites & penguin colonies.	Implement measures to reduce adverse impacts of habitat degradation and/or modification. Other marine users and coastal communities Refer to Tactical Response Plans

8.3 Source Control

Source control is the primary and most effective form of spill response. In the event of an offshore hydrocarbon spill, the feasibility of controlling the spill from the source should always be considered, giving due consideration to logistical constraints and safety implications.

Source control equipment and resources available to Beach in the event of a LOWC are detailed in Appendix B. 1.

8.3.1 Vessel

For a vessel spill at sea, the Vessel Master shall implement the Shipboard Marine Pollution Emergency Plan (SMPEP) or Shipboard Oil Pollution Emergency Plan (SOPEP) (equivalent to class).

8.3.2 Pipeline / Platform

System pressures are monitored via the distributed control system (DCS) onshore, and the platform and pipeline can be shut down via the DCS or emergency shut down (ESD) can be implemented from the platform.

8.3.3 Loss of Well Control

Restoring well control is the primary objective under a LOWC scenario.

Beach has considered platform based well kill for LOWC from existing platform and well kill using relief well for a LOWC event. The decision for which strategy to adopt will be dependent on the nature of an event at the time to achieve the objective of safely bringing the well under control as soon as possible. These options are not mutually exclusive, and it may be that both options are pursued in parallel to each other. However, as there are potential circumstances where safe access to the platform may not be possible or is not successful, the assumption is that in the worst-case event, a relief well may be required followed by a dynamic well kill.

A platform well kill might be able to be attempted via the platform production facilities, potentially with fluids being pumped to the platform via the umbilical, or from a vessel adjacent to the platform. This is particularly applicable, given the depleted nature of the Yolla-A Platform and Thylacine-A Platform wells, as pumping a lighter-weight brine or seawater into a well may be sufficient to kill it.

The primary method of well control for subsea wells is via a dynamic well kill by intersecting the well bore below the release location via a relief well and circulating kill weight drilling fluid into the well bore, thus controlling the flow of hydrocarbons from the reservoir.

Refer to the well-specific Source Control Contingency Plan (SCCP) for the recommended source control strategies.

Relief Well

Drilling a relief well is the primary source control strategy for wells in the Otway and Bass Basins. Each well, or group of similar wells, has a Relief Well Plan detailing: the relief well strategy for each well or group of similar wells, anticipated timeframes to drill a relief well and resources available to implement the relief well strategy.

Beach anticipates the mobilisation of an alternate MODU to the Otway and Bass Basins and the successful intersection of a flowing well would take approximately 86 days. Details of the most suitable source control methods applicable to the specific wells will be detailed in well-specific Source Control Contingency Plan, inclusive of the relief well plan and dynamic kill modelling.

Relief Well Locations

Two relief well sites have been identified for each location, even though modelling confirms only one relief well is required for the kill operation. This redundancy will give contingency in the event one of the relief well sites is deemed not accessible. Final sites will be chosen based on a risk assessment considering the actual conditions in the event of a LOWC.

Relief Well Targets

An intersection point as deep as possible, but above top of the reservoir, is preferable in order to achieve maximum frictional and hydrostatic pressure drop in the blowing wellbore. Steel is required in the blowout well in order to home in on the target using magnetic ranging techniques, hence the 9 5/8" casing shoe will be the deepest possible intersection point for an open hole blowout scenario.

The relief well may be drilled directly to the target, or alternatively a conventional strategy of approach and cross-by of the target well to facilitate detailed ranging and triangulation. Subsequently, the relief well should parallel the blowout well at close proximity. This section is used to align the relief well with the blowout well before intersecting at the planned kill point. The relief well designs are based on conservative directional drilling parameters.

MODU Selection

The Otway and Bass Basins are considered remote locations and therefore likely to have an impact on the time taken for a suitable rig to be mobilised to the relief well location. This timeframe has been built into the oil spill modelling. Rig broker reports are used to monitor the rig market on a monthly basis and, if required, assist in sourcing and contracting a suitable MODU, including whether the MODU has a valid Australian Safety Case.

Interface shall be managed via the Australian Energy Producers 'Memorandum of Understanding (AEP MoU): Mutual Assistance' (to which Beach is a signatory) between Beach Energy, the New Zealand Oil Operator, Rig Contractor, and the Australian Regulator.

The rig broker can be contracted to identify and contract a suitably specified rig (including Australian Safety Case status) within 14 days. Note, a MODU mobilised from the NW Shelf or Singapore is likely to take 35 days. These periods have been factored into the relief well schedule within the well-specific relief well plans.

MODU selection for relief well drilling will be based on the following:

- Rating of well control equipment: Rigs considered shall have equipment rated to at least 10,000 psi to perform the required well kill.
- Water depth: Rig being considered for relief well drilling must be rated for a minimum water depth of 60 m-100 m.
- Seabed conditions.
- Metocean conditions and rig ability to moor or jack up at relief well location.
- Rig with a valid Australian Safety Case.
- Proximity to the Otway and Bass Basins.
- Ability to engage in a mutual aid agreement with the operator.

Capping Stack System (CSS) Deployment

Rough sea states, including high waves and longer wave periods, can affect the safe operating limits of CSS deployment. The sea state can negatively impact the ability to safety deploy capping stack using a deck crane or A-frame located on the stern of the deployment vessel. Furthermore, if the vessel is experiencing too much heave due to wave action, the CSS could unintentionally hit the subsea wellhead during deployment causing damage to the equipment itself and to the wellhead. Thus, operating limits of acceptable sea states are required for deployment of the equipment for successful deployed in adverse sea state environments such as the Otway and Bass Basins. However, the gas plume environment in shallow water conditions is manifestly different to a deeper water environment due to the exclusion zone above the wellhead preventing vertical installation of the equipment. The feasibility analysis has confirmed that due to the technical complexity of deploying a CSS in shallow waters with a gas plume environment and harsh metocean conditions the use of a capping stack is not operationally suitable for Beach wells within the Otway and Bass Basins.

8.4 Monitoring and Evaluation

Understanding the behaviour and trajectory of hydrocarbon slicks is required for L2 and L3 spill scenarios to confirm the potential for environmental harm from the spill. There are a number of methods that can be used to monitor and evaluate hydrocarbon spills including direct observation (surveillance by air, vessel or tracking buoys), manual calculations, or computer modelling. Each of these methods, including the triggers for their use, is discussed in the following sections.

8.4.1 Predicting spill trajectory

Manual calculations for estimation of spill trajectory will be used for an initial calculation in parallel with oil spill trajectory modelling (OSTM) to provide an accurate spill trajectory for the current weather conditions and type/volume of hydrocarbon spill.

For a L2 or L3 spill, trajectory modelling would be conducted based on real time spill and metocean data and this information would be used to refine the spill response planning and execution.

8.4.2 Aerial / Vessel surveillance

Estimation of hydrocarbon volume can be estimated using the Bonn Agreement Oil Appearance Code (BAOAC – Refer to Appendix D).

Aircraft provide a better platform than vessels for surveillance, and Beach would utilise this option in the event of a Level 2 or 3 spill to provide information on the location, extent, trajectory, and spill volume estimate.

Fixed-wing aviation support available to Beach in the event of a L2/L3 spill is detailed in Appendix B. 3. Trained oil spill observers would be engaged from AMOSC to undertake the observations.

Aerial observations would be discontinued (with only shoreline surveillance remaining) once no areas of metallic sheen or true oil colour were observed as this would indicate that the slick thickness was less than 5 microns throughout and therefore poses little risk of environmental harm and is not amenable for any on-water or shoreline clean-up techniques.

8.4.3 Satellite Tracking Buoys

These units can be used to track the movement and extent of a spill. Beach own two tracking buoys. One of the buoys is on the manned platform (Yolla A). The other buoy is at the onshore supply base so that it can be deployed by the helicopter in the event of an incident. This buoy will be transferred to any rig that is undertaking operations in the area.

8.5 Protection and Deflection

Deflection equipment such as booms can be deployed to deflect slicks from encroaching on environmentally sensitive areas. Absorbent type booms are a suitable secondary protection measures at environmental sensitive sites. The feasibility and effectiveness of these measures is largely dependent on calm sea conditions allowing for the deployment of booms and this response option is only warranted where shoreline resources or offshore infrastructure are at risk.

Priority response areas are identified in Section 4.4.

Detailed Tactical Response Plans (TRPs) have been developed for priority protection areas.

All protection and deflection operations within State waters shall be under the direction of the state control agency. Beach will support protection and deflection operations as direct by state control agency.

8.6 Shoreline Clean-Up

Shoreline clean-up strategies must be developed in consideration of the shoreline character, resources at risk, and nature and degree of oiling. In general, other strategies are considered prior to shoreline clean-up due to the immediate environmental impact, heavy resource requirement, health, and safety concerns (i.e. manual handling, heat stress, fatigue, etc), logistical complexities and waste management.

Shoreline clean-up of diesel or condensate is not generally feasible or beneficial in the high energy environments typical of the Victorian and NSW south coast, and Tasmania. Any diesel would be highly weathered before it could make landfall and would be expected to have minimal environmental impacts.

The coastline of the Otway Basin is dominated by sheer sandstone cliffs, while the Bass Basin has sand and rock formations. Both coastlines have small and remote beaches which experience frequent heavy surf and swell. These locations rarely have vehicle access that would allow for the deployment of clean-up equipment and teams. Any hydrocarbons on these shorelines will likely weather rapidly and be broken down by natural processes.

All shoreline clean-up operations shall be under the direction of the state control agency. Beach will support shoreline clean-up operations as direct by state control agency.

8.7 Oiled Wildlife Response (OWR)

8.7.1 Victorian State waters

Department of Climate Change, Energy, the Environment and Water (DEECA) (formerly DELWP) is the agency responsible for responding to wildlife affected by a marine pollution emergency in Victorian State waters. If an incident which affects or could potentially affect wildlife occurs in Commonwealth waters close to Victorian State waters, AMSA will request support from DEECA to assess and lead a response if required. DEECA's response to oiled wildlife is undertaken in accordance with the Wildlife Response Plan for Marine Pollution Emergencies (draft).

Beach will provide support for the response through provision of resources as requested by DEECA utilising existing contracts such as AMOSC.

AMOSC maintains oiled fauna kits.

Both DEECA and AMSA have local and regional oiled wildlife response capability that may be activated under the direction of DEECA.

Personnel may also be deployed under the direction of DEECA to undertake wildlife response activities in State jurisdiction.

DEECA responds to oiled wildlife notifications and has identified the following steps which must be taken when reporting wildlife affected by an oil spill. Refer to the **External Contacts Directory** for contacts details (Appendix A).

Notify the DTP Operational Duty Officer and the DEECA State Agency Commander immediately.

Notify AMSA if the oil spill occurs in Commonwealth waters and wildlife is affected.

Determine the exact location of the animal and provide accurate directions. Maintain observation until DEECA can deploy staff to the site.

Take response actions only as advised by DEECA or AMSA:

- Determine the exact location of the animal for accurate directions for appropriately trained wildlife response personnel. Maintain observation and keep people, dogs, and wildlife scavengers away until trained rescuers have arrived.
- Avoid handling or treating injured wildlife as this may cause further stress and poses a safety risk to untrained handlers.

8.7.2 Tasmanian State Waters

The Tasmanian Oiled Wildlife Response Plan (WildPlan) is administered is administered by the Wildlife Health and Marine (WHAM) of the Department of Natural Resources and Environment Tasmania (NRET) (formerly DPIPWE) and outlines priorities and procedures for the rescue and rehabilitation of oiled wildlife.

Wildlife rescue kits are held at the NRET offices within Tasmania.

To activate oiled wildlife response, contact NRET. Refer to the **External Contacts Directory** for contact details (Appendix A).

8.7.3 New South Wales Waters

The NSW DPI is responsible for activating the Agriculture and Animal Services Functional Area Supporting Plan, as the appointed Agriculture and Animal Services Functional Area (AASFA) as stated under the NSW State Emergency Management Plan and State Waters Marine Oil and Chemical Spill Plan. The AASFA coordinates oil wildlife response and recovery in support of the Control Agency and is responsible for undertaking risk assessments, notification of key stakeholders, conducting wildlife response (e.g., rescue, triage, treatment, and rehabilitation), and providing a Liaison Officer upon request.

NSW DPI has a MOU with multiple organisations that will provide animal services resources to assist in an emergency response under the coordination of NSW DPI.

8.7.4 Commonwealth Waters

Beach will activate AMOSC and AMSA in the event of a Level 2 / 3 spill. Part of this activation will be the standby of OWR teams. AMOSC and AMSA both have on call personnel and equipment who can be activated if necessary. The Oil Spill Trajectory Modelling (undertaken by RPS via AMOSC contract) will determine the direction of the spill and the potential interaction of any wildlife. Helicopter and/or fixed-wing aircraft would be mobilised to observe any slick. If it is safe to do so, vessels will be mobilised to the slick area.

To activate AMSA, AMOSC and helicopter and/or fixed-wing aircraft, refer to the **External Contacts Directory** for contact details (Appendix A)

To notify the DCCEEW of oiled or potentially oiled wildlife in Commonwealth waters, contact DCCEEW and the Director of National Parks, refer to the **External Contacts Directory** for contact details (Appendix A)

8.8 Waste Management

8.8.1 Disposal of Waste

Of the modelled worst-case discharge scenarios, only a near-shore diesel spill from a vessel collision or a full LOWC is predicted to result in actionable thresholds of shoreline hydrocarbon exposure. Likewise, these scenarios also have the potential for waste generation from oiled wildlife response.

8.8.2 Waste Management Methodology

This section provides context for the potential scale of waste that may be generated during oil pollution response operations.

During clean-up and oil recovery operations, the type and amount of waste generated will depend on the location and recovery method (see Table 8-3).

Table 8-3: Waste Volume Calculation

Location	Hydrocarbon: Waste volume	Comments
Offshore recovery	1: 3	Inefficiency of recovery systems causing higher levels of water to oil ratio intake.
Shoreline clean-up	1: 10-20	Significant increase in waste volume due to collection of surrounding environments.

In the event of a clean-up operation, temporary waste handling bases will be set up at designated staging areas such as Port Welshpool. Beach in conjunction with its current waste management contractor will determine the suitability of temporary storage facilities for the collected hydrocarbons and oily debris. Table 8-4 summarises packing, storing and disposal of different types of waste that Beach's EPA licensed waste contractor, can support.

The transport of waste material may be required at sea, from sea to land and on land to on land, liquid transport trucks, flatbed trucks, dump trucks and gully suckers can be utilised to transport waste material through Beach's licensed waste contractor.

