Appendix 1

Assessment of BassGas operations against the aims of marine park management plans

Assessment of BassGas operations against the IUCN Reserve Management Principles for Australian Marine Parks

In the absence of park-specific management plans for the Boags and Beagle Australian Marine Parks (AMPs), and based on the Guidance Note on Activities within Commonwealth Marine Reserves (NOPSEMA, Nov 2015), the International Union for Conservation of Nature (IUCN) reserve management principles are used as a proxy to guide an assessment of BassGas operations against the Boags and Beagle AMPs.

The IUCN objectives are provided in the Australian IUCN Reserve Management Principles for Commonwealth Marine Park as set out in Schedule 8 of the EPBC Regulation.

The following information summarises the risk to the Boags and Beagle AMPs from the spill scenarios.

204,250 bbl subsea blowout of Yolla condensate over 86 Days	
Sea surface:	No contact.
Entrained hydrocarbons:	No contact.
Dissolved hydrocarbons:	1% probability of exposure to low concentrations of dissolved aromatics in the top 10 m of the water column. No exposure to higher thresholds. No contact in the top 10-20 m of the water column.
Shoreline contact:	Not applicable.
300 m^3 surface release of MDO over 6 Hours	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.
3,144.9 bbl pipeline rupture of Yolla condensate over 57.6 minutes	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.

The table on the following page provides an assessment of routine and non-routine operations against the IUCN zonation for the Boags and Beagle AMPs.

Zonation for the AMPs based on IUCN categories							
AMP	**IUCN Ia**	**IUCN Ib**	**IUCN II**	**IUCN III**	**IUCN IV**	**IUCN V**	**IUCN IV**
Boags AMP	N/A	N/A	N/A	N/A	N/A	N/A	Yes. The whole AMP is classified as 'multiple use zone.'
Beagle AMP	N/A	N/A	N/A	N/A	N/A	N/A	Yes. The whole AMP is classified as 'multiple use zone.'

IUCN zoning definitions

IUCN Ia	Strict Nature Reserve - protected area managed mainly for science
IUCN Ib	Wilderness area - protected area managed mainly for wilderness protection
IUCN II	National Park - protected area managed mainly for ecosystem conservation and recreation
IUCN III	Natural Monument - protected area managed for conservation of specific natural features
IUCN IV	Habitat/Species Management Area – protected area managed mainly for conservation through management intervention
IUCN V	Protected Landscape/Seascape – protected areas managed primarily for landscape/seascape conservation and recreation
IUCN VI	Managed Resource Protected Area - protected area managed mainly for the sustainable use of natural ecosystems

AMP	IUCN category	Category description	Primary objective	Australian IUCN reserve management principles*	Predicted impacts and risks from BassGas operations	Predicted risks from a loss of well control
Boags AMP Beagle AMP	VI	Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.	To protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can be mutually beneficial.	The reserve or zone should be managed mainly for the sustainable use of natural ecosystems based on the following principles: • The biological diversity and other natural values of the reserve or zone should be protected and maintained in the long term. • Management practices should be applied to ensure ecologically sustainable use of the reserve or zone. • Management of the reserve or zone should contribute to regional and national development to the extent that this is consistent with these principles.	Routine emissions and discharges from the platform operations do not reach these AMPs and therefore do not impact on the primary objectives of the AMPs.	The risk of contact with dissolved aromatic hydrocarbons is very low (1%). This low risk, and the rapid weathering of condensate, means that the primary objective for the AMPs will not be impacted.

*As defined in Schedule 8 of the EPBC Regulations 2000

Assessment of BassGas operations against the stated aims of the Phillip Island Nature Parks Management Plan (Phillip Island Nature Parks, 2018)

The following information summarises the risk to the park from the spill scenarios.

204,250 bbl subsea blowout of Yolla condensate over 86 days	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.
300 m^3 surface release of MDO over 6 hours	
Sea surface:	1% probability of low oil exposure. No contact at higher thresholds.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	1% probability of low shoreline loading. 1% probability of moderate shoreline loading. No contact at higher thresholds.
3,144.9 bbl pipeline rupture of Yolla condensate over 57.6 minutes	
Sea surface:	No contact at higher thresholds.
Entrained and dissolved hydrocarbons:	No exposure to entrained hydrocarbons. No contact at higher thresholds. 2% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds.
Shoreline contact:	No contact.

The table on the following pages provides an assessment of routine and non-routine operations against the management aims of the park.