Table 8-4: Waste Category, Storage, Disposal and Treatment Options

Waste category	Packing & temporary onsite storage	Disposal & treatment[5]
Oiled Liquids	Oil field tanks (fast tanks) IBC Tank trucks Livestock tanks Sealed oil drums Lined skips/pits[1]	Recovery and recycling Bioremediation/land farming[3] Incineration/land filling[2]
Oiled man-made materials	Lined skips Lined earthen pits or berms[1] Industrial waste bags Plastic trash bags Sealed-top drums	Recovery and recycling Incineration/land filling[2]
Oiled naturally occurring organic materials	Lined skips Lined earthen pits or berms[1] Industrial waste bags Plastic trash bags Sealed-Top drums	Recovery and recycling Bioremediation/land farming[3] Incineration/land filling[2]
Oiled dead wildlife/birds[4]	Industrial waste bags Plastic trash bags	Incineration/land filling[2]

1. Lined pits for the storage of oiled wastes cannot be constructed within a National Park due to the sensitivity of the location. The potential impacts on subterranean fauna and aquifers must be considered at all other locations.
2. Incineration and land filling will only occur at appropriately licensed waste disposal facilities
3. Suitable areas to be identified in consultation with local and state authorities.
4. Wildlife and birds are collected by those trained in wildlife recovery. All dead wildlife and birds must be segregated. Some wildlife carcasses may need to be retained for scientific purposes. Vic DEECA, NSW DPI and/or Tas NRET will provide direction if this is required.
5. Sorted by most preferred to least preferred method

8.9 Environmental Monitoring

The Beach Offshore Operational and Scientific Monitoring Plan (OSMP) provides a framework for Beach's environmental monitoring response for Level 2 and Level 3 offshore hydrocarbon spills from their petroleum activities undertaken in the Otway and Bass Basins.

Oil spill monitoring has been divided into two types:

- Operational monitoring which collects information about the spill and associated response activities to aid planning and decision making during the response or clean-up operations. Operational monitoring typically finishes when the spill response is terminated.
- Scientific monitoring (also known as Type II or recovery phase monitoring) which is focused on non-response objectives and evaluating environmental impact and recovery from the spill and response activities. Scientific monitoring may continue for extended periods after a spill response is terminated.

Operational monitoring studies may be implemented in conjunction with relevant response strategies as described in this OPEP (e.g. Monitoring and Evaluation, Protection and Deflection, Shoreline Clean-up, and Oiled Wildlife Response (OWR)).

9 Spill Response Environmental Performance Outcomes, Standards & Measurement Criteria

Table 9-1: Spill Response Environmental Performance Outcomes, Standards and Measurement Criteria

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
Response Capability			
Beach maintain trained and competent EMT and CMT personnel for the duration of the activity.	**Training and Competency** Beach maintain trained and competent EMT and CMT personnel as per Section 11.	Head of Corporate Risk	Training and competency records
Source Control			
Isolation of spill source & cessation of spill to sea from vessel spill	**SOPEP/SMPEP** All vessels contracted by Beach within the Otway and Bass Basins shall have an SOPEP / SMPEP (appropriate to class).	Vessel Owner / Operator	Pre-mobilisation inspection records demonstrate vessel SOPEP / SMPEP in place prior to vessel entering the field.

Beach has appropriate source control plans in place prior to undertaking drilling activities	**Source Control Plans**
	Prior to undertaking drilling activities Beach shall have:
	• A NOPSEMA accepted WOMP for each well prior to drilling and throughout the production phase detailing the controls in place to restore well integrity in the event of a LOWC incident.
	• A well specific Source Control Contingency Plan (SCCP) inclusive of relief well plan demonstrating source control response arrangements are in place to:
	  ○ Deploy an alternate MODU and commence drilling a relief well within 8 weeks of a LOWC incident.
	  ○ Successfully intersect a flowing well within 86 days.
		Drilling & Completions Manager	Documented NOPSEMA accepted WOMP prior to drilling.
			Documented well specific SCCP inclusive of Relief Well Plan prior to drilling.

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
Beach maintains capability to effectively implement well control	**Well Control Resources** Prior to undertaking drilling activities Beach shall; • Be a signatory to the AEP Memorandum of Understanding: Mutual Assistance. • Maintain contractual agreements with well control specialists to supply specialist personnel and equipment to facilitate source control activities. • Maintain agreements with Vessel / Rig Broker(s) to access suitable response support vessels and alternate MODU(s). • Have enough and suitably qualified personnel (as described in Section 5.2.5 of this OPEP), or knowing have access to enough personnel, to form and maintain the Source Control Incident Management Team (SCIMT) for the expected 86-day duration of a LOWC incident. • Have enough equipment and consumables (see Appendix B of this OPEP), or knowingly have access to enough equipment and consumables, to effectively intersect a flowing well.	Drilling & Completions Manager	Signed copy of AEP Memorandum of Understanding: Mutual Assistance. Well Control Specialist contract(s) in place Vessel / MODU Broker reports available Register of SCIMT members and roster in place
Beach validates source control capability is accessible and available in a timely manner	**Spill Response Exercises – Source Control** Prior to undertaking drilling activities within the Otway or Bass Basins, and annually thereafter, Beach shall undertake a source control exercise ensuring arrangements are in place to: • Effectively apply the SCCP in a hypothetical LOWC event. • Initiate the AEP Memorandum of Understanding: Mutual Assistance via AEP members and confirm a suitable alternate MODU could be engaged within 2 weeks of a hypothetical LOWC event.	Drilling & Completions Manager	Exercise records confirm pre-drill and annual source control capability testing. Exercise records confirm access to enough source control equipment and personnel within timeframes specified within well specific SCCPs and relief well plans.

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
	• Mobilise Well Control Specialists to Adelaide within 3 days of a hypothetical LOWC event. • Contract suitable support vessels within 2 weeks of a hypothetical LOWC event. • Initiate the SCIMT within 2 hours of a hypothetical LOWC event and maintain the SCIMT (to the structure detailed within the well specific SCCP) for an expected 86-day LOWC event. • Access enough equipment and consumables (refer to Appendix B of this OPEP) to effectively intersect a flowing well based upon the relief well strategy detailed within the well specific relief well plan. Prior to undertaking drilling activities in the Otway and Bass Basins, Beach shall test emergency communications protocols between: • MODU and National Response Centre (NRC). • EMT, CMT and SCIMT. • EMT and Regulatory authorities / Control Agencies. • EMT / SCIMT and source control response providers. Beach shall validate that all contracted MODUs and vessels have undertaken exercises and spill drills in accordance with their approved SOPEP / SMPEP or equivalent.		Exercise records confirm emergency communications protocols in place and effective. Rig and vessel exercise / drill records.
Monitoring and Evaluation			
Beach maintains capability to effectively implement monitoring & evaluation	**Monitoring & Evaluation Resources** Beach shall:	General Manager HSE	AMOSC service contract in place. AMOSC equipment and personnel audited by Beach.

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
	• Maintain a service contract with AMOSC to enable access to AMOSC personnel and equipment and other AMOSC Members personnel (AMOSC Core Group) and equipment under mutual aid arrangements. • Validate AMOSC on call roster to ensure trained aerial observers can be available within 4 hours for deployment. • Maintain a contract with a fixed-wing aircraft operator enabling mobilisation of aircraft for aerial monitoring within 90 min of initiation. • Maintain contractual arrangements to access Oil Spill Trajectory Monitoring service providers, either directly or via AMOSC. • Maintain arrangements with a Vessel Broker to gain access to surveillance vessels. • Maintain an oil spill tracking buoy aboard the MODU during offshore drilling activities for ready deployment during a L2/L3 spill event.		Aviation contracts in place. OSTM contract in place (under AMOSC contract or direct). Vessel / MODU Broker reports available. Record of spill tracking buoy aboard MODU.
Risks managed from monitoring & evaluation	**Risk Assessment** In consultation with State Control Agency and relevant stakeholders, and prior to undertaking monitoring & evaluation operations, Beach shall undertake an operational NEBA and risk assessment (Beach's Risk Assessment Process will be used unless otherwise directed) to mitigate potential impacts to: • Marine fauna including listed migratory species. • Commercial shipping • Cultural heritage sites	EMT Leader	Documented risk assessment. Consultation records.

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
	• Aviation • Socio-economic receptors		
Beach implements monitoring & evaluation to inform spill response for L2/3 spills	**Implement Monitoring & Evaluation** Beach shall implement monitoring and evaluation (as per Section 9.1.2 or as directed by the Control Agency) during a L2/L3 oil pollution emergency or as requested by State Control Agency where State waters are, or have the potential to be, impacted.	EMT Leader	Incident records confirm monitoring and evaluation undertaken during L2 / L3 spill event.
Monitoring undertaken	**Operational Monitoring** During monitoring and evaluation operations Beach shall implement operational monitoring in alignment with the Offshore Operational and Scientific Monitoring Plan (OSMP) (CDN/ID S4100AH17908).	EMT Leader	Monitoring records maintained.
Shoreline Clean-up			
Beach maintains capability to effectively assess shorelines and implement shoreline clean-up	**Shoreline Clean-up Resources** Beach shall: • Maintain a service contract with AMOSC to enable access to AMOSC personnel and equipment and other AMOSC Members personnel (AMOSC Core Group) and equipment under mutual aid arrangements. • Validate AMOSC on call roster to ensure trained in shoreline assessment can be available within 4 hours for deployment. • Prior to drilling in the Otway or Bass Basins, engage with AMSA regarding potential access arrangements to the National Response Team (NRT) and National Response	General Manager HSE	AMOSC service contract in place. AMSA engagement records regarding access to NRT and NRST Waste Management contract in place.

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
	Support Team (NRST) in the event of an oil pollution emergency. • Maintain a contract with licenced waste contractors and licenced waste facilities to enable appropriate disposal / treatment of oil contaminated waste.		
Shoreline Assessment undertaken	**Shoreline Assessment** In consultation with State Control Agency, an assessment shall be undertaken of affected and potentially affected shorelines to establish response priorities and outcomes when developing Incident Action Plans (IAPs).	EMT Leader	Shoreline assessment records inform response priorities and outcomes within IAPs.
Monitoring undertaken	**Operational Monitoring** During shoreline clean-up operations Beach shall implement operational monitoring in alignment with the Offshore Operational and Scientific Monitoring Plan (OSMP) (CDN/ID S4100AH17908).	EMT Leader	Monitoring records indicate monitoring undertaken in accordance with NOPSEMA accepted OSMP.
Shoreline clean-up present net environmental benefit	**NEBA** Beach shall jointly undertake a NEBA with State Control Agency and only implement shoreline clean-up where a net environmental benefit is agreed with the State Control Agency.	EMT Leader	Documented NEBA Communications records
Risks managed from shoreline clean-up operations	**Risk Assessment** In consultation with State Control Agency and relevant stakeholders, and prior to undertaking shoreline clean-up operations, Beach shall undertake a risk assessment (Beach's Risk Assessment Process will be used unless otherwise directed) to mitigate potential impacts to:	EMT Leader	Documented risk assessment

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
	• Shoreline habitats • Shoreline communities • Oiled wildlife • Cultural heritage sites • Socio-economic receptors		
Relevant access authority obtained	**Site Access** In consultation with State Control Agency, access authority from relevant stakeholders shall be obtained prior to undertaking shoreline clean-up operations.	EMT Leader	Records of access authority
Tactical Response Plans developed	**Tactical Response Plans** Prior to undertaking drilling activities in the Otway Basin or Bass Basins, Tactical Response Plans (TRPs) shall be developed for all priority protection areas where predicted shoreline hydrocarbon loading exceeds 100 g/m^2 within 7 days and include: • Site Information: site location description and map, site access description and map, site specific logistical / access constraints, key ecological and socio-economic sensitivities within the area, nearby facilities, and services. • Response Information: response strategies and tasks, site overview and maps, response checklists, site establishment information, local information including contact details of key stakeholders, detailed task checklists, resource requirements (personnel / vehicles / vessels / equipment / site support).	General Manager HSE	Documented TRPs for all priority protection areas
Oiled Wildlife Response			

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
Beach maintains capability to effectively implement oiled wildlife response	**Oiled Wildlife Resources** Beach shall: • Maintain a service contract with AMOSC to enable access to AMOSC personnel and equipment and other AMOSC Members personnel (AMOSC Core Group) and oiled wildlife response equipment under mutual aid arrangements. • Validate AMOSC on call roster to ensure trained oiled wildlife responders can be available within 4 hours for deployment. • Prior to drilling in the Otway or Bass Basins, engage with AMSA regarding potential access arrangements to the National Response Team (NRT) and National Response Support Team (NRST) and addition oiled wildlife response equipment in the event of an oil pollution emergency. • Maintain a contract with licenced waste contractors and licenced waste facilities to enable appropriate disposal / treatment of oil contaminated waste.	General Manager HSE	AMOSC contract in place AMSA engagement records regarding access to NRT and NRST Waste Management contract in place
Required notifications undertaken	**Notifications** Beach shall notify the relevant State Control Agency, the government support agencies and AMSA as soon as possible after a spill that has, or has the potential to, affect wildlife in either State or Commonwealth waters.	Emergency Management Liaison Officer	Communications records
Operational monitoring undertaken	**Operational Monitoring** Beach will implement, via scientific monitoring consultants, the following operational monitoring in alignment with the Offshore Operational and Scientific Monitoring Plan: • Study O3: Oiled wildlife surveillance	EMT Leader	Monitoring records

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
Shoreline clean-up present net environmental benefit	**NEBA** Beach shall jointly undertake a NEBA with the relevant State Control Agency and the government support agencies, and only implement oiled wildlife response where a net environmental benefit is agreed with the relevant State Control Agency.	EMT Leader	Documented NEBA Communications records
Risks managed from shoreline clean-up operations	**Risk Assessment** In consultation with the State Control Agency, the government support agencies, and relevant stakeholders, and prior to undertaking oiled wildlife response, Beach will undertake site-specific risk assessment and mitigate potential impacts to: • Shoreline habitats • Shoreline communities • Oiled wildlife • Cultural heritage sites • Socio-economic receptors	EMT Leader	Documented risk assessment Consultation records
Authority to handle wildlife obtained	**Fauna Handling** In consultation with Vic DEECA, Tas NRET and/or NSW DPI only authorised responders shall handle and treat oiled wildlife.	EMT Leader	Consultation records Licencing records.
Monitoring undertaken	**Operational Monitoring** During oiled wildlife response Beach shall implement operational monitoring in alignment with the Offshore Operational and Scientific Monitoring Plan (OSMP) (CDN/ID S4100AH717908).	EMT Leader	Monitoring records indicate monitoring undertaken in accordance with NOPSEMA accepted OSMP.

Environmental Performance Outcome	Environmental Performance Standard	Responsible Person	Measurement Criteria
Waste Management			
Waste management appropriate	**Waste Management Plan** Site-specific waste management plans will be developed in consultation and agreement with the relevant State Control Agency, State EPA and the land custodian / owner.	EMT Leader	Documented Waste Management Plan Consultation records
Waste storage appropriate	**Waste Storage** Waste storage arrangements will be agreed with the Beach Waste Management Contractor in consultation and agreement with the relevant State Control Agency, State EPA and the custodian / owner and will be: • Fully bunded • Secured • Supervised	EMT Leader	Documented Waste Management Plan Consultation records
Waste disposal appropriate	**Waste Facility** Wastes will be segregated and manifested to ensure they are sent to an appropriately licenced waste facility as agreed with the relevant State EPA.	EMT Leader	Documented waste manifest Licenced waste Contractors & waste facilities. Consultation records
Waste transport appropriate	**Waste Transport** Wastes will be transported by correctly permitted vehicles to licenced waste facilities in accordance with the relevant State EPA requirements.	EMT Leader	Documented waste manifest Licenced waste transporters Consultation records

10 On-Going Response Preparedness and Exercises

10.1 OPEP Review

The plan shall be reviewed and updated as necessary in response to one or more of the following:

- Annually.
- When major changes which may affect the oil spill/pollution response coordination or capabilities have occurred.
- Routine testing of the plan if gaps are identified within the plan.
- After an actual emergency.
- If Beach's spill risk profile changes significantly due to additional activities or operations.
- .

The review of the plan shall consider external influences including:

- Change in any relevant legislation.
- Advice from the government relating to the conservation of listed species.
- Updates to State or Australian Marine Park management plans.
- Changes in fisheries management or other socio-economic features of the environment.
- New knowledge about the receiving environment in bioregional profiles or published scientific literature that may contribute to environmental baselines or data collection methods.
- Change in State or Commonwealth oil spill response arrangements and resources.

10.2 Testing Arrangement

In accordance with the Commonwealth OPGGS(E) Regulations the response arrangements within this OPEP will be tested:

- When they are introduced.
- When they are significantly amended.
- Not later than 12 months after the most recent test.
- if a new location for the activity is added to the EP after the response arrangements have been tested, and before the next test is conducted – testing the response arrangement 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.

The effectiveness of response arrangements will be measured by the performance standards detailed in Table 10-1 for each exercise type and take into account any external restrictions. Exercises will be documented, and corrective actions/recommendations tracked to closure.

A log shall be maintained during all oil pollution response exercises including a record of the effectiveness and timeliness of the response against the objectives of the exercise.

Where objectives are not met, or potential improvements have been identified during an exercise, these learnings shall be recorded and retained for inclusion into the subsequent revision of this OPEP.

Where significant deficiencies are identified in the effectiveness or timeliness of response arrangements as identified within this OPEP, this OPEP shall be updated within one month of the exercise to address the identified issues.

As required by the Commonwealth OPGGS(E) Regulations, the testing arrangements must be appropriate to the response arrangements and to the nature and scale of the risk of oil pollution relevant to the activity.

Testing arrangements appropriate to the response arrangements and to the to the nature and scale of each activity covered by this OPEP are included in Table 10-1.

In accordance with the Commonwealth OPGGS(E) Regulations the testing arrangements are also designed to provide for:

- The various locations of Beach facilities and activities in the Otway and Bass Basins.
- Response arrangements in relation to each of the facilities and activities.

Not all spill preparedness and response testing environmental performance outcomes will be tested simultaneously. The frequency of testing will relate to the potential spill level, spill risk and complexity of response.

Table 10-1: Spill Preparedness and Response Testing Environmental Performance Outcome, Standards and Measurement Criteria

Environmental Performance Outcome	Environmental Performance Standard	Testing Timing / Frequency	Responsible Person	Participants	Measurement Criteria
Vessel Operations (Level 1 / 2 spill)					
Response systems functioning	Emergency communications between shore base, MODU and offshore vessels shall be tested when the vessel is new to field.	Prior to arrival in field	Beach Contract Owner	Shore base MODU Vessel(s)	Exercise records confirm effective communications
Procedures in place and appropriate	Beach shall validate that each vessel within field has a SOPEP / SMPEP.	Prior to arrival in field	Beach Contract Owner	Vessel(s)	Vessel inspection / audit records confirm SOPEP / SMPEP in place
	Beach EMT shall test the effectiveness of OPEP & OSMP in guiding spill response and remediation based upon: • Notification timing and completeness. • Timeliness of response according to predicted response timing. • Availability of response personnel. • Training and competency of response personnel	Approximately[1] one month prior to drilling in field and then annually	Head of Corporate Risk	EMT on call roster AMOSC Monitoring Provider	Exercise records confirm OPEP / OSMP effective

[1] Timing of any testing will be determined based on the availability of the crew who will be involved in the activity with the time required to implement any changes.

Environmental Performance Outcome	Environmental Performance Standard	Testing Timing / Frequency	Responsible Person	Participants	Measurement Criteria
	Beach shall test the effectiveness of Emergency Response Plan in guiding EMT to fulfil roles and responsibilities.	Annually	Head of Corporate Risk	EMT	Exercise records conform all EMT able to fulfil allocated roles & responsibilities
Contractual arrangements in place to obtain equipment & people	Beach shall validate contractual arrangements with external service providers the capability of each service provider to respond according to scope.	Approximately[1] one month prior to drilling in field and then annually	Head of Environment	Contract Owner(s) Service Providers	All required contracts in place
Equipment available in a timely manner	Beach shall validate equipment stock levels and deployment times from AMOSC (desktop) based upon those presented within this OPEP.	At least one month prior to drilling in field and then annually	Head of Environment	Contract Owner AMOSC	Written confirmation of AMOSC capability
Appropriately trained people available	Beach shall validate the capability of environmental monitoring providers to ensure they continue to meet Beach requirements based upon company spill risk profile and potential monitoring scope of work (desktop).	Upon contract renewal	Head of Environment	Contract owner(s) Monitoring Providers	Written confirmation of Environmental Consultant capability to implement OSMP
	Internal and external training requirements for EMT validated (desktop).	Approximately[2] one month prior to drilling	Head of Corporate Risk	Leaning & Development	Training records in place and meet capability requirements

[2] Timing of testing will be determined based on the availability of the crew who will be involved in the activity with the time required to implement any changes.

Environmental Performance Outcome	Environmental Performance Standard	Testing Timing / Frequency	Responsible Person	Participants	Measurement Criteria
		in field and then annually			
Pipeline and Platform Operations (Level 1 / 2 spill) as above plus					
Response systems functioning	Emergency communications shall be tested between ERT and EMT.	Annually	Head of Corporate Risk	ERT EMT	Exercise records confirm effective communications
	Emergency notifications between EMT and Regulator(s) tested (including regulatory timeframes).	Annually	Head of Corporate Risk	EMLO EMT Regulators	Exercise records confirm effective communications and notification timeframes met
Contractual arrangements in place to obtain equipment & people	Beach shall validate contractual arrangements with external service providers the capability of each service provider to respond according to scope.	Annually	Head of Environment	Contract Owner(s) Service Providers	All required contracts in place
Drilling (Level 2 / 3 LOWC) as above plus					
Response systems functioning	Emergency communications between the MODU and EMT / SCIMT tested.	At least one month prior to drilling in field and then 6-monthly	Drilling & Completions Manager	MODU EMT / SCIMT	Exercise records confirm effective communications
	Emergency notifications between EMT and Regulator(s) tested (including regulatory timeframes).	At least one month prior to drilling in field and then annually	Head of Corporate Risk	EMLO EMT / SCIMT Regulators	Exercise records confirm effective communications and notification timeframes met

Environmental Performance Outcome	Environmental Performance Standard	Testing Timing / Frequency	Responsible Person	Participants	Measurement Criteria
	Communication systems and methods between CMT / EMT Leader / SCIMT Leader / EMT members tested.	At least one month prior to drilling in field and then 6-monthly	Head of Corporate Risk	CMT / EMT/ SCIMT	Exercise records confirm effective communications
	OSTM arrangements tested.	Approximately[1] one month prior to drilling in field and then annually	Head of Environment	AMOSC OST Service Provider	Exercise records confirm ability to initiate OSTM
Procedures in place and appropriate	Beach shall test readiness or arrangements to implement the relief well plan under the AEP MoU.	Approximately[1] one month prior to drilling in field and then annually	Drilling & Completions Manager	SCIMT AEP Well Control Specialists	Exercise records confirm relief well plan in place & tested
	Beach shall test the effectiveness of Source Control Contingency Plan guiding SCIMT to fulfil roles and responsibilities.	Approximately[1] one month prior to drilling in field and then annually	Drilling & Completions Manager	SCIMT	Exercise records conform all EMT able to fulfil allocated roles & responsibilities
Equipment available in a timely manner to respond to a L2 / L3 LOWC	Beach shall test logistics pathways for mobilisation & deployment of L2 / L3 equipment, including support vessels and suitable MODUs validated (desktop).	Approximately[1] one month prior to drilling in field and then annually	Drilling & Completions Manager	MODU / Rig Broker SCIMT Other Operator(s) under MoU	Exercise records confirm logistics pathways open and likely to facilitate deployment within anticipated timeframes
Appropriately trained people available to	Validation Well Control Specialists capability continues to meet Beach requirements based upon company spill risk profile (desktop).	Approximately[1] one month prior to drilling	Drilling & Completions Manager	Well Control Specialists	Written confirmation of Well Control Specialists capability

Environmental Performance Outcome	Environmental Performance Standard	Testing Timing / Frequency	Responsible Person	Participants	Measurement Criteria
respond to a L2 / L3 LOWC		in field and then annually		Learning and Development	
	Internal and external training requirements for the SCIMT validated (desktop).	Approximately[1] one month prior to drilling in field and then annually	Drilling & Completions Manager	Learning and Development	Training records in place and meet capability requirements

11 Training and Competency

All personnel who have been assigned Beach EMT roles are required to be conversant with their roles and associated responsibilities as defined within the EMP and OPEP. Beach also adopts the knowledge requirement principles for incident management teams responding to oil spills set out in APPEA's (now AEP's) *Guidance document: Incident Management teams – Knowledge requirements for responding to marine oil spills* (**AEP Guidance Document**) (Note that an IMT referred to in the AEP Guidance is equivalent to an EMT under the Beach CEM Framework).

All personnel with specific roles or responsibilities within the Beach CEM Framework shall receive appropriate levels of training and ongoing development commensurate with the responsibility and associated accountabilities required of each position. See Figure 5-3 and Figure 5-4 for the composition of the Beach CMT and EMT.

Emergency Management Team Capability is managed and tracked in Beach's leaning management system. A summary of related training and competency requirements for the core EMT personnel is provided in Table 11-1. In summary, for EMTs responding to oils spills these requirements include:

1. Emergency (All Hazards) training – this may be achieved by:
    a. all hazards training courses delivered by external providers and including but not limited to:
        i. PMAOMIR418
        ii. Australasian Inter-Service Incident Management System (AIIMS)
        iii. ICS200/400
    b. Beach internal all–hazards training addressing the areas identified in Section 4 of the AEP Guidance and tailored to Beach's CEM framework and plans
2. OPEP specific introduction – delivered by Beach
3. Specific oil spill response training – IMOII or IMOIII (depending on role), delivered by external providers such as AMOSC and OSRL and addressing the knowledge requirements set out in Section 5 of the AEP guidance.

Beach maintains an on-call roster for both CMT and EMT (Friday to Friday) but have a redundancy of additional appropriately trained and qualified staff and a further list of resources who may be called to support a response, including an IMO3 trained leader.

Beach has identified the minimum number of personnel per position to appropriately implement an initial response to an oil spill/pollution event and the minimum number of trained personnel per position for an initial response including accounting for shift rotation (i.e. night and day shift rotations). The number should be used as guidance, as the EMT is expected to expand and contract depending on the spill scenario and EMT requirements.

In addition to the internal capability of trained oil spill responders, Beach also has access to external, trained spill responders and resources which allow Beach to reach the minimum personnel numbers required for an adequate CEM capability (as described in Section 5.3).

AMOSC Oil Spill Response Specialist will require training as per the AMOSC training and competency training.

AMOSC Core Group Oil Spill Responders are industry personnel that require AMOSC Core Group Workshop (refresher training undertaken every two years), AMOSC IMO L1 and IMO L2 training.

AMSA's NRT is trained and managed in accordance with the National Response Team Policy, approved by the National Plan Strategic Coordination Committee (AMSA, 2021).

Table 11-1: Training Requirements for EMT Capability

EMT Requirements	Minimum Personnel Required*	Initial Resource Provider**	Training Course Name: Management (IMO L2 or equivalent)	Command & Control (IMO L3 or equivalent)	All Hazards Training (Beach internal training and/or external e.g. PMAO418, AIIMS)	OPEP Specific Introduction
EMT Roles						
EMT Leader	Total minimum requirements of: 6 x IMO3 10 x IMO2	Beach		✓	✓	✓
EMT Deputy		Beach		✓	✓	✓
EMLO Federal		Beach			✓	✓
EMLO State		Beach			✓	✓
EMLO Local		Beach			✓	✓
Health & Safety Officer		Beach	✓		✓	✓
Operations Lead		Beach	✓		✓	✓
Logistics Lead		Beach	✓		✓	✓
Planning Lead		Beach	✓		✓	✓
Environment Lead		Beach	✓		✓	✓
Finance Lead		Beach			✓	✓
Documentation		Beach			✓	✓
Duration of Training			As determined by relevant training provider	As determined by relevant training provider	Course specific	1 hour
Frequency of training / exercise			3 years - refresher course unless the participant has led or actively participated in at least one EMT/CMT exercise	3 years – refresher course, unless the participant has led or actively participated in at least one EMT/CMT exercise	3 years unless the participant has led or actively participated in at least one EMT/CMT exercise	Annually or prior to specific offshore campaign
Trainer			Appropriate external provider e.g. AMOSC, OSRL	Appropriate external provider e.g. AMOSC, OSRL	Course specific	Internal

*Minimum personnel required is based on numbers required for initial EMT response and is based on Beach Energy: Spill Response Resourcing Assessment conducted by AMOSC. The minimum personnel requirements takes account of the potential need for day & night shift in the initial response plus an allowance for redundancy to accommodate leave.

**Resources may be Beach personnel or contractors to Beach. Beach resources may also include personnel from external organisations (such as other operators) where there is a written resource sharing arrangement in place and provided those persons have received the Beach OPEP Specific Introduction.

12 Record Keeping

All consultation correspondence, written reports (including monitoring, audit and review reports) such as emergency exercise logs used to record the effectiveness and timeliness of the response against the objectives of the exercise, or any other record relating to the environmental performance of this OPEP must be retained for a minimum of 5 years following the cessation of activities within the scope of this OPEP.

All records must be stored in a way that makes retrieval of the document or record reasonably practicable.