Management Aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
1. Conservation Excellence		
Building resilience in little penguin, seabird and Australian fur seal populations through research-led conservation programs.	No impact.	No impact.
Investing in habitat restoration and developing innovative wildlife protection solutions.	No impact.	No impact.
Enhancing Phillip Island as a safe haven for wildlife through identifying and controlling threats.	No impact.	No impact.
Engaging young people in conservation challenges through education at schools and across all Nature Parks sites.	No impact.	No impact.
Establish a Research Centre to increase awareness of our programs and create new opportunities.	No impact.	No impact.
Revolutionise oiled wildlife rehabilitation practices through the live application of magnetic cleaning technology.	No impact.	No impact.
Work with key partners to develop a plan for the management of native threatened wildlife with priority given to the strategic re-introduction of species to Phillip Island.	No impact.	No impact.
Utilise our research to influence marine and fisheries policy.	No impact.	No impact.
Implement conservation campaigns that inspire our visitors and community to take action.	No impact.	No impact.
Strengthen partnerships with key conservation and scientific organisations to influence global seabird conservation efforts.	No impact.	No impact.
Develop an understanding of the Caring for Country practices of Aboriginal and Torres Strait Islander Peoples and establish partnerships to help integrate these practices on Phillip Island.	No impact.	No impact.
Work with Parks Victoria and other key agencies to help establish Victorian Island Arks.	No impact.	No impact.
Partner with Bass Coast Shire Council and our community to eliminate the impact of cats on native fauna.	No impact.	No impact.
2. Extraordinary Visitor Experiences		
Partnering with organisations to deliver new and engaging experiences that meet our conservation objectives.	No impact.	No impact.

Building a Penguin Parade visitor centre that represents a world class ecotourism attraction.	No impact.	No impact.
Maintaining market leadership as an International Tourism destination.	No impact.	No impact.
Managing and interpreting the natural and cultural history of Nature Parks sites.	No impact.	No impact.
Develop more intimate and tailored tourism experiences that meet the changing needs of our visitors.	No impact.	No impact.
Establish penguin viewing experiences that complement the new world class Penguin Parade visitor centre.	No impact.	No impact.
Enhance the daytime use of the Summerland Peninsula and its spectacular coastline through the creation and promotion of walking and cycling experiences that improve access for all. (Summerland Peninsula Infrastructure and Procurement Master Plan)	No impact.	No impact.
Work with Traditional Custodians and the Aboriginal and Torres Strait Islander Community to develop and deliver authentic cultural experiences.	No impact.	No impact.
Create new and diverse volunteer opportunities to double volunteer participation across the Nature Parks.	No impact.	No impact.
Strengthen our visitors' connection with the natural environment to influence behaviour change and improve environmental outcomes.	No impact.	No impact.
Plan for the future of the Koala Reserve and its valued wildlife to provide more diverse and engaging experiences that complement our conservation values.	No impact.	No impact.
Increase visitation to Churchill Island through new visitor experiences and events that showcase the heritage precinct.	No impact.	No impact.
Advocate for increased accommodation options on Phillip Island to grow overnight group visitation and visitor yield.	No impact.	No impact.
3. Community Partnerships		
Developing respectful partnerships with Phillip Island's Traditional Custodians and wider Aboriginal and Torres Strait Islander Community	No impact.	No impact.
Enabling opportunities for community engagement such as the Community and Environment Advisory Committee and Community Open Day.	No impact.	No impact.
Investing in quality infrastructure at beach access areas that is sympathetic to the surrounding environment and promotes access for all.	No impact.	No impact.
Establish a new site to make the Nature Parks more visible and accessible to our community.	No impact.	No impact.

Utilise new technology to connect with the local community to deliver on our clear conservation, ecotourism and reconciliation objectives	No impact.	No impact.
Partner with Bass Coast Shire Council and Destination Phillip Island to implement the Phillip Island and San Remo Visitor Economy Strategy and foster a collaborative approach to environmental and tourism planning.	No impact.	No impact.
Collaborate with our community and key partners to establish Phillip Island as an accredited ecotourism destination (Global Sustainable Tourism Certification program).	No impact.	No impact.
Promote how to live with wildlife throughout our community to build a greater affiliation with nature.	No impact.	No impact.
Work with key partners to improve walking and cycling links on Phillip Island which will enhance the Island's liveability and people's connection with nature.	No impact.	No impact.
4. Sustainable Future		
Maintaining financial stability through growth in premium visitor experiences and improved visitation throughout shoulder periods.	No impact.	No impact.
Driving visitors to Phillip Island through its promotion as a must see wildlife destination to key international and domestic markets.	No impact.	No impact.
Align our commercial activities to our renewed commitment to environmental sustainability whilst maintaining overall financial return.	No impact.	No impact.
Commit to becoming a carbon neutral organisation by 2030.	No impact.	No impact.
Transition all sites to be waste and water neutral.	No impact.	No impact.
Improve the Nature Parks' sustainability credentials by expanding our Ecotourism Accreditation and seeking to join a carbon neutral accreditation program.	No impact.	No impact.
Build funding support for our conservation outcomes through philanthropic and corporate partnerships, grants and other funding opportunities.	No impact.	No impact.
5. Agile Organisation, Inspired People		
Fostering a safe and inclusive culture for all of our team, volunteers, contractors, community and visitors.	No impact.	No impact.
Developing our passionate, empowered and valued team.	No impact.	No impact.
Strengthen our global networks to enhance innovation in product development and conservation.	No impact.	No impact.

Embed a deep respect and understanding of Aboriginal and Torres Strait Islander Peoples' cultural values and protocols across our organisation.	No impact.	No impact.
Review our values to align with the organisation's conservation and sustainability ambitions.	No impact.	No impact.
Create collaborative work spaces for our team that encourage interaction and allow everyone to move easily across all sites.	No impact.	No impact.
Use technology to ensure business efficiencies, improve environmental outcomes and build collaboration.	No impact.	No impact.