13 List of Abbreviations

Definitions of terms used in this document:

Abbreviation	Definition
AASFA	Agriculture and Animal Services Functional Area
AEP	Australia Energy Producers
AMOSC	Australian Marine Oil Spill Centre
AMP	Australian Marine Park
AMSA	Australian Maritime Safety Authority
API	American Petroleum Institute
APPEA	Australian Petroleum Production & Exploration Association now AEP
ASAP	As Soon As Possible
BAOAC	Bon Agreement Oil Appearance Code
BOP	Blow-out Preventor
CEM	Beach Emergency's Crisis and Emergency Management Framework
CMP	Crisis Management Plan
CMT	Crisis Management Team
CMO	Beach's incident and action reporting software
CSS	Capping Stack System
CxT	Crisis Communications Team
DCS	Distributed Control System
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DO	Duty Officer
DotEE	(Commonwealth) Department of the Environment and Energy
DELWP	(Victorian) Department of Environment, Land, Water and Planning
DEECA	(Victorian) Department of Energy, Environment and Climate Action (formerly Victorian Department of Jobs, Precincts and Regions)
DEECA: ERR	(Victorian) Department of Energy, Environment and Climate Action: Earth Resources Regulation
DJPR EMB	(Victorian) Department of Jobs, Precincts and Regions – Emergency Management Branch now DEECA
DJPR ERR	(Victorian) Department of Jobs, Precincts and Regions – Earth Resources Regulation now DEECA: ERR
DoT	(Victorian) Department of Transport
DTP	(Victorian) Department of Transport and Planning

Abbreviation	Definition
DTP REC	(Victorian) Department of Transport and Planning – Resilience Emergency Coordination Branch
DPIPWE	(Tasmanian) Department of Primary Industries, Parks, Waters and Environment
DPI	(New South Wales) Department of Primary Industries
EMBA	Environment that May be Affected
EMLO	(Beach) Emergency Management Liaison Officer
EM	Emergency Management
EMT	Emergency Management Team
EMV	Emergency Management Victoria
EP	Environment Plan
EPA	Environmental Protection Authority
EPBC	Environment Protection and Biodiversity Conservation Act
ERP	Emergency Response Plan
ERT	Emergency Response Team
ESD	Emergency Shut Down
HSE	Health, Safety, and Environment
ICS	Incident Command System
IAP	Incident Action Plan
IBC	Intermediate Bulk Container
IUCN	International Union for Conservation of Nature
IMT	Incident Management Team (Used at Beach for Source Control IMT)
IMO	International Maritime Organisation accreditation
ITOPF	International Tanker Owners Pollution Federation
JSCC	Joint Strategic Coordination Committee
LOC	Loss of Containment
LOWC	Loss of Well Control
MD	Managing Director
MDO	Marine Diesel Oil
MNES	Matters of National Environmental Significance
MODU	Mobile Offshore Drilling Unit
NatPlan	National Plan for Maritime Environmental Emergencies
NEBA	Net Environmental Benefit Analysis

Abbreviation	Definition
NRET	Natural Resources and Environment (Tasmania)
NRST	National Response Support Team
NRT	National Response Team
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NOPTA	National Offshore Petroleum Titles Administrator
NRC	National Response Centre
NSW	New South Wales
OIE	Offset Installation Equipment
OIM	Offshore Installation Manager
OPEP	Oil Pollution Emergency Plan
OSMP	Operational & Scientific Monitoring Plan
OSMIP	Operational & Scientific Monitoring Implementation Plan
OSRL	Oil Spill Response Limited
OSTM	Oil Spill Trajectory Model
OWR	Oiled Wildlife Response
PEARL	People, Environment, Asset, Reputation and Livelihood
PM	Project Manager
POLREP	Marine Pollution Report
RCC	Rescue Coordination Centre (RCC)
ROV	Remotely Operated Vehicle
SEMP	State Emergency Management Plan
SCCP	Source Control Contingency Plan
SCIMT	Source Control Incident Management Team
SCME	State Controller Maritime Emergencies
SCR	Safety Case Revision
SIRT	Subsea Incident Response Toolkit
SITREP	Marine Pollution Situation Report
SME	Subject Matter Expert
SMPEP	Shipboard Marine Pollution Emergency Plan
SOPEP	Shipboard Oil Spill Pollution Emergency Plan
SSDI	Subsea Dispersant Injection
TAEIV	Training and Assessment Certificate 4

Abbreviation	Definition
TEC	Threatened Environmental Communities
TEM	Tasmanian Emergency Management
TRP	Tactical Response Plan
TST	Telephone Support team
VOC	Volatile Organic Compounds
WHAM	Wildlife Health and Marine
WildPlan	Tasmanian Oiled Wildlife Response Plan
WOMP	Well Operations Management Plan

14 Document Information and History

Document Custodian group

Title	Name/s
DocCust-HSER-Environment	Ashley Linton, Zacc Paparella

Document Superseded

Rev	Date	Document Number	Document name
4	20/10/2024	CDN/ID 18986979	Victoria Offshore Oil Pollution Emergency Plan (OPEP)

Document History

Rev	Date	Changes made in document	Reviewer/s	Consolidator	Approver
3	8/02/2024	Submission to NOPSEMA – OGV Drilling Program	PWE	Xodus	MWH
3a	26/07/2024	Submission to NOPSEMA - OGV	NK	Xodus	BMU
4	20/10/2024	Annual Review	PP,LD	TF	KGA
5	17/04/2025	Submission to NOPSEMA – OGV Completions Program	RH, ZP, KGA	ZP	KGA
5a	08/08/2025	Submission to NOPSEMA – OGV Completions Program	ZP, RH, MH, RM	ZP	KGA

Appendix A **Emergency Contacts Directory**

(Current 27th January 2024)

A. 1. External Contacts

A. 1. 1 Regulatory and Other External Contacts

Regulator	Contact	Phone	E-Mail
AMSA	Rescue Coordination Centre	1800 641 792 (24/7)	rccaus@amsa.gov.au https://www.amsa.gov.au/about/contact-us
DCCEEW	General	1800 803 772	
Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC)	Reception	(03) 5152 5100	admin@glawac.com.au
NOPSEMA	Incident Notification	1300 674 472	submissions@nopsema.gov.au
NOPTA	Titles		resources@nopta.gov.au
NSW Maritime	Duty Officer	131 256	
NSW Fire & Rescue	Duty Officer	(02) 9319 7000	
NSW EPA	Enquiries	131 555 (24/7)	info@epa.nsw.gov.au
NSW Department of Primary Industries (DPI)	Via AMSA	See AMSA details above	See AMSA details above
NSW Port Authority of Sydney	NSW Maritime Incident Duty Officer or directly to the Port Authority	(02) 9296 4999	
NSW Port Authority of Newcastle	NSW Maritime Incident Duty Officer or directly to the Port Authority	(02) 4929 3890	
NSW Port Authority of Port Kembla	NSW Maritime Incident Duty Officer or directly to the Port Authority	(02) 4275 0197	
Tas EPA	General	1300 372 842 (24/7)	contact@epa.vic.gov.au
	Environment Protection Authority	1800 005 171 (24/7)	incidentresponse@epa.tas.gov.au
	Whale Hotline	0427 942 537	
Tas NRET	Wildlife incidents	6165 4305	
Vic DTP	Operational Duty Officer	1800961 311 (24/7)	operational.response@transport.vic.gov.au

Vic DEECA	Vic Emergency Hotline	1800 226 226	
	Customer Service Centre	136 186	
Vic DEECA ERR	Duty Officer	0419 587 010 (24/7)	ERRChiefInspector@ecodev.vic.gov.au
Vic Port of Portland	Duty Officer	(03) 5525 0999	
Vic Gippsland Ports	Duty Officer	(03) 5150 0500	

A. 1. 2 Responder Contacts

Responder	Function	Contact	Phone	E-Mail
AMOSC	Spill Response - all	Duty Officer	0438 379 328 (24/7)	
AMSA	Spill Response - vessel	Duty Officer	1800 641 792 (24/7)	rccaus@amsa.gov.au
Adagold Aviation Pty Ltd	Fixed-wing aviation support		1800 767 747	
Integrated Helicopter Services	Helicopter support		0438 237 242	
Boots and Coots (Halliburton) (Australia, New Zealand, Papua New Guinea, Timor Leste)	Well Control Specialist	Level 27, 140 St. Georges Terrace Perth WA 6000 Australia	Perth: +61 8 9455 8300 or 24/7: +1-281-931-8884 or 1-800-BLOWOUT	
Wild Well Control	Well Control Specialist	General Manager – Asia Pacific	(03) 5143 2225 +61 428 514 012	
Cudd Well Control (Houston)	Well Control Specialist	Headquarters: Cudd Well Control 2828 Technology Forest Blvd. The Woodlands, TX 77381	T: +1 713.849.2769	cwcinfo@cudd.com

A. 1. 3 Consultant Contact

Consultant	Service	Contact	Phone	E-Mail
RPS	OSMP Implementation	Level 3/500 Hay St, Subiaco WA 6008	(08) 9211 1111	

A. 2. Internal Beach Contacts

A. 2. 1 Internal Beach Contacts

Contact / Function	Phone	E-Mail
National Response Centre (NRC)	(03) 9411 2147	
Vic GM Operations	0436 645 483	
BassGas Production Manager	0419 890 559	
Otway Production Manager	0476 828 914	
EMT Leader	(03) 9411 2147 (via the NRC)	
Wells Emergency Team Leader	(03) 9411 2147 (via the NRC)	
Corporate Risk	0417 568 525	randall.harvey@beachenergy.com.au

A. 3. Emergency Management Team Role Checklists for Oil Pollution Event

Role	Responsibility
EMT Leader	❑ Recognise and maintain response priorities (**P**eople, **E**nvironment, **A**ssets, **R**eputation and **L**ivelihood) ❑ Provide strategic direction and leadership to the whole EMT – this will include the OP IMT, the SCIMT and the SC IMT. ❑ Determine structure of response team, discuss with OP IMT Leader, and activate EMT/OP IMT ❑ Develop and implement a coordinated range of support initiatives across the activated teams (SCIMT/SC IMT and OP IMT) to resolve the event, including being the conduit of information to the CMT Leader; and ❑ Communicate the format in which discussions will occur (e.g. utilising Team Process' or regular timing schedule for updates) ❑ Decide on communications method with CMT Leader (via EMT Leader or Deputy) **Activate/Update/Initial actions** ❑ Activate the OSMP/OPEP (possibly, in consultation with EMT Environment) ❑ Government and corporate communications ❑ Chair team meetings / briefing / debrief sessions – set and review response objectives ❑ Carry out incident assessment and escalation potential analysis: ▪ Are all people accounted for and safe? ▪ Is the sources isolated? ▪ What is the current size of the spill? ▪ What is it? (product name and properties) ▪ Where is it? (GPS reference, distance and bearing from, place name) ▪ How big is it? (Volume, area) ▪ Where is it going? (Current forecast, weather, and tide) ▪ When will it get there? ▪ What is in the way? (Prioritise protection) ▪ What is happening to it? (Weathering) ▪ How could it escalate? ❑ Roles and responsibilities: ▪ Statutory agency ▪ Combat agency ❑ Notifications: ▪ Reports ▪ Crisis Management Team ▪ EPA ▪ Key Stakeholders ❑ Assess and declare the event level– consult with CMT to carry out organisational as required (through CMT Communications) ❑ Discuss with CMT Leader requirement for additional SMEs to be brought into the EMT (or specialist teams) or into the CMT ❑ Escalate / de-escalate event as appropriate and carry out associated activations / notifications ❑ Review and approve meeting minutes / actions on event status boards and task list ❑ Establish / review team objectives **Issues** ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood) and ensure response teams are doing the same ❑ Response strategy development / review and execution – refer to specific EMP Appendices for response and communications guidance, information, contingency plans and SOPs ❑ Identify other emergency or crisis management plans that are endorsed by regulators for the impacted asset and what thresholds these plans have regarding activation of and coordination with additional teams ❑ Alignment / consistency of EMT members' actions and activities – manage response continuity ❑ Align EMT actions and response with those of other activated response teams (e.g. ERT / CMT) ❑ Communications strategy and requirements (with relevant EMT members) ❑ Industry wide considerations (including notifications – joint response obligations) ❑ Industry / NOPSEMA communication obligations ❑ Impact minimisation – contain event and begin recovery

Role	Responsibility
	❑ Regulatory notification requirements (e.g. ESV, NOPSEMA etc) within timelines as defined in licenses
	Stakeholders
	❑ Contribute to stakeholder identification and prioritisation
	❑ Customers – review / assess ongoing impact to customers (liaise with EMT Logistics or Commercial))
	❑ Consider stakeholder needs and expectations – e.g. regulators, government agencies, emergency services, community groups, employees, media outlets, customers, retailers
	❑ Other industry participants and communications / notification groups – as per Emergency Communications Protocol (if applicable)
	❑ Industry partners – e.g. retail companies, contractors (per industry practices and contractual obligations)
	❑ Industry meetings – attend meetings / arrange representation, contribute on behalf of Beach
	❑ Regulators (e.g. ESV, NOPSEMA, UTR etc) – advise regulators of operating constraints (e.g. reduced pipeline operating pressures)
	❑ EMT CMT Leader – provide SITREP / briefing as event changes and following EMT meetings
	Actions
	❑ During any absences from the Emergency Management Room, delegate to Deputy or Planning to support team function
	❑ Guide and advise EMT members on response requirements, identify and allocate tasks
	❑ Activate support teams as necessary to assist the response (including subject matter experts, system technical / supply advisers, communications specialists)
	❑ Establish team meeting / briefing schedule (including frequency and timing) – with EMT Planning
	❑ Provide regular updates to CMT
	❑ Identify and apply appropriate plans, procedures and work instructions
	❑ Refer any media interest to EMT Communications
	❑ Consider shift handover for extended responses – including for support staff / teams
	❑ Log of events – maintain and record your decisions, actions, updates and contacts
	Concluding Actions
	❑ Identify and complete all outstanding actions and obligations
	❑ Ensure all relevant strategy specific termination criteria have been met in agreement with Control Agency
	❑ Declare end of event and coordinate / chair EMT debriefing
	❑ Formulate and implement a stand down plan with other activated response and support teams – manage consistency and coordination of actions
	❑ Confirm notification of all operational resources / 3rd party responders of event conclusion
	❑ Authorise and participate in the post-event investigations (by Legal representative) – assign actions, track and monitor progress and completion status
	❑ Provide all log sheets and written records / correspondence to EMT Planning

EMT Deputy

- ❑ Act as 2IC of the EMT, and carry out tasks as requested by EMT Leader
- ❑ Provide advice on overall management of EMT, including H&S and HR aspects
- ❑ Act as conduit of information to the CMT, for update briefings and direct liaise with Finance
- ❑ Decide on communications method with CMT Leader and CMT Finance and if required, HR
- ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood) and ensure response teams are doing the same
- ❑ Response strategy development / review and execution – refer to specific EMP Appendices for response and communications guidance, information, contingency plans and SOPs
- ❑ Identify other emergency or crisis management plans that are endorsed by regulators for the impacted asset and what thresholds these plans have regarding activation of and coordination with additional teams
- ❑ Alignment / consistency of EMT members' actions and activities – manage response continuity
- ❑ Align EMT actions and response with those of other activated response teams (e.g. ERT / CMT)
- ❑ Communications strategy and requirements (with relevant CMT members)

Stakeholders

- ❑ Contribute to stakeholder identification and prioritisation
- ❑ Customers – review / assess ongoing impact to customers (liaise with EMT Logistics or a commercial representative for advice)
- ❑ Consider stakeholder needs and expectations – e.g. regulators, government agencies, emergency services, community groups, employees, media outlets, customers, retailers
- ❑ Other industry participants and communications / notification groups – as per Emergency Communications Protocol (if applicable)
- ❑ Industry partners – e.g. retail companies, contractors (per industry practices and contractual obligations)
- ❑ Commercial – Liaise with commercial members for updates on operating production commitments
- ❑ Brief CMT Leader – provide SITREP / briefing as event changes and following EMT meetings

Actions

- ❑ During any absences of EMT Leader from the Emergency Management Room, assume management functions to support ongoing team functions
- ❑ Guide and advise EMT members on response requirements, identify and allocate tasks
- ❑ Consider shift handover for extended responses – including for support staff / teams
- ❑ Log of events – maintain and record your decisions, actions, updates and contacts

Concluding Actions

Provide all log sheets and written records / correspondence to EMT Planning

EMT Planning

- ❑ This position is help by an IMO2 qualified EMT Member
- ❑ Provides support to the EMT Leader in delivering timely integrated crisis management actions
- ❑ May serve as a sounding board for the EMT Leader
- ❑ Will assist the EMT Leader in developing the objectives in the first hour of notification of an event;
- ❑ EMT Planning will manage the EM Room and team members within it. This includes moderating discussions and adherence to the rules of the room leading the 'Team Process'
- ❑ EMT Planning is the 2IC of the EMT and is the conduit of information from the Leader to the Information Coordinator and Scribe. EMT Planning will act as Leader when the EMT Leader steps out or is unavailable.