Assessment of BassGas operations against the stated aims of the San Remo Coastal Reserve Management Plan (San Remo Foreshore Reserve Committee of Management, 2010

The following information summarises the risk to the park from the spill scenarios.

204,250 bbl Subsea Blowout of Yolla Condensate over 86 Days	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.
300 m^3 Surface Release of MDO over 6 Hours	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.
3,144.9 bbl Pipeline Rupture of Yolla Condensate over 57.6 Minutes	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.

The table on the following page provides an assessment of routine and non-routine operations against the management aims of the park.

Management Aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
High Priority Management Actions		
Maintain and protect the natural and built environment of the San Remo Foreshore Reserve.	No impacts.	No impacts.
Develop a track around the entire San Remo Foreshore Reserve.	No impacts.	No impacts.
Clarification and documentation of the San Remo Reserve boundaries.	No impacts.	No impacts.
Facilitate the development of a plan for the Jetty Precinct.	No impacts.	No impacts.
Ensure ongoing financial viability of the Foreshore Committee of Management.	No impacts.	No impacts.
Implement the Master Plan for the Lions Park (San Remo Community Park).	No impacts.	No impacts.
Develop and implement a Management Plan that ensures the commercial and environmental viability of the Foreshore caravan park.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Kilcunda Foreshore Reserve Management Plan (Bass Coast Shire Council, 2016)

The following information summarises the risk to the park from the spill scenarios.

204,250 bbl subsea blowout of Yolla condensate over 86 days	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.
300 m^3 surface release of MDO over 6 hours	
Sea surface:	34% probability of low oil exposure. 7% probability of moderate oil exposure. 1% probability of high oil exposure.
Entrained and dissolved hydrocarbons:	12% probability of low exposure to entrained hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds. 5% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m below sea. No contact at higher thresholds.
Shoreline contact:	34% probability of low loading. 31% probability of moderate loading. 7% probability of high loading.
3,144.9 bbl pipeline rupture of Yolla condensate over 57.6 minutes	
Sea surface:	8% probability of low oil exposure on the sea surface. No contact at higher thresholds.
Entrained and dissolved hydrocarbons:	1% probability of low exposure to entrained hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds. 2% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds.
Shoreline contact:	8% probability of low loading. 6% probability of moderate loading. No contact at the high threshold.

The table on the following page provides an assessment of routine and non-routine operations against the management aims of the park.

Management Aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
1. Management		
Ensure ongoing sustainable and efficient management of the Kilcunda Foreshore Reserve and engage community involvement in management activities.	No impact.	No impact.
2. Recreation		
Maintain and improve facilities and amenities within the Kilcunda Foreshore Reserve to enable continued safe recreational use and enjoyment of the foreshore.	No impact.	No impact.
3. Protection of the Environment		
Protect and enhance native vegetation, threatened species and coastal habitats within the Kilcunda Foreshore Reserve and improve community knowledge of key values.	No impact.	No impact.
4. Fire Management		
The Kilcunda Foreshore Reserve will be managed to minimise fire risk in accordance with the Kilcunda Foreshore Reserve Fire Protection Plan.	No impact.	No impact.
5. Cultural Heritage		
Protect cultural and heritage values throughout the Kilcunda Foreshore Reserve.	No impact.	No impact.
6. Coastal Erosion		
Coastal erosions within the Kilcunda Foreshore Reserve will be managed to minimise impacts to infrastructure assets and natural values, whilst working with natural coastal processes.	No impact.	No impact.
7. Climate Change		
Monitoring and plan for the potential impacts of climate change for all development and improvement activities or proposals within the Kilcunda Foreshore Reserve.	No impact.	No impact.

Assessment of BassGas operations against the stated aims of the Kilcunda Foreshore Reserve Management Plan (Bass Coast Shire Council, 2016)

The following information summarises the risk to the park from the spill scenarios.

204,250 bbl subsea blowout of Yolla condensate over 86 days	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.
300 m^3 surface release of MDO over 6 hours	
Sea surface:	34% probability of low oil exposure. 7% probability of moderate oil exposure. 1% probability of high oil exposure.
Entrained and dissolved hydrocarbons:	12% probability of low exposure to entrained hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds. 5% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m below sea. No contact at higher thresholds.
Shoreline contact:	34% probability of low loading. 31% probability of moderate loading. 7% probability of high loading.
3,144.9 bbl pipeline rupture of Yolla condensate over 57.6 minutes	
Sea surface:	8% probability of low oil exposure on the sea surface. No contact at higher thresholds.
Entrained and dissolved hydrocarbons:	1% probability of low exposure to entrained hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds. 2% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds.
Shoreline contact:	8% probability of low loading. 6% probability of moderate loading. No contact at the high threshold.

The table on the following page provides an assessment of routine and non-routine operations against the management aims of the park.