Activate/Update

- ❑ Upon activation, attend the EMT as directed – obtain event briefing from EMT Leader
- ❑ Create and distribute POLREP within first 60 minutes of notification
- ❑ Commence a personal event log
- ❑ Determine level of response and staffing requirements – in consultation with EMT Leader
- ❑ Establish Emergency Management Room and notify EMT members of its location – verify that all equipment is present and functioning correctly (with EMT Information Coordinator)
- ❑ Advise EMT Leader of status of team members (available / unavailable / arrived / en-route)
- ❑ Confirm ERT / CMT contact information, distribute Emergency Management Room (EMR) / EMT contact information
- ❑ Consider the need to appoint separate role holders for the EMT Planning and Information Coordinator roles (with EMT Leader)

Activation

- ❑ Assist EMT Leader to chair meetings / briefing sessions
- ❑ Contribute to overall event assessment based on current information
- ❑ Prompt EMT Leader to establish / review team objectives
- ❑ Advise EMT members on EMT process, their roles, responsibilities and any outstanding actions / commitments and ensure induction for new/incoming members
- ❑ Prepare SITREP (coordinate with Information Coordinators) – distribute to activated response team/s
- ❑ Initiate personal log of events

Phase 1:

- ❑ Recognise and maintain response priorities (**P**eople, **E**nvironment, **A**ssets, **R**eputation and **L**ivelihood)
- ❑ Obtain and collate IAP documentation
- ❑ Identify immediate priority areas for protection
- ❑ Draft IAP, recording response:
  - Aim
  - Objectives
  - Response Strategies
  - Tasks
  - Resourcing
- ❑ Present IAP to EMT Leader for approval and distribute
- ❑ Conduct NEBA
- ❑ Conduct Trajectory (ADIOS)
- ❑ Security and integrity of EMR and safety of EMT members – authorised entry for the EMR
- ❑ Administrative and logistical support required by the EMT (deploy support groups)
- ❑ Monitor and manage effectiveness, morale and fatigue levels of the EMT
- ❑ Extended operation – assist EMT Leader with EMT member shift changes, manage to minimise impact on response continuity and fatigue of team members
- ❑ Resourcing – identify and provide support resources to assist the EMT to function (e.g. facilities, administrative and logistical, current and future needs, establish a SAP work centre cost code for time writing purposes)

Phase 2:

- ❑ Information Review
- ❑ Planning Preparations
- ❑ Response Strategies
- ❑ Supporting Plans
  - Health and Safety
  - Waste Management

- Oiled Wildlife Response

- ❑ Further develop IAP
- ❑ Implement response strategies

Ongoing Actions

- ❑ Manage information flow and ensure information remains up-to-date
- ❑ Obtain regular updates from Operations, Logistics and CMT Finance, Information Coordinator and Scribe
- ❑ Report Key outcomes to the EMT Leader
- ❑ Monitor / manage the EMT membership (e.g. monitor fatigue and effectiveness, source alternates)
- ❑ Assist EMT Leader with EMT briefing schedule (preparation, execution, timing)
- ❑ Monitor team log – ensure that key event information is recorded (e.g. decisions, actions, updates and contacts) and confirm this is undertaken by the EMT Information Coordinators when activated

- ❑ Consider shift handover for extended responses – including for support personnel
- ❑ Log of events – maintain and record your decisions, actions, updates and contacts

Concluding Actions

- ❑ Identify End Point Criteria
- ❑ Notify all staff
- ❑ Ensure completion of duties

and identify and complete all outstanding actions and obligations

- ❑ Assist EMT Leader to coordinate / chair EMT debriefing and implement an EMT stand down plan
- ❑ Issue a notification to the business regarding stand down of the EMT
- ❑ Collect and collate log sheets written records / correspondence from all EMT members – compile a comprehensive master event log and provide to CMT Legal
- ❑ Review post-event reports and identify areas for improvement (with EMT Leader) – assign actions and track their progress and completion
- ❑ Review Emergency Management Plan and identify updates

EMT Information Coordinator

- ❑ The Information Coordinator is responsible for ensuring accurate and appropriate collection and recording of information
- ❑ The Information Coordination is responsible advising the EMT Scribe, as required, regarding room set up and populating the display charts

Activate/Update

- ❑ Upon activation, attend the EMT as directed – report to EMT Planning for briefing and requirements
- ❑ Assist EMT Planning with EM Room setup – confirm all equipment is present and functioning
- ❑ Prepare recording devices for use e.g. whiteboards, laptops etc.
- ❑ Compile an initial Situation Report, collating all the key event information and data – provide to the EMT Leader for review and distribution
- ❑ On instruction from the EMT Planning, assist in initiating a team log of events – consult EMT members as necessary for clarification and details of response actions undertaken so far
- ❑ Maintain a record of the status on the Status Board as directed by the EMT Leader
- ❑ Record / document EMT briefing meetings – record decisions, actions and outcomes
- ❑ Update event records immediately following EMT briefings
- ❑ Assist EMT Planning with preparation of event SITREPs

Issues

- ❑ Record / document EMT issues
- ❑ Information updates / current event statistics and data – gather, compile and provide to the EMT Leader
- ❑ Key event information – identify required information categories with EMT Leader (e.g. geographical area affected, number of customers impacted, resources deployed, response / recovery duration)

Stakeholders

- ❑ Record stakeholder identification, prioritisation and notifications
- ❑ EMT Leader – provide information and statistics on the size and scale of the event, assist with their distribution to internal stakeholders

Actions

- ❑ Maintain an accurate and chronological team log / record of events
- ❑ Your recording function is critical – DO NOT get involved in any other activities
- ❑ Record actions / tasks assigned to EMT members and track their status – inform EMT members of overdue tasks / unfulfilled commitments
- ❑ Notify EMT Planning if you are having trouble maintaining event records (e.g. unsure of what to record, volume of information is too great, too many discussions occurring simultaneously)
- ❑ Request additional Information Coordinators as required – assign tasks and responsibilities
- ❑ Clarify any confusion of events / actions as soon as apparent
- ❑ Prepare and populate an information template to capture key event information
- ❑ Display and maintain information hardcopies in EMR (e.g. media releases, contact lists, event details – maps, details of event scene)

Actions

- ❑ Be prepared to compile and distribute minutes / status summaries during the event as required – liaise with EMT Planning for assistance
- ❑ Maintain a record of EMT members assigned to team roles / present in the EM Room
- ❑ Consider shift handover for extended responses – including for support personnel
- ❑ Log of Events – maintain / record TEAM decisions, actions and contacts

Concluding Actions

- ❑ Enter any outstanding information into recording logs / devices
- ❑ Identify and complete any outstanding actions and obligations
- ❑ Participate in event debriefs as necessary – act as recording secretary
- ❑ Assist EMT Planning to collect and consolidate log sheets and written records / correspondence into a master event log

EMT Scribe

- ❑ The Scribe is responsible for commencing the event in Teams and ongoing updating of stakeholders and tasks
- ❑ The Scribe is responsible for populating the display charts, under the direction of the Information Coordinator
- ❑ The Scribe is responsible for maintaining the visual display of EMT and CMT members phone numbers, and the start and finish time of CMT Members (for fatigue management)
- ❑ Continuous management and updating of event records, preparation of SITREPs as requested
- ❑ Maintains a record of the event and the activities of the EMT for reference during the event and following return to BAU
- ❑ Record of all stakeholder notification and engagement required
- ❑ Records all financial commitments, costs for informing the CMT Finance of costs (expended and anticipated).

Activate/Update/Initial Actions

- ❑ Upon activation, attend the EMT as directed – report to Information Coordinator for briefing and requirements
- ❑ Assist EMT Information Coordinator with Emergency Management room setup – confirm all equipment is present and functioning
- ❑ Prepare recording devices for use e.g. whiteboards, laptops etc.
- ❑ Compile an initial Situation Report collating all the key event information and data – provide to the EMT information Coordinator for review and distribution
- ❑ On instruction from the EMT Planning, assist in initiating a team log of events– consult EMT members as necessary for clarification and details of response actions undertaken so far
- ❑ Maintain a record of the status on the Status Board as directed by the EMT Information Coordinator
- ❑ Record / document EMT briefing meetings – record decisions, actions and outcomes
- ❑ Update event records immediately following EMT briefings
- ❑ Assist EMT Information Coordinator with preparation of event SITREPs

Phase 1

- ❑ Information updates / current event statistics and data – gather, compile and provide to the Leader
- ❑ Key event information – identify required information categories with EMT Leader (e.g. geographical area affected, number of customers impacted, resources deployed, response / recovery duration)

Phase 2:

- ❑ Maintain an accurate and chronological team log / record of events
- ❑ Your recording function is critical – DO NOT get involved in any other activities
- ❑ Record actions / tasks assigned to EMT members and track their status – inform EMT members of overdue tasks / unfulfilled commitments
- ❑ Notify EMT Planning if you are having trouble maintaining event records (e.g. unsure of what to record, volume of information is too great, too many discussions occurring simultaneously)
- ❑ Request additional Information Coordinators as required – assign tasks and responsibilities
- ❑ Clarify any confusion of events / actions as soon as apparent
- ❑ Prepare and populate an information templates to capture key event information
- ❑ Display and maintain information hardcopies in EMR (e.g. media releases, contact lists, event details – maps, details of event scene)
- ❑ Be prepared to compile and distribute minutes / status summaries during the event as required – liaise with EMT Planning for assistance
- ❑ Maintain a record of EMT members assigned to team roles / present in the EMR
- ❑ Consider shift handover for extended responses – including for support personnel
- ❑ Log of Events – maintain / record TEAM decisions, actions and contacts

Concluding Actions

- ❑ Enter any outstanding information into recording logs / devices
- ❑ Identify and complete any outstanding actions and obligations
- ❑ Participate in event debriefs as necessary – act as recording secretary
- ❑ Assist EMT Planning to collect and consolidate log sheets and written records / correspondence into a master event log

EMT Community Relations

EMT Community Relations will most likely go on to be part of the Crisis Communication Team (CxT), but will remain the conduit of information between the EMT and the CxT (in the CMT);

Activate/Update

- ❑ Contribute to overall event assessment based on current information
- ❑ Provide input to a review of the severity classification
- ❑ Review response outcomes against external communications and community management objectives
- ❑ Advise the EMT on likely / expected reputational and community perspectives, interest and reactions
- ❑ Establish contact with any other activated external communications or community teams / representatives within Beach (including CxT) – agree on standard event communication protocols
- ❑ Initiate personal log of events
- ❑ Confirm the EMT Leader communications needs and expectations
- ❑ Identify any response-related communications already undertaken or received
- ❑ Refer to Crisis Communications Plan (If applicable) (Attachment 1 of CMP)

Issues

- ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood)
- ❑ Communication priorities (establish in consultation with CxT Leader)
- ❑ Media / reputation exposures – communicate to the EMT any immediate, emerging and ongoing communications issues, interest and activity (e.g. traditional and social media, NGOs, other stakeholders)
- ❑ External scrutiny – monitor external (e.g. media) awareness / reporting of event
- ❑ Spokesperson considerations – Identify need early and discuss with CxT/CMT Communications
- ❑ Media attendance – arrange through any media attending event scene / Beach locations (including security, segregation from response, response to information requests, communication of key messages)
- ❑ Influential / aggressive media or community stakeholders – with CxT/CMT Communications, formulate specific response strategies, prepare spokesperson
- ❑ External contact – manage filtering, prioritisation and re-direction of incoming event related calls (e.g. media, next of kin, community) including resource requirements, information needs (e.g. approved / key messages)
- ❑ Call centre / switchboard, IVR messaging, SMS, websites – with CxT/CMT Communications, identify resource requirements, actions, information needs (including currency and accuracy of scripts / information)

Stakeholders

- ❑ Identify key media, government and community contacts and develop briefing schedule / management strategy –assign responsibilities to individual CxT members
- ❑ Prompt direction from CxT/CMT Communications, Inform / notify relevant media, community groups and external agencies
- ❑ Provide updates on external and community related issues and actions/support, utilise for implementation of communications and media strategies at the event scene

Actions

- ❑ Activate support personnel / groups and media / communication strategies as necessary – brief activated teams
- ❑ Consider stakeholder feedback during response strategy development, advise EMT on stakeholder perspectives, interest and reactions
- ❑ Develop media and community plans and materials and manage its distribution
- ❑ Coordinate prompt development, review and approval of communications material (e.g. event information, community / public safety information etc)– with EMT Emergency Manager, Legal, Commercial
- ❑ Develop key messages and materials for media and community – maintain consistency between messages from Communications and with other activated teams (e.g. ERT, CMT)
- ❑ Maintain EMT awareness and understanding of key messages
- ❑ Establish, maintain and distribute disclosure standards and communications protocols – clearly communicate which information is confidential and which may be released
- ❑ Prompt EMT members to maintain records of all stakeholder interactions
- ❑ Keep a communications log of all event related calls made / received
- ❑ Undertake notification and management of assigned stakeholders
- ❑ Consider shift handover for extended responses – including for support personnel
- ❑ Log of events – maintain and record your decisions, actions, updates and contacts

Concluding Actions

- ❑ Advise EMT leader on the timing and reputational and community implications of stand down timing
- ❑ Identify and complete all outstanding actions and obligations

- ❑ Participate in event debriefs as necessary (including with CMT is required)
- ❑ Provide all log sheets and written records / correspondence to EMT Planning (including communications logs)
- ❑ Consider on-going media and community attention – develop suitable management strategies
- ❑ Confirm that all relevant stakeholders are notified of the event conclusion
- ❑ Review effectiveness of the CxP and identify areas for improvement Upon activation, attend or advise the EMT as directed – obtain event briefing from EMT Leader and assist (as requested) with classification on the Event Classification Matrix

EMT Logistics

- ❑ Coordination of resources required to the affected site as well as required within the EMT.

Activate/Update/Initial Actions

- ❑ Upon activation, attend or advise the EMT as directed – obtain event briefing from EMT Leader
- ❑ Initiate personal log of events
- ❑ Consider setting up a process to track, manage and collect costs and how to report to CMT Finance
- ❑ Provide an event update to the EMT on response resourcing (e.g. the availability of support services, equipment and materials and the status of outstanding resources requests)
- ❑ Ensure implementation of Procurement Strategy
- ❑ Ensure implementation of Staging Area Strategy
- ❑ Ensure implementation of Communications Strategy (working with CMT Communications)
- ❑ Ensure implementation of Medical Strategy (working with EMT H&S and Source Control IMT)
- ❑ If required, build support to include Procurement Coordinator, Staging Area Coordinator, Communications Coordinator and Medical Coordinator

Initial Response

- ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood)
- ❑ Establish spill/pollution response equipment list for the required area(s) and place on standby or mobilise as required, including:
  - Dispersant (Boat/Air)
  - Oil Spill Response Equipment
  - Transport
  - Accommodation/Food
  - PPE
  - Waste Management Gear
  - Vessels
  - Crane
  - Personnel
  - Lay Down Area
- ❑ Establish other agencies and authorities available for support
- ❑ Organise air/vessels/locals to monitor and evaluate
- ❑ EMT response resource requirements – manage supply and deployment to site (in liaison with EMT Operations and ERT Resource Management)
- ❑ Response funding – activate management processes (e.g. fund tracking / transfer procedures)
- ❑ Resource usage, prioritisation and estimation of (and resource allocation to) future service and support requirements – develop a resource plan for the event
- ❑ Staging areas for coordination of operational dispatch and relief of resources
- ❑ Specialist response needs – source specialist personnel, services and equipment (manage ongoing resourcing) – liaise with EMT Operations for requirements
- ❑ Contractual requirements and implications related to emergency utilisation of contract staff currently allocated to undertaking scheduled / planned works

Ongoing Response

- ❑ Activate support personnel / group as necessary – brief and allocate tasks
- ❑ Identify service and support requirements for planning operations
- ❑ Mobilise spill response gear as required
- ❑ Update team on ETA of resources
- ❑ Request support from other agencies/authorities such as:
  - Fire
  - Police
  - SES
  - Council
  - Labour Hire
  - Ports and Harbours
  - Community Groups
  - Local Companies
- ❑ Refer any media interest to EMT Communications
- ❑ Consider shift handover for extended responses – including for support personnel
- ❑ Log of events – maintain and record your decisions, actions, updates and contacts

Concluding Actions

- ❑ Identify and complete all outstanding actions and obligations
- ❑ Participate in event debriefs as necessary
- ❑ Collect and collate records of all procurements relating to the event – produce a comprehensive record of ordering, delivery and invoicing of supplies and services for accounts processing
- ❑ Confirm payment of all external / third party suppliers, close all response-related purchase orders
- ❑ Formulate and manage implementation of an event demobilisation plan for response resources (liaise with ERT Logistics and EMT Operations)
- ❑ Ensure clean up and repair or assets if required
- ❑ Provide all log sheets and written records / correspondence to EMT Planning

EMT Health & Safety

- ❑ The Health and Safety Response functions ensures that the resolution activities are in accordance with Beach's HSE directives and meet all the regulatory requirements.
- ❑ The HSE function will work closely with the CMT HSE & Risk representative.

Activate/Update

- ❑ Upon activation, attend or advise the EMT as directed – obtain event briefing from EMT Leader and assist with set up as and notifications as required
- ❑ Initiate personal log of events
- ❑ Review any safety or environment related response, activity or contacts made prior to your arrival
- ❑ Contribute to overall event assessment based on current information
- ❑ Provide input to a review of the event classification
- ❑ Brief EMT on those people injured or at risk, as well as any environmental activities and issues

Issues

- ❑ Recognise and maintain response priorities (**P**eople, **E**nvironment, **A**ssets, **R**eputation and **L**ivelihood)
- ❑ Status of people injured or at risk – source from affected site and update EMT (including head count, casualty numbers, locations and status), provide to EMT Operations
- ❑ Liability – identify any deviation between safety and environment procedural / policy requirements and any actions leading up to and during the event / response
- ❑ Common faults – identify any elements of the event that may impact other Beach assets (e.g. through use of similar equipment / processes or operating conditions / environments)

Stakeholders

- ❑ Contribute to stakeholder identification and prioritisation
- ❑ Regulatory reporting – verify that appropriate HSE regulatory bodies have been contacted – including state Safe Work regulators
- ❑ ERT HSE – assist the affected ERT(s) with health and safety management at the scene
- ❑ Liaise with CMT Legal – discuss legal privilege requirements and impacts on response and investigations

Actions

- ❑ Facilitate H&S risk assessments to inform development of IAPs
- ❑ Activate support personnel / group as necessary – brief and allocate tasks
- ❑ Assist and advise the EMT in development of an appropriate response strategy
- ❑ Provide the EMT with relevant company records or data (e.g. safety and environment policy records, training records, qualifications of affected personnel, company HSE statistics)
- ❑ Provide EMT with specialist H&S advice and support relevant to the response (including critical issues)
- ❑ Document injury / fatality details and advise EMT on legislative reporting
- ❑ Undertake notification and management of assigned stakeholders
- ❑ Refer any media interest to EMT Communications
- ❑ Consider shift handover for extended responses – including for support personnel
- ❑ Log of events – maintain and record your decisions, actions, updates and contacts

Concluding Actions

- ❑ Identify and complete all outstanding actions and obligations
- ❑ Participate in event debriefs as necessary
- ❑ Provide all log sheets and written records / correspondence to EMT Planning
- ❑ Assist EMT Human Resources to organise counselling for affected personnel and monitor attendance
- ❑ Assist in final reporting to safety regulators – verify that requirements have been met
- ❑ Monitor any long-term health, environment or ecological effects related to the event or the response

EMT Environment

Activate/Update

- ❑ Consult with EMT Leader on activating the OSMP/OPEP
- ❑ Establish protection priorities and objectives in collaboration and agreement with Control Agency
- ❑ Develop Operational NEBA in collaboration and agreement with Control Agency
- ❑ Develop strategy specific incident action plans (IAPs) (excluding well control) in collaboration and agreement with Control Agency
- ❑ Feedback into the EMT about notifications and reporting requirements
- ❑ Monitor and evaluate – plane for visibility (AMOSC will supply trained aerial observer)
- ❑ Ongoing modelling (trajectory) RPS
- ❑ Work with EMT Logistics to deploy satellite tracking buoy
- ❑ GIS person is pulled in as part of the team, to provide mapping and visibility
- ❑ Implement Operational and Scientific Monitoring Plan (OSMP)
- ❑ Feedback monitoring and evaluation into the Team Meeting and Operational Planning Cycle
- ❑ Community information – work with EMT Communication for community liaison and stakeholder tracking.

Issues

- ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood)

Stakeholders

- ❑ Contribute to stakeholder identification and prioritisation
- ❑ Regulatory reporting – verify that appropriate HSE regulatory bodies have been contacted – including state Environmental protection Agencies

Actions

- ❑ For any spill or release verify that appropriate surveillance and tracking is in place
- ❑ Consider the requirement to monitor possible environmental and ecological effects of any release
- ❑ If relevant, provide a profile of areas likely to be affected by any toxic release (produce maps if possible) – assist activated ERT(s) to prioritise areas for protection / special consideration
- ❑ Undertake actions as per any pre-prepared Environmental Plan or Oil Pollution Response Plans
- ❑ Provide the EMT with relevant environmental contaminants registers for affected systems (e.g. PFOS/PFAS)
- ❑ Consider shift handover for extended responses – including for support personnel
- ❑ Log of events – maintain and record your decisions, actions, updates and contacts
- ❑ Provide the EMT with relevant company records or data (e.g. environment policy records)

Concluding Actions

- ❑ Identify and complete all outstanding actions and obligations
- ❑ Participate in event debriefs as necessary
- ❑ Provide all log sheets and written records / correspondence to EMT Planning
- ❑ Assist in final reporting to environmental regulators – verify that requirements have been met
- ❑ Monitor any long term environment or ecological effects related to the event or the response

Emergency Management Liaison Officer	This role is held by an IMO2 qualified EMT Member **Key Interfaces** ❑ EMT HSE: Provide updates, advise on HSE issues ❑ The Department of Transport and Planning (DTP) is Victoria's State Government transport system coordinator. Under the Emergency Management Act (EMA) 2013, DoT is the control agency for marine pollution Oil Pollutions in Victorian coastal waters up to three nautical miles. ❑ NOPSEMA: According to the EMA 2013, the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is the Statutory Agency for oil related spills greater than three nautical miles from the Victorian shoreline. ., While NOPSEMA maintains regulatory oversight of offshore petroleum incidents, offshore petroleum titleholders are required to control the response activities ❑ AMOSC: The oil industry established The Australian Marine Oil Pollution Centre (AMOSC) as a not-for-profit subsidiary company of the Australian Institute of Petroleum (AIP). To respond to oil related incidents **Activate/Update** ❑ Upon activation, attend or advise the EMT as directed – obtain event briefing from EMT Leader and assist (as requested) with event classification per the Event Classification Matrix ❑ Initiate personal log of events ❑ Review any safety or environment related response, activity or contacts made prior to your arrival ❑ Provide assessment of the stakeholders that require notification ❑ Gain approval EMT Leader to notify appropriate stakeholders ❑ Ensure AMOSC is notified and deployed **Issues** ❑ Coordinate Beach and Emergency Services response for injured via the appropriate control agency ❑ Check legal position of notifications and messaging and gain approval to proceed ❑ Ensure the internal stakeholders are notified of the incident and the notification requirements of control agencies **Stakeholders** ❑ Prioritize safety of the public and employees ❑ Confirm liaison point of control agency under the EMA 2013 ❑ Confirm liaison point for AMOSC ❑ Set regular teleconferences and agendas ❑ Set location of meetings in control agency wishes to meet in person ❑ Appoint a scribe to note take and update the EMT after all meeting ❑ Receive sitreps from the EMT **Actions** ❑ Regularly update EMT on control agency and AMOSC coordination ❑ Maintain meeting minutes and actions in the form of a sitrep which is shared amongst the EMT, control agency and AMOSC ❑ Refer any media interest to EMT Leader (to enable immediate referral to EMT) ❑ Consider shift handover for extended responses (greater than 8 hours)– including support personnel such as a scribe ❑ Log of events – maintain and record your decisions, actions, updates and contacts **Concluding actions** ❑ Identify and complete all outstanding actions and obligations ❑ Participate in event debrief/s as necessary ❑ Provide all log sheets and written records / correspondence to EMT Information Coordinator ❑ Assist EMT Human Resources to organise counselling for affected personnel and monitor attendance ❑ Assist in final reporting to safety and environment regulators – verify that requirements have been met ❑ Monitor any long-term health, environment or ecological effects related to the event or the response

EMT Operations

- ❑ This function may be the conduit of information from the site/field, as directed by the EMT Leader.
- ❑ This function may activate as specialist teams but maintain the requirement to be part of the 'Team Process' and provide a representative to the EMT
- ❑ Monitor rosters and resources of the affected site during a declared event until the EMT Planning role is activated. Communicate with the affected ERT Incident Manager or Site Controller and assist with coordination of all activities undertaken directly to resolve an event. This includes oversight and application of company resources to the response and at the scene in support of the EMT response strategy. Provide technical advice on the affected system/assets that may involve alternate response strategies and overall assessment of impacts that the event and any planned response may have on production.

Activate/Update/Initial Actions

- ❑ First Strike Response
- ❑ Report to EMT Room
- ❑ Initiate personal log of events
- ❑ Provide event updates to the EMT, including current situation, response progress, emergent risks
- ❑ Contribute to overall event assessment based on current information
- ❑ Provide input to a review of the event classification
- ❑ Actual operational outcomes Vs EMT response priorities / actions / objectives
- ❑ Ensure implementation of Marine Strategy
- ❑ Ensure implementation of Shoreline Strategy
- ❑ Ensure implementation of Waste Management Strategy
- ❑ Coordinate aerial operation
- ❑ Built Operations Group as required, with Marine Coordinator, Shoreline Coordinator, Waste Management Coordinator and possibly with Aviation Coordinator and Wildlife Coordinator)

Phase 1:

- ❑ Recognise and maintain response priorities (People, Environment, Assets, Reputation and Livelihood)
- ❑ Attend first and subsequent EMT meetings
- ❑ Report on immediate response actions taken and outcomes including current status
- ❑ Ensure all field staff are briefed using SMEACS format
- ❑ **Arial Surveillance** Arrange with logistics for either a fixed wing aircraft or helicopter (as required)
- ❑ Have an aircraft perform Ariel Surveillance with an observer
- ❑ If aircraft is required for dispersant spraying, a separate aircraft will need to be sources – task logistics

Phase 2:

- ❑ Obtain regular updates from personnel within the Operations group (if any)
- ❑ Oversee completion of tasks
- ❑ Report key outcomes reported to the EMT Leader
- ❑ Consider shift handover for extended responses – including for support personnel
- ❑ Log of events – maintain and record your decisions, actions, updates and contacts

Concluding Actions

- ❑ When notified by EMT Leader of termination of response, inform all (if any) Operations staff
- ❑ Identify and complete all outstanding actions and obligations
- ❑ Participate in event debriefs as necessary
- ❑ Contribute to implementation of the event demobilisation plan (with EMT Logistics)
- ❑ Provide all log sheets and written records / correspondence to EMT Planning

Appendix B **Spill Equipment and Resources**

(Current 30 January 2024)

B. 1. Source Control Equipment – Well Control

A detailed description of available source control equipment and resources including deployment timeframes is detailed within the Beach Offshore Source Control Contingency Plan (SCCP) and well-specific relief well plans. A summary of these resources is provided below.

B. 1. 1 Well Control Specialists

Access to a range of source control equipment including equipment and personnel is available through 3rd party contracts with:

- Boots and Coots (Halliburton): https://www.halliburton.com/
- Cudd Well Control: http://www.cuddwellcontrol.com/
- Wild Well Control: https://www.wildwell.com/

Contact details for these well control specialists are provided in Appendix A.

B. 1. 2 MODU

Rig broker reports are used to monitor the rig market on a monthly basis and if required, assist in sourcing and contracting a suitable MODU. The rig broker can be contracted to identify and contract a suitably specified rig (including Australian Safety Case status) within 14 days.

MODU selection criteria for relief well drilling is detailed in Section 8.3.3.

B. 1. 3 Casing and Consumables

A detailed description of casing and consumable requirements based upon relief well design is detailed within the well-specific relief well plans.

B. 2. Maintenance Vessels & Vessels of Opportunity

Beach has existing contracts in place to support its maritime requirements including vessels to support relief well drilling operations.