Management Aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
1. Management		
Ensure ongoing sustainable and efficient management of the Kilcunda Foreshore Reserve and engage community involvement in management activities.	No impact.	No impact.
2. Recreation		
Maintain and improve facilities and amenities within the Kilcunda Foreshore Reserve to enable continued safe recreational use and enjoyment of the foreshore.	No impact.	No impact.
3. Protection of the Environment		
Protect and enhance native vegetation, threatened species and coastal habitats within the Kilcunda Foreshore Reserve and improve community knowledge of key values.	No impact.	No impact.
4. Fire Management		
The Kilcunda Foreshore Reserve will be managed to minimise fire risk in accordance with the Kilcunda Foreshore Reserve Fire Protection Plan.	No impact.	No impact.
5. Cultural Heritage		
Protect cultural and heritage values throughout the Kilcunda Foreshore Reserve.	No impact.	No impact.
6. Coastal Erosion		
Coastal erosions within the Kilcunda Foreshore Reserve will be managed to minimise impacts to infrastructure assets and natural values, whilst working with natural coastal processes.	No impact.	No impact.
7. Climate Change		
Monitoring and plan for the potential impacts of climate change for all development and improvement activities or proposals within the Kilcunda Foreshore Reserve.	No impact.	No impact.

Assessment of BassGas operations against the stated aims of the Bunurong Marine National Park, Bunurong Marine Park, Bunurong Coastal Reserve and Kilcunda-Harmers Haven Coastal Reserve Management Plan (Parks Victoria, 2006)

The following information summarises the risk to the park from the spill scenarios.

204,250 bbl subsea blowout of Yolla condensate over 86 days	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.
300 m^3 surface release of MDO over 6 hours	
Sea surface:	10-34% probability of low oil exposure. Up to 7% probability of moderate oil exposure. 1% probability of high oil exposure.
Entrained and dissolved hydrocarbons:	10-12% probability of exposure to low entrained hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds. 5-9% probability of exposure to low dissolved aromatic hydrocarbons at 0-10 m below sea. No contact at higher thresholds.
Shoreline contact:	13-34% probability of low loading. 12-31% probability of moderate loading. 3-7% probability of high loading.
3,144.9 bbl pipeline rupture of Yolla condensate over 57.6 minutes	
Sea surface:	1-8% probability of low oil exposure on the sea surface. No contact at higher thresholds.
Entrained and dissolved hydrocarbons:	1-3% probability of low exposure to entrained hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds. 12-16% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m below sea surface. 4-6% probability of moderate exposure to dissolved aromatic hydrocarbons at 0-10 m below sea surface. No contact at the high threshold.
Shoreline contact:	1-8% probability of low loading at shoreline. 1-6% probability of moderate loading at shoreline. No contact at the high threshold.

The table on the following pages provides an assessment of routine and non-routine operations against the management aims of the parks.

Management Aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
4.1 Landscape and seascape		
Preserve and protect the landscape and seascape values of the planning area, particularly the natural character and places of high scenic quality and areas of significance to the indigenous community.	No impacts.	No impacts.
Minimise the impact of developments and management activities on the planning area's landscape values.	No impacts.	No impacts.
4.2 Geological and geomorphological features		
Protect geological and geomorphological features of the planning area and minimise impacts from management activities and visitor use.	No impacts.	No impacts.
Allow natural geological and geomorphological processes to continue with minimal human interference.	No impacts.	No impacts.
Provide opportunities for appropriate research into, appreciation of, and education about the geological and geomorphological features of the planning area.	No impacts.	No impacts.
4.3 Catchment and water quality		
Ensure the integration of future planning and management between the planning area and adjacent catchment.	No impacts.	No impacts.
Maintain a high quality of water within the planning area and surrounding waters to ensure that natural biological and physical processes can occur.	No impacts.	The OPEP takes into accounts risks to the open ocean and prioritises actions to reduce the spread and extent of oil on the sea surface.
Minimise impacts of threatening processes from catchment-sourced activities.	No impacts.	No impact.
4.4 Hydrodynamics		
Allow natural hydrodynamic processes to continue without human interference.	No impacts.	No impacts.
Minimise impacts on planning area values from human-induced changes to local hydrodynamic processes.	No impacts.	No impacts.
4.5 Marine habitats and communities		
Protect marine ecological communities and indigenous flora and fauna, particularly threatened species.	No impacts.	The OPEP takes into accounts risks to the open ocean and prioritises actions to reduce the spread and extent of oil on the sea surface.

Increase knowledge of marine ecological communities, flora and fauna to aid management, protection and appreciation.	No impacts.	No impacts.
Increase knowledge of key threatening processes to marine ecological communities, flora and fauna, to limit impacts.	No impacts.	No impacts.
4.6 Marine pests		
Minimise the risk of introduction of marine pests by human activities, and their subsequent establishment in the planning area.	The EP contains control measures aimed to minimise the risk of introducing marine pests to Victorian waters.	No impacts.
Establish arrangements for the detection of new incursions within the planning area in support of Victorian marine pest management arrangements.	No impacts.	No impacts.
Implement national or Victoria-wide control arrangements as they relate to the planning area.	No impacts.	No impacts.
4.7 Terrestrial flora		
Maintain the floristic structure and diversity of vegetation communities, and protect them from threatening processes.	No impacts.	No impacts.
Increase knowledge of the planning area's vegetation communities and species, particularly its threatened species, to aid management, protection and appreciation.	No impacts.	No impacts.
4.8 Terrestrial fauna		
Protect and preserve indigenous fauna and faunal habitats from visitor use and management activities, and maintain genetic diversity.	No impacts.	No impacts.
Increase knowledge of the planning area's fauna species and habitats, particularly threatened species, to aid management, protection and appreciation.	No impacts.	No impacts.
4.9 Terrestrial pests		
Control, and where possible eradicate, non-indigenous plants, animals and diseases.	No impacts.	No impacts.
Minimise the potential for the introduction and spread of pest plants and animals and diseases.	No impacts.	No impacts.
Minimise the impact of control programs on native flora and fauna species.	No impacts.	No impacts.
Restore native vegetation in areas where weeds have been controlled or eradicated.	No impacts.	No impacts.
4.10 Soil conservation		

Prevent and control soil degradation, and rehabilitate areas affected by soil degradation caused by visitor and management activities.	No impacts.	No impacts.
4.11 Fire management		
Protect planning area values from the deleterious effects of wildfire or inappropriate fire regimes.	No impacts.	No impacts.
Cooperate with relevant agencies and land managers in the protection of human life, neighbouring properties and assets.	No impacts.	No impacts.
5.1 Indigenous cultural heritage		
Protect Indigenous cultural heritage, including places and objects, from interference or damaging activities.	No impacts.	No impacts.
Nurture Indigenous cultural lore relating to the planning area.	No impacts.	No impacts.
5.2 Maritime and other cultural heritage		
Conserve places and values of historic and cultural significance within the planning area.	No impacts.	No impacts.
Increase learning about and appreciation of the historic heritage of the planning area.	No impacts.	No impacts.
6.1 Information, interpretation and education		
Promote and encourage visitors' discovery, enjoyment and appreciation of the planning area's natural and cultural values in a safe and appropriate manner through information, interpretation and education.	No impacts.	No impacts.
Encourage public support for parks and management practices.	No impacts.	No impacts.
Provide opportunities to learn about and understand the cultural and spiritual significance of the planning area to the Indigenous community.	No impacts.	No impacts.
6.2 Access		
Provide and maintain appropriate access to the planning area for visitor use and management purposes.	No impacts.	No impacts.
Minimise the impact of access on natural and cultural values of the planning area.	No impacts.	No impacts.
6.3 Visitor site activities		
Establish and maintain visitor facilities that enhance visitor enjoyment and are consistent with the protection of planning area values.	No impacts.	No impacts.
6.4 Recreational boating and associated facilities		

Provide opportunities for recreational boating and appropriate surface water sports while protecting natural and cultural values.	No impacts.	No impacts.
Promote safe boating and water safety within the planning area.	No impacts.	No impacts.
6.5 Diving and snorkelling		
Provide opportunities for diving and snorkelling in the planning area while protecting natural and cultural values.	No impacts.	No impacts.
6.6 Swimming, surfing and shore-based activities		
Provide opportunities for appropriate shore-based recreation within the planning area, while minimising impacts on the natural and cultural values.	No impacts.	The OPEP takes into accounts risks to the shoreline and prioritises actions to reduce the spread and extent of oil towards the shoreline.
6.7 Dog walking		
Provide opportunities for dog walking in appropriate areas of the planning area, while protecting park and reserve values and the experience of visitors.	No impacts.	No impacts.
6.8 Horse riding		
Minimise conflicts with recreational activities, threats to visitor safety and natural values within the planning area.	No impacts.	No impacts.
6.9 Hang gliding		
Protect visitors and values in the planning area from impacts of hang gliding and paragliding within the planning area.	No impacts.	No impacts.
6.10 Recreational fishing		
Provide opportunities for sustainable recreational fishing while minimising impacts to natural and cultural values.	No impacts.	No impacts.
6.11 Tourism services		
Provide opportunities for and encourage provision of external tourism services while minimising impacts on natural and cultural values of the planning area.	No impacts.	No impacts.
6.12 Public Safety		
Promote visitor safety and awareness of safety issues and risks within the planning area associated with access and use.	No impacts.	No impacts.
Promote and observe safe practices and cooperate with emergency services.	No impacts.	No impacts.

7.1 Authorised uses		
Manage authorised uses in accordance with relevant legislation, and minimise their impact on the planning area's values.	No impacts.	No impacts.
7.2 Occasional uses		
Manage uses and permitted activities in accordance with relevant legislation, and minimise their impacts on the planning area's values.	No impacts.	No impacts.
7.3 Boundaries and adjacent uses		
Minimise impacts on planning area values from adjacent uses and developments.	No impacts.	No impacts.
Ensure the integration of management with adjoining land and waters in accordance with principles for ecologically sustainable development.	No impacts.	No impacts.
Effectively communicate the location of Marine National Park and other planning area boundaries.	No impacts.	No impacts.
8.1 Community awareness		
Build a shared sense of ownership and custodianship for the planning area among community groups and individuals.	No impacts.	No impacts.
Increase community awareness and understanding of the values and management activities of the planning area.	No impacts.	No impacts.
8.2 Community participation		
Support and encourage community groups and volunteers to assist actively in the area's management by participating and by contributing their knowledge and skills.	No impacts.	No impacts.
Encourage tertiary students to undertake volunteer work experience and research that is consistent with aims for the planning area.	No impacts.	No impacts.
Inform, enrich and strengthen the planning area's management with the community's traditions and customs, especially Traditional Owner's cultural lore.	No impacts.	No impacts.
8.3 Agency partnerships		
Enhance management by collaborating with other agencies to ensure that they give appropriate consideration to natural and cultural values in planning and implementing activities that relate to the planning area.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Cape Liptrap Coastal Park Management Plan (Parks Victoria, 2003)

The following information summarises the risk to the park from the spill scenarios.