The contracts for the Otway and Bass Basins currently reside with a number of service provides that have undertaken the Beach Contracts and procurement process.

Over time vessels and operating companies change in the region. Beach has a procurement process, contractor management process and contracting management system that is implemented prior to engagement of vessels.

Any vessels used on Beach activities will carry a vessel SOPEP and Level 1 spill equipment on-board appropriate to the nature and scale of the vessel and vessel crew are fully trained and exercised in the application of the SOPEP.

Beach receives a monthly update of available vessels under an existing arrangement with a Vessel Broker. The availability and location of vessels capable of deploying the capping stack equipment, if suitable for the specific site, will be confirmed prior to spud of the wells.

Both operational and scientific monitoring program implementation requires vessel support, however these vessels do not need to meet the technical specifications of support vessel required for the MODU during relief well drilling operations, therefore alternate vessels can be used for these operations. Also, much of the monitoring program will likely be undertaken in near shore environments where larger vessels would be unsuitable.

B. 3. Fixed Wing Aviation Support

Beach may call upon fixed wing aircraft for aerial surveillance in the event of a Level 2 or Level 3 spill. The need for this service will be determined by the EMT Leader during the incident response and as per the OPEP Part 2 of this OPEP.

Beach has an existing contract with aviation provider to supply fixed-wing aerial support as detailed in Section A. 1. 2.

Beach will supply the aviation provider with the relevant flight pattern and log sheet for the surveillance and any additional trained oil spill observers via arrangements with AMOSC.

B. 4. Helicopter Support

During an incident response, Beach may call upon helicopter services to undertake aerial surveillance assistance or transport personnel in an event of a Level 2 or 3 spill, with the requirement determined by the EMT Leader at the time of the incident.

Beach has an existing contract with a helicopter provider as detailed in Section A. 1. 2.

At least one helicopter will be available for use by Beach during a spill response. A helicopter will be located at either Warrnambool or Tooradin.

When drilling projects are in progress there may also be other helicopters located at Warrnambool or Essendon. Beach and the helicopter provider have a working arrangement for this service and tests the call out process as part of its emergency response test plan and schedule.

A typical total mobilisation and flight time from:

- Essendon to site is about 1hr 45min (minimum).
- Tooradin to site is about 1hr 30min hours.
- Warrnambool to site is about 50 min (20 min flight time).

Beach will supply the helicopter provider with the relevant flight pattern and log sheet for the surveillance and trained oil spill observers via arrangements with AMOSC.

B. 5. Oiled Wildlife Response

Under the National Plan, Maritime Emergencies Non-Search & Rescue (NSR) Plan and TasPlan, the response to oiled wildlife from a vessel spill where a government agency is the Control Agency is covered in terms of responsibilities and equipment.

In Victoria, DEECA is the lead agency for wildlife impacted by marine pollution. The response procedures are defined in the Wildlife Response Plan for Marine Pollution Emergencies. This plan is incorporated as part of State Maritime Emergencies (non-search and rescue) Plan where an oil spill has occurred.

The Tasmanian Oiled Wildlife Response Plan (WildPlan) is administered by the Wildlife Health and Marine (WHAM) of the Department of Natural Resources and Environment Tasmania (NRET) (formerly DPIPWE) and outlines priorities and procedures for the rescue and rehabilitation of oiled wildlife.

The Agriculture and Animal Services Functional Area Supporting Plan is administered by the Animal Services Functional Area (AASFA) which formed by the NSW DPI as coordinates risk assessments, notification and wildlife response and rehabilitation of wildlife.

Oiled wildlife kits are available through AMOSC, the national plan and state agencies. DEECA has a number of first strike kits as well as arrangements in place for triage and rehabilitation of small, oiled seabirds. Wildlife rescue kits are held at various locations within Tasmania.

AMOSC also has wildlife equipment which can be mobilised directly by Beach in the event of a spill where there is a likelihood of oiled wildlife requiring treatment. However, it is noted that the remoteness and typical sea conditions of the

Otway offshore area and the logistic constraints associated with finding and collecting oiled wildlife at sea, will limit the feasibility of an offshore wildlife response effort.

Advice will be sought from AMOSC and regulatory agencies to guide any decisions regarding mounting a wildlife response will be based on the risks posed by the spill and safety and feasibility of a response.

B. 6. Government Resources

B. 6. 1 Australian Maritime Safety Authority

The Australian Maritime Safety Authority (AMSA) administers the National Plan which requires each State and Territory to produce its own contingency plans to support the national plan. If a spill occurs in Victorian or Tasmanian state waters the Maritime Emergencies (NSR) Plan or TasPlan is activated. If the spill is beyond the resources of the state agencies, then the additional resources can be sourced through agreements in the National plan for a marine pollution response.

B. 6. 2 Victorian Department of Transport and Planning (DTP) Resilience and Emergency Coordination Branch

In the event of a diesel spill from a supply vessel near shore, the equipment within the respective port region will be utilised as per the Maritime Emergencies (NSR) Plan through Vic DTP Resilience and Emergency Coordination Branch (REC).

In an event of a Level 2/3 incident, Vic DTP, as per the Maritime Emergencies (NSR) Plan, may provide the following assistance as required:

- Provision of vessels and support to CFA/FRV for chemical spills in State Waters
- Coordinate the supply of State equipment and personnel resources in support of the Incident Management Team
- Coordinate provision of Victorian equipment and personnel for any interstate or Commonwealth response.

VIC REC updated with Beach's program changes as part of its consultation program and shall be provided a copy of the accepted OPEP.

B. 6. 3 Tasmanian Environment Protection Authority (EPA)

In the event of a spill from a vessel near shore, the equipment within the respective port will be utilised as per the TasPlan through Tas EPA. This equipment may also be available to support a Level 2 or 3 spill where Beach is the Control Agency. Stockpiles of Level 1 equipment are located at Burnie, Devonport, Bell Bay and Hobart Ports and a current list of equipment is available from Tas EPA.

B. 6. 4 New South Wales Roads and Maritime Services Maritime (Maritime)

In the event of spill from a vessel within NSW State waters, NSW Maritime (or the relevant Port Authority) will assume the responsibility for responding to the incident. NSW Maritime and the Port Authority maintain Level One stockpiles of equipment at the major ports, regional ports of Eden and Yamba and as well as Lord Howe Island, Port Macquarie and Nowra. In addition to the Level One stockpiles discussed above, the Port Authority of NSW maintains its own stockpile of Level Two/Three equipment which is stored with its Level One equipment locations in Sydney and Newcastle. NSW Maritime also owns a purpose-built Wildlife Wash Facility that is available for deployment to anywhere in the state which is stored and maintained by the Port Authority of NSW at its Glebe Island base.

B. 6. 5 AMOSC Resources

AMOSC is supported by a core group of key personnel from oil industry members companies who are trained and regularly exercised in spill response. When called upon under arrangements established in AMOSPlan, Core Group Members can respond to an incident at short notice and provide a high level of expertise in leading teams on the ground responding to an incident. Actual timings and Core Group availability is updated monthly and can be obtained through AMOSC as required. AMOSC also holds large stockpiles of oil spill response equipment designed for both coastal and offshore use and has established contractual arrangements and processes for the mobilisation of equipment and

personnel to assist with a spill anywhere in Australian waters. A list of the AMOSC available equipment can be obtained through the AMOSC or their website.

AMOSC assistance may be sought in the event of a Level 2 or 3 spill. Beach's EMT Leader shall determine when and whether AMOSC notification and assistance will be required.

Under AMOSPlan, should the spill response require equipment or personnel from another company, the request for assistance is made directly by Beach to that company. AMOSC can assist in this dialogue through the Mutual Aid Policy, and Beach will contact AMOSC to activate the relevant Principal & Agency Agreement (of the lending company) and Mutual Aid Policy if borrowing resources.

AMOSC headquarters and their major equipment base are located in Geelong, adjacent to the Port of Geelong Corio Quay Supply base.

Beach shall provide AMOSC a copy of the accepted OPEP.

B. 7. Environmental Monitoring Resources

Beach has a current Master Service Agreement in place with several recognised specialist environmental consultants capable of undertaking scientific monitoring. Beach will undertake audits / desk top reviews of the capabilities of these consultants to ensure that they are capable of meeting the requirements of this OPEP.

Annual reviews of contracts and service providers are completed by Beach to confirm they still meet the required standards and are able to provide the contracted services. If any existing contractors are deemed unsuitable, a like service provider will be appointed. Should it be required (as determined by EMT Leader and the EMT Environment), the environmental consultant will undertake scientific sampling and analysis to fulfil the requirements of this monitoring program as detailed in Operational & Scientific Monitoring Plan (OSMP).

Appendix C Templates and Forms

C.1. Marine Pollution Report (POLREP)

C.2. Marine Pollution Situation Report (SITREP)

C.3. Oil Spill Incident Report – Level 1 Spill

C.4. Oil Spill Incident Report – Level 2/3 Spill

C.5. Stand down of EMT checklist

C. 1. Marine Pollution Report (POLREP)

Online forms from AMSA include:

- Marine Pollution Report (POLREP)

PDF or word version via https://www.amsa.gov.au/forms/harmful-substances-report-polrep-oil

C. 2. Marine Pollution Situation Report (SITREP)

Online form from DTP include:

- Marine Pollution Situation Report (SITREP)

C. 3. Oil Spill Incident Report – Level 1 Spill

Date:		
Spill observer:		
Report time:		
Reported time:		
Location of the spill:		
Material spilled:		
Estimate of spill quantity and description of the slick:		
Particulars of damage caused as a result:		
Apparent source/cause of the spill:		
Has spill been contained (Tick✓)	❑ Yes❑ No	
Comments:		
Location:	**Reported by:**	**Reported to:**
Time:	**Date:**	**Phone No:**
Are additional resources required to disperse/contain spill: ❑ Yes❑ No		

C. 4. Oil Spill Incident Report – Level 2/3 Spill

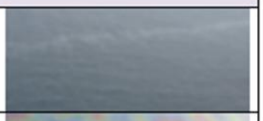
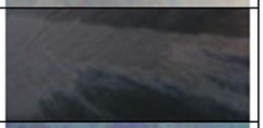
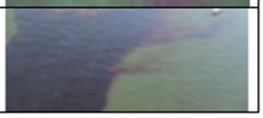
Date:	**Report time:**	
Spill observer:	**Reported to:**	
Time spill occurred:	**Date spill occurred:**	
Material spilled:	**API gravity:**	
Apparent source/cause:		
Location of spill:	Latitude:	Longitude:
Is spill continuing:	Yes	No
If yes, estimated rate of release:	Cubic meters/day:	bbl/day:
Volume of discharge: a) estimated	Cubic metres:	bbls:
Volume of discharge: b) known	Cubic metres:	bbls:
Size of spill: **(plot on chart)**		
Rate and direction of slick movement:		
Oil slick type:	**Continuous:**	**Windows:**
Estimated average thickness:		
Estimated time to nearest threatened resources:	**(hrs)**	
Meteorological and Ocean Data		
Temperature:		
Wind speed:		
Precipitation:		
Forecast:		
Oceanographic Data:	**Tide state:**	**Direction**
	Currents:	**Speed:**
Direction: **Sea State:**	**1** **2**	**3** **4** **5** **6+**
Average wave height:	**Metres:**	
Period:	**Seconds:**	
Comments:		

Date:	Report time:

C. 5. Stand down of EMT Checklist

STAND DOWN CHECKLIST / ACTIONS	
KEY ACTIONS:	
The EMT Leader is responsible for assigning personnel to commence the collation of emergency data prior to the commencement of the investigation process. On-going resources for incident control and post incident recovery (if required) should also be considered by the EMT Leader, including current/potential business continuity aspects (per Beach Energy's Business Continuity Plan).	
Final information release and/or notification should occur to some, or all, of the following:	
• All Site ERT and support personnel	• All relevant EMT and support personnel
• Contractor Management	• Regulatory authorities
• Emergency Services	• Employees (off and on duty)
• Employees families/NOK	• Third Parties
• Suppliers and/or contractors	• Joint Venture Partners and customers
• Media	• Government support agencies
• Mutual aid	• Environmental agencies
• Trade unions	• Local community and pressure groups
Initial 'hot' debrief of all personnel to include:	
• A short report by all persons of the history of the incident and their responses; • Outstanding problems with health, safety and environment; • Recovery of production; • Technical information regarding Beach's ongoing operations; and • Emotional responses to what has happened.	
Then:	
• Close additional security arrangements • Finalise additional catering and other services • Continue counselling for those involved in the incident • Compile and file all documents relating to the response • Ensure that all log entries are signed and that all call records and Sit Rep's are signed off by the person who prepared the document • Arrange for full incident investigation and analysis • Approve/comment on incident debriefing reports and recommended actions	
Carry out an After-Action Review to ascertain effectiveness of:	
Incident callout	**Site ERT functions**
• Overall emergency response	• Interface with other EMT members
Recommend revision of Emergency Plans as required.	
Schedule time for After-Action Review and if required, full debrief on the incident.	