204,250 bbl subsea blowout of Yolla condensate over 86 days	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.
300 m^3 surface release of MDO over 6 hours	
Sea surface:	10% probability of low oil exposure. No contact at higher thresholds.
Entrained and dissolved hydrocarbons:	31% probability of low exposure to entrained hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds. 9% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m below sea. No contact at higher thresholds.
Shoreline contact:	4% probability of low loading. 3% probability of moderate loading. No contact at the high threshold.
3,144.9 bbl pipeline rupture of Yolla condensate over 57.6 minutes	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	1% probability of low exposure to entrained hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds. 21% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m below sea surface. 4% probability of moderate exposure to dissolved aromatic hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds.
Shoreline contact:	No contact.

The table on the following pages provide an assessment of routine and non-routine operations against the management aims of the park.

Management Aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
4.1 Geological and landform features		
Manage sites of geological and geomorphological significance to allow public access and interpretation.	No impact.	No impact.
4.2 Rivers and Catchments		
Maintain water quality in the park's catchments.	No impact.	No impact.
4.3 Vegetation		
Manage ecosystems to ensure the protection of indigenous flora species and vegetation communities, particularly significant species and communities.	No impact.	No impact.
Improve knowledge about the conservation of natural values with minimal disturbance to the environment.	No impact.	No impact.
4.4 Fauna		
Ensure the preservation and protection of indigenous fauna.	No impact.	No impact.
Manage park ecosystems to provide for the long-term protection and preservation of significant communities, habitats and species.	No impact.	No impact.
Improve knowledge about the conservation of fauna and their habitat requirements.	No impact.	No impact.
4.5 Landscape		
Minimise the visual intrusions on natural landscape within the park, especially from major viewing points.	No impact.	No impact.
Where possible, remove or shield undesirable visual intrusions.	No impact.	No impact.
4.6 Fire Management		
Protect life, property and park values from damage by fire.	No impact.	No impact.
Suppress wildfires in a manner appropriate to seasonal conditions, with the objective of minimising impacts on park values.	No impact.	No impact.
Sustain the vigour, diversity and successional development of the park's plant and animal communities by ecological burning on the basis of current and future knowledge.	No impact.	No impact.
4.7 Pest plants and animals		

Eradicate or control pest plant and animal species using methods that minimise disturbance to natural systems and park values.	No impact.	No impact.
Restore native vegetation to areas where weeds have been removed.	No impact.	No impact.
4.8 Soil Conservation		
Prevent and control soil degradation caused by visitor and management activities	No impact.	No impact.
Rehabilitate sites where unnatural soil degradation has occurred.	No impact.	No impact.
Protect important economic, cultural and natural assets from soil erosion.	No impact.	No impact.
4.9 Aboriginal Cultural Heritage		
Preserve and protect features of Aboriginal cultural and archaeological significance.	No impact.	No impact.
Provide opportunities for people to learn about and understand the park's Aboriginal cultural values.	No impact.	No impact.
4.10 Post-settlement Cultural Heritage		
Preserve and protect features of cultural, archaeological and historical significance.	No impact.	No impact.
Provide opportunities for people to learn about and understand the park's historic and cultural values.	No impact.	No impact.
5.1 Information, interpretation and education		
Encourage visitors' discovery, enjoyment and appreciation of the park's natural and cultural values.	No impact.	No impact.
Orientate visitors in relation to park features.	No impact.	No impact.
Inform visitors of appropriate behaviour during their park visit.	No impact.	No impact.
Provide high-quality interpretive and educational opportunities to promote an understanding and appreciation of the park's values.	No impact.	No impact.
5.2 Access		
Maintain roads and tracks to standards consistent with management aims.	No impact.	No impact.
5.3 Day Visits		
Establish and maintain day visitor facilities that enhance visitor enjoyment of the park and are consistent with protecting park values.	No impact.	No impact.

Improve visitor facilities and raise the profile of the park as a day visitor destination.	No impact.	No impact.
5.4 Camping		
Provide opportunities for a range of camping experiences while minimising impacts on park values.	No impact.	No impact.
5.5 Boating		
Support the Walkerville Foreshore Committee of Management in providing basic boat launching facilities at Walkerville North.	No impact.	No impact.
5.6 Fishing		
Provide opportunities for recreational fishing while minimising the impacts on park values.	No impact.	No impact.
5.7 Bushwalking		
Provide a variety of high-quality walking opportunities within the park, while minimising impacts on park values.	No impact.	No impact.
5.8 Horse Riding		
Provide opportunities for horse riding while minimising this activity's adverse environmental effects and conflicts with other users.	No impact.	No impact.
5.9 Cycling		
Provide access for cycling, and at the same time minimise the environmental impact of cycling and the conflict with other recreational activities.	No impact.	No impact.
5.10 Dogs		
Provide for dogs in certain areas of the park, consistent with protecting park values and the experience of visitors.	No impact.	No impact.
5.11 Hang-gliding and Paragliding		

Provide opportunities for hang-gliding and paragliding while minimising the impact on park values and other uses.	No impact.	No impact.
5.12 Fossicking		
Provide an opportunity for gemstone collecting in the park, while ensuring that the impact on environmental values and other visitors is minimised.	No impact.	No impact.
5.13 Commercial Services		
Provide opportunities for commercial tourism and the touring public while minimising environmental impacts and effects on other visitors.	No impact.	No impact.
5.14 Public Safety		
Promote safe visitor use of the park.	No impact.	No impact.
Ensure that park management has adequate capacity to respond to emergency situations.	No impact.	No impact.
6.1 Friends and Volunteers		
Provide opportunities for and encourage the participation of groups and volunteers in protection, conservation and maintenance projects to enhance the management of the park.	No impact.	No impact.
Provide opportunities for and encourage tertiary students to undertake volunteer work experience and research consistent with park management aims.	No impact.	No impact.
6.2 Community Awareness and Park Neighbours		
Increase community awareness of park management activities, including prescribed burning, pest plant and animal control and visitor management activities.	No impact.	No impact.
Encourage conservation and sound land management practices on private land adjacent to the park.	No impact.	No impact.
7.1 Authorised Uses		

Manage public utilities and authorised uses in accordance with the National Parks Act, to minimise their impacts on the parks natural and scenic values.	No impact.	No impact.
Protect water quality in the park and provide for appropriate use of water resources.	No impact.	No impact.
7.2 Boundaries and Adjacent Uses		
Accurately define park boundaries on the ground.	No impact.	No impact.
Ensure adequate planning controls for adjoining land developments are in place.	No impact.	No impact.
Co-operate with adjacent landowners to protect both private and park areas from fire, pests and other hazards.	No impact.	No impact.

Assessment of BassGas operations against the stated aims of the Wilsons Promontory Marine National Park, Marine Park and Marine Reserve Management Plan (Parks Victoria, 2006).

The following information summarises the risk to the parks from the spill scenarios.

204,250 bbl subsea blowout of Yolla condensate over 86 days	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No contact.
Shoreline contact:	No contact.
300 m^3 surface release of MDO over 6 hours	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	1% probability of low exposure to entrained hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds. 1% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m below sea surface. No contact at higher thresholds.
Shoreline contact:	No contact.
3,144.9 bbl pipeline rupture of Yolla condensate over 57.6 minutes	
Sea surface:	No contact.
Entrained and dissolved hydrocarbons:	No exposure to entrained hydrocarbons at 0-10 m below sea surface. 2% probability of low exposure to dissolved aromatic hydrocarbons at 0-10 m and 10-20 m below sea surface. No contact at higher thresholds.
Shoreline contact:	No contact.

The table on the following pages provides an assessment of routine and non-routine operations against the management aims of the park.

Management Aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
4.1 Geological and geomorphological features		
Identify geological and geomorphological features of the planning area and protect them from potentially damaging human activities	No impacts.	No impacts.
Allow natural geological and geomorphological processes to continue without human interference.	No impacts.	No impacts.
Provide opportunities for appropriate research into, appreciation of, and education about geological and geomorphological features.	No impacts.	No impacts.
4.2 Catchment and water quality		
Ensure the integration of future planning and management for the planning area and adjacent catchment.	No impacts.	No impacts.
Maintain a high quality of water within the planning area and surrounding waters to ensure that natural biological and physical processes can occur.	No impacts.	The OPEP takes into accounts risks to the open ocean and prioritises actions to reduce the spread and extent of oil on the sea surface.
Minimise the impacts on water quality within the planning area from activities within the catchment.	No impacts.	
4.3 Hydrodynamics		
Allow natural hydrodynamic processes to continue without human interference.	No impacts.	No impacts.
Minimise impacts on planning area values from human-induced changes to local hydrodynamic processes.	No impacts.	No impacts.
4.4 Habitats and communities		
Protect marine ecological communities and indigenous flora and fauna, particularly threatened species.	No impacts.	The OPEP takes into accounts risks to the open ocean and prioritises actions to reduce the spread and extent of oil on the sea surface.
Increase knowledge of marine ecological communities, flora and fauna to aid management, protection and appreciation.	No impacts.	No impacts.
Increase knowledge of key threatening processes to marine ecological communities, flora and fauna, to limit impacts.	No impacts.	No impacts.
4.5 Landscape and seascape		