Appendix D Bonn Agreement Oil Appearance Code

Code	Description / Appearance	Layer Thickness Interval (Microns)	Litres per km^2	Typical Appearance
1	Sheen (silver / grey)	0.04-0.30	40-300	
2	Rainbow	0.30-5.0	300-5,000	
3	Metallic	5.0-50	5,000-50,000	
4	Discontinuous True Oil Colour	50-200	50,000-200,000	
5	Continuous True Oil Colour	>200	>200,000	

Appendix E Aerial Surveillance Observer Log – Oil Spill

Survey Details											
Date		Start time		End time		Observers					
Incident						Area of survey					
Aircraft Type		Call sign				Average altitude		Remote sensing used			
Weather Conditions											
Wind speed (knots)						Wind direction					
Cloud base (feet)						Visibility (Nm)					
Time high water						Current direction					
Time low water						Current speed (Nm)					
Slick Details											
Slick grid parameters by lat/long						Slick grid parameters by air speed			Slick grid dimensions		
Length Axis		Width Axis				Length Axis		Width Axis	Length	Nm	
Start Latitude		Start Latitude				Time (seconds)		Time (seconds)	Width	Nm	
Start Longitude		Start Longitude							Length	km	
End Latitude		End Latitude				Air Speed (Knots)		Air Speed (Knots)	Width	km	
End Longitude		End Longitude							Total Grid Area	km^2	

Code	Colour	%age cover observed		Total Grid Area		Area per oil code		Factor	Oil volume	
1	Silver		%		km^2		km^2	40 – 300L/km^2		L
2	Rainbow		%		km^2		km^2	300 – 5,000L/km^2		L
3	Metallic		%		km^2		km^2	5,000 – 50,000L/km^2		L
4	Discontinuous true oil colour		%		km^2		km^2	50,000 – 200,000L/km^2		L
5	Continuous true oil colour		%		km^2		km^2	>200,000L/km^2		L
Non shaded areas to be completed on flight. Shaded areas completed on return.								TOTAL		L

Appendix F Aerial Surveillance Observer Log – Marine Mammals

Date:	Survey #
Aircraft/Pilot:	Observer:
Blue Whale Study Contact:	Enquest Contact:
Survey Start Time:	Survey Finish Time:

Event#	Waypoint #	Event time [hh:mm]	Event Position [dd.mmm]	Description of sighting and marine mammal	No. of Marine Mammal(s)	Sterling Position [dd.mmm]
			. °S			. °S
			. °E			. °E
			. °S			. °S
			. °E			. °E
			. °S			. °S
			. °E			. °E
			. °S			. °S
			. °E			. °E
			. °S			. °S
			. °E			. °E

Appendix G Shoreline Assessment

General Information			
Date	Dd/mm/yy:	Survey Time	From: To:
Weather	Sun / Cloud / Fog / Rain / Windy		
Location	Description:		Lat: Long:
Total Length	m		

Survey Team	
Name	Organisation

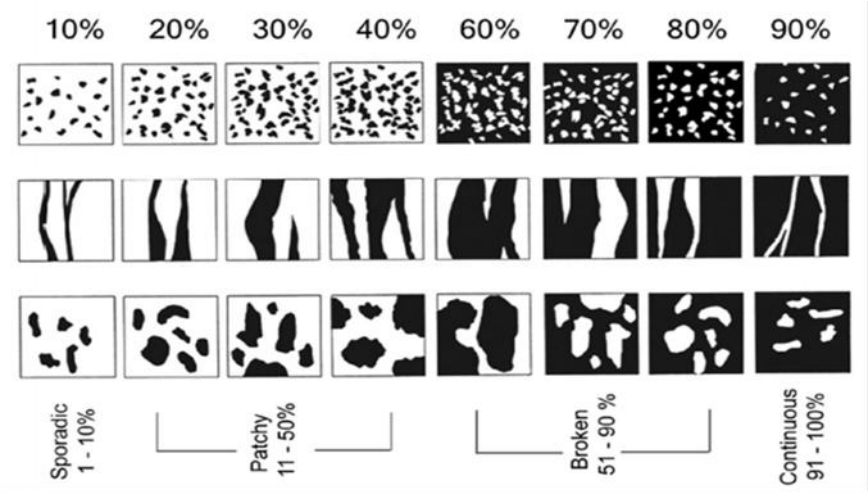
Shoreline Type			
Legend: P = Primary S = Secondary			
	Exposed Bedrock Cliff and Seawalls		Intertidal Mud/ Sand Flats
	Exposed Bedrock Platform or Reef		Mangroves
	Sheltered Bedrock Platform or Reef		Salt marshes
	Exposed Boulder/ Cobble and Rip rap		Seagrass (Shallow/Intertidal)
	Sheltered Boulder/ Cobble and Rip rap		Shallow/Intertidal Corals
	Pebble Beaches		Natural Inlets/ Channels
	Sand Beaches		Marinas/ Artificial Waterways

Operational Features	
Debris Present: Yes /No Amount: _____ m^3	
Direct Backshore Access: Yes / No	Access Restrictions:
Backshore cliff: Yes / No Height _____m	Suitable Lay down Area: Yes / No

Surface Oiling Conditions

Place an X in the appropriate box

Zone #	Tidal Zone				Oil Cover			Oil Thickness					Oil Character					
	L	M	U	S	Length	Width	Cover (%)	PO	CV	CT	ST	FL	FR	MS	TB	TP	SR	AP

Legend:	
Tidal Zone L = Lower Tidal M = Middle Tidal U = Upper Tidal S = Super Tidal	
Surface Oiling Thickness PO = Pooled Oil (fresh oil or mousse > 1 cm thick) CV = Cover (oil or mousse from >0.1 cm to <1 cm on any surface) CT = Coat (visible oil <0.1 cm, which can be scraped off with fingernail) ST = Stain (visible oil, which cannot be scraped off with fingernail) FL = Film (transparent or iridescent sheen or oily film)	**Surface Oiling Character** FR = Fresh Oil (unweathered, liquid oil) MS = Mousse (emulsified oil occurring over broad areas) TB = Tar balls (discrete accumulations of oil <10 cm in diameter) TP = Tar Patties (highly weathered oil, of tarry, nearly solid consistency) SR = Surface Oil Residue (non-cohesive, oiled surface sediments) AP = Asphalt Pavements (cohesive, heavily oiled surface sediments)
Distribution Guide (% Oil Cover)  	
Sketch	**Date:**

Checklist: (Place an X once completed)			
Oiled Area		Local Features	
Orientation (North)		Access	
Scale		Survey Area (Width/Length)	

Appendix H Internal and External Supporting Documents and Plans

Standard/CDN	Supporting Documents
Internal	
CDN 8189619	After Action Review Procedure
CDN S4810RD718250	Artisan-1 Source Control Contingency Plan (SCCP)
CDN 18386856	Business Continuity Plan
CDN 18985422	Guide to Planning Crisis & Emergency Exercises
CDN 18331497	Crisis Communications Plan
CDN 18024233	Crisis Management Plan
CDN 18985346	Emergency and Security Management Standard
CDN 18025990	Emergency Management Plan (EMP)
CDN S4210AD718257	Geographe-4 Source Control Contingency Plan (SCCP)
CDN S4110AD718256	Geographe-5 Source Control Contingency Plan (SCCP)
CDN 4152175	Offshore Spill Response Plan (Kupe)
CDN 3972816	Oil Pollution Emergency Plan (BassGas)
CDN S4100AH717907	Oil Pollution Emergency Plan (Otway)
T-5100-35-MP-005	Otway and Bass RWP
CDN 18387076	Physical Security Manual
Element 8	Risk Management and Hazard Control
CDN S4110AD718259	Thylacine North-2 Source Control Contingency Plan (SCCP)
Matrix (via Boardwalk)	Training and Capability Matrix
CDN 8189619	After Action Review Procedure
CDN S4810RD718250	Artisan-1 Source Control Contingency Plan (SCCP)
CDN 18386856	Business Continuity Plan
CDN 18331497	Crisis Communications Plan
CDN 18024233	Crisis Management Plan
CDN 18985346	Emergency and Security Management Standard
CDN 18025990	Emergency Management Plan (EMP)
CDN S4210AD718257	Geographe-4 Source Control Contingency Plan (SCCP)
CDN S4110AD718256	Geographe-5 Source Control Contingency Plan (SCCP)
CDN 18630468	Health Emergency Plan
CDN 18330844	Human Resources Emergency Plan
CDN 16744575	Incident Management Directive

Standard/CDN	Supporting Documents
CDN 4152175	Offshore Spill Response Plan (Kupe)
CDN 3972816	Oil Pollution Emergency Plan (BassGas)
CDN S4100AH717907	Oil Pollution Emergency Plan (Otway)
External	
AEP	Operational and Scientific Monitoring Bridging Implementation Plan Template – Revision A (APPEA 2021) https://www.appea.com.au/wp-content/uploads/2021/08/Joint-Industry-OSM-Bridging-Implementation-Plan-12032021.pdf
AEP	Australian Offshore Titleholders Source Control Guidelines - APPEA Memorandum of Understanding (Section 7), Revision 0, (APPEA 2021) https://www.appea.com.au/wp-content/uploads/2021/09/210921-Australian-Offshore-Titleholders-Source-Control-Guideline-Rev-0-APPROVED-Web.pdf
AMSA	Identification of Oil on Water. Aerial Observation and Identification Guide https://www.amsa.gov.au/sites/default/files/2014-01-mp-amsa22-identification-oil-on-water.pdf
AMSA	NP–GUI–025: National Plan response, assessment and termination of cleaning for oil contaminated foreshores (AMSA 2015) https://www.amsa.gov.au/marine-environment/national-plan-maritime-environmental-emergencies/np-gui-025-national-plan
AMSA	National Response Team Policy (NP-POL-002) 20 Feb 2023 https://www.amsa.gov.au/sites/default/files/national-response-team-policy-february-2023_0.pdf
AMSA	National Plan for Maritime Environmental Emergencies ('NatPlan') (AMSA 2020) https://www.amsa.gov.au/sites/default/files/national-plan-maritime-envrironmental-emergencies-2020.pdf
AMOSC	AMOSPlan (AMOSC 2021) https://amosc.com.au/wp-content/uploads/2021/10/amosplan-2021.pdf
Australian Marine Parks	South-east Commonwealth Marine Reserves Network Management Plan 2013-23 (Director of National Parks 2013) https://parksaustralia.gov.au/marine/pub/plans/se-network-management-plan2013-23.pdf
DEECA	Victorian Emergency Animal Welfare Plan Revision 2 (DELWP 2019) https://agriculture.vic.gov.au/__data/assets/pdf_file/0005/567077/Victorian-Animal-Emergency-Welfare-Plan.pdf
Department of Climate Change, Energy, the Environment and Water	EPBC Regulations 2000 – Part 8 Division 8.1 interacting with cetaceans

Standard/CDN	Supporting Documents
(DCCEEW) - Commonwealth	
DCCEEW	For Conservation Advice and Recovery Plans see activity EP or: Recovery Plans: https://www.dcceew.gov.au/environment/biodiversity/threatened/recovery-plans/made-or-adopted Conservation advice: https://www.dcceew.gov.au/environment/biodiversity/threatened/conservation-advices Species Profile and threats Database: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl
EPA Tasmania	Tasmanian Oiled Wildlife Response Plan (WildPlan) (DPIW 2006) https://epa.tas.gov.au/Documents/WildPlan_final.pdf
EPA Tasmania	Tasmanian Marine Oil and Chemical Spill Contingency Plan ('TasPlan') (DPIPWE 2022) https://epa.tas.gov.au/Documents/TasPlan.pdf
Emergency Management Victoria (EMV)	State Emergency Management Plan (SEMP) (EMV 2023) https://www.emv.vic.gov.au/responsibilities/semp
EMV	SEMP Maritime Emergencies (non-Search and Rescue) SubPlan ('VicPlan') Edition 2 (EMV 2021) https://www.emv.vic.gov.au/responsibilities/state-emergency-management-plan-sub-plans/semp-maritime-emergencies-non-search-and-rescue-sub-plan
NSW Roads & Maritime Services	NSW State Emergency Management Plan (EMPLAN) https://www.nsw.gov.au/sites/default/files/2021-04/state-emergency-management-plan-emplan.pdf
NSW Roads & Maritime Services	NSW State Waters Marine Oil and Chemical Spill Contingency Plan https://www.nsw.gov.au/sites/default/files/2022-07/oil-spill-contingency-plan-nsw-state-waters.pdf
NOPSEMA	Guidance Note N-04750-GN1488 A382148 – Oil Pollution Risk Management (NOPSEMA 2021) https://www.nopsema.gov.au/sites/default/files/documents/2021-07/A382148.pdf
NOPSEMA	NOPSEMA Environment Bulletin - Oil spill modelling (NOPSEMA 2019) https://www.nopsema.gov.au/sites/default/files/documents/2021-04/A652993.pdf
NOPSEMA	NOPSEMA Environment Alert - Oil spill sampling and source identification (NOPSEMA 2017) https://www.nopsema.gov.au/sites/default/files/documents/2021-03/A546475.pdf
RPS Report	Thylacine Installation and Commissioning – Phase 5 Oil Spill Modelling – Variation 1. No: MAQ1217J. (02 November 2022)

Standard/CDN	Supporting Documents
RPS Report	Beach Energy – Yolla Platform Oil Spill Modelling Reprocessing Report (Rev 0). No: MAQ0925J. (25 February 2020).
RPS Report	Beach Energy Artisan-1 Exploration Well Oil Spill Modelling (Rev 1). No: MAQ0828J. (13 June 2019).
RPS Report	Otway Offshore Operations -Oil Spill Modelling (Rev 1). No: MAQ1246J (16 March 2023)
RPS Report	Beach Energy Bass Strait – Oil Spill Modelling (Rev 0). No: MAQ1313J (August 2023).
RPS Report	Otway Gas Victoria - Oil Spill Modelling (Rev 1). No: MAQ1296J (03 August 2023)
RPS Report	Otway Gas Victoria - Oil Spill Modelling (Rev 1). No: GOC365512 (17 October 2024)
RPS Report	Beach Energy Otway Operations EP Update – Oil Spill Modelling. No: MAQ1041J. (26 July 2021).

Appendix I Testing Protocols Linked to Regulatory Commitments and Objectives

Protocol Testing including field deployment Beach to conduct a test. Announcing "this is a test / exercise call only".	**Annual Scheduled Tests**	**Scheduled Mar Qtr.**	**Scheduled Jun Qtr.**	**Scheduled Sept Qtr.**	**Scheduled Dec Qtr.**
Vessel Spill / Collision (4.2.1)	1		1		
Loss of integrity – Platform or Pipeline (L2/L3) (4.2.2)	1			1	
Loss of Well Control (L2 / L3) (4.2.3)	1				1
For the avoidance of doubt, all above protocols in their completeness, under all scenarios are to be tested. The above protocols can be tested in an exercise, or by individuals testing each separate action and protocol					
Desktop testing schedule (note, Beach may test individually or in an exercise)					
Effectiveness of OPEP & OSMP in guiding spill response and remediation based upon: • notification timing and completeness • timeliness of response according to predicted response timing • availability of response personnel • training and competency of response personnel	2	1		1	
Test the effectiveness of Emergency Management Plan in guiding EMT to fulfil roles and responsibilities	2		1		1
Validate contractual arrangements with external service providers the capability of each service provider to respond according to scope of OPEP.	2	1		1	
Validate equipment stock levels and deployment times from AMOSC (desktop) based upon those presented within the OPEP	2		1	1	
Internal and external training requirements for EMT validated (desktop)	2	1			1
Validate the capability of environmental monitoring providers to ensure they continue to meet Beach requirements based upon company spill risk profile and potential monitoring scope of work (desktop)	2	1		1	
Test Emergency communications shall be	2	1		1	

Protocol Testing including field deployment Beach to conduct a test. Announcing "this is a test / exercise call only".	**Annual Scheduled Tests**	**Scheduled Mar Qtr.**	**Scheduled Jun Qtr.**	**Scheduled Sept Qtr.**	**Scheduled Dec Qtr.**
tested between ERT and EMT					
Validate Emergency notifications between EMT and Regulator(s) tested (including regulatory timeframes)	2	1	1		
Emergency communications between the MODU and EMT / SCIMT tested	2			1	1
Communication systems and methods between CMT / EMT Leader / SCIMT Leader / EMT members tested	2		1		1
OSTM arrangements tested	2			1	1
Beach shall test the effectiveness of Source Control Contingency Plan guiding SCIMT to fulfil roles and responsibilities	2		1		1
Beach shall test logistics pathways for mobilisation & deployment of L2 / L3 equipment, including support vessels and suitable MODUs validated (desktop)	2		1	1	
Validation Well Control Specialists capability continues to meet Beach requirements based upon company spill risk profile (desktop)	2			1	1
Internal and external training requirements for the SCIMT validated (desktop)	2	1		1	
Test readiness or arrangements to implement the relief well plan under the AEP MoU	2		1		1
Totals	**45**	**9**	**11**	**12**	**13**

End of document