Preserve and protect the landscape and seascape values of the park, including the natural character, aesthetic qualities and values of significance to Indigenous communities.	No impacts.	No impacts.
Minimise the visual impact of developments and management activities, including those adjacent to the park.	No impacts.	No impacts.
4.6 Marine pests		
Minimise the risk of introduction of marine pasts by human activities, and their subsequent establishment in the planning area.	The EP contains control measures aimed to minimise the risk of introducing marine pests to Victorian waters	No impacts.
Establish arrangements for the detection of new incursions within the planning area in support of Victorian marine pest management arrangements.	No impacts.	No impacts.
Implement national or Victoria-wide control arrangements as they relate to the planning area.	No impacts.	No impacts.
5.1 Indigenous cultural heritage		
Protect Indigenous cultural heritage from interference or damaging activities.	No impacts.	No impacts.
Nurture Indigenous cultural lore relating to the planning area.	No impacts.	No impacts.
5.2 Maritime and other cultural heritage		
Conserve and protect places and values of historic significance associated with maritime exploration, commercial exploitation, coastal trading and navigation	No impacts.	No impacts.
Encourage learning and understanding about the historic heritage of the planning area, particularly as they relate to the historic theme 'Shipping along the Coast'.	No impacts.	No impacts.
6.1 Information, interpretation and education		
Promote and encourage visitors' discovery, enjoyment and appreciation of the natural and cultural values of the planning area in a safe and appropriate manner through information, education and interpretation.	No impacts.	No impacts.
Encourage public support for the planning area and management practices.	No impacts.	No impacts.
Provide opportunities to learn about and understand the cultural and spiritual significance of the planning area to the Traditional Owners.	No impacts.	No impacts.
Promote an awareness of past European cultural activities in the park.	No impacts.	No impacts.
6.2 Access		

Provide for the use and enjoyment of the planning area.	No impacts.	No impacts.
Minimise the impact of access on natural and cultural values of the planning area	No impacts.	No impacts.
6.3 Recreational boating and surface water sports		
Provide opportunities for recreational boating and appropriate surface water sports while protecting natural and cultural values	No impacts.	No impacts.
Promote safe boating and water safety within the planning area.	No impacts.	No impacts.
Provide opportunities for marine mammal observation while ensuring their long-term protection.	No impacts.	No impacts.
6.4 Diving and snorkelling		
Provide opportunities for diving and snorkelling in the planning area while protecting natural and cultural values.	No impacts.	No impacts.
6.5 Swimming and shore-based activities		
Provide for appropriate shore-based activities while protecting natural and cultural values.	No impacts.	The OPEP takes into accounts risks to the shoreline and prioritises actions to reduce the spread and extent of oil towards the shoreline.
6.6 Recreational fishing		
Provide opportunities for sustainable recreational fishing while minimising impacts on the marine park and marine reserve.	No impacts.	No impacts.
6.7 Tourism services		
Encourage the provision of appropriate tourism services to improve the quality and range of recreational experiences available to visitors.	No impacts.	No impacts.
Ensure that licensed tour operators recognise and respect the natural and cultural values of the planning area, including Indigenous cultural heritage values.	No impacts.	No impacts.
6.8 Aircraft		
Monitor and minimise the impact of fixed wing aircraft and helicopters on the natural values of the planning area.	No impacts.	No impacts.
6.9 Public Safety		
Promote visitor safety and awareness of safety issues and risks within the planning area associated with access and use.	No impacts.	No impacts.
Promote and observe safe practices, and cooperate with emergency services.	No impacts.	No impacts.

7.1 Authorised uses		
Manage authorised uses and permitted activities in accordance with the National Parks Act, and minimise their impact on park values.	No impacts.	No impacts.
7.2 Boundaries and adjacent uses		
Ensure the integration of management of the planning area with adjoining land and waters in accordance with principles for ecologically sustainable development.	No impacts.	No impacts.
Ensure that necessary boundaries are clearly identifiable.	No impacts.	No impacts.
Minimise confusion by simplifying land tenure in the planning area.	No impacts.	No impacts.
8.1 Community awareness		
Build a shared sense of ownership and custodianship for the planning area in community groups and individuals.	No impacts.	No impacts.
Increase the community's awareness and understanding of the planning area's values, management activities and catchment impacts.	No impacts.	No impacts.
8.2 Community participation		
Support and encourage the active participation of community groups and volunteers in protection, conservation and monitoring projects to enhance management of the planning area.	No impacts.	No impacts.
Provide opportunities for, and encourage, tertiary students to undertake volunteer work experience and research consistent with aims for the planning area.	No impacts.	No impacts.
Inform, enrich and strengthen the planning area's management with the community's tradition and customs, especially the Traditional Owner's cultural lore.	No impacts.	No impacts.
8.3 Agency partnerships		
Enhance management of the planning area by collaborating with other agencies to ensure that they give appropriate consideration to park values in planning and implementing activities that relate to the planning area.	No impacts.	No impacts.

Attachment 2

Assessment of BassGas operations against the aims of threatened species management plans

Assessment of BassGas operations against the stated aims of the National Recovery Plan for Threatened Albatrosses and Giant Petrels 2011-2016 (DSEWPC, 2011)

The following table provides an assessment of routine and non-routine operations against the management aims of the plan.

Criteria to measure performance of the Plan against the objective	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Specific Objectives		
Research and monitoring of the biology, ecology and population dynamics of albatrosses and giant petrels breeding within Australian jurisdiction is sufficient to understand conservation status and to implement effective and efficient conservation measures.	No impacts.	No impacts.
Land-based threats to the survival and breeding success of albatrosses and giant petrels breeding within areas under Australian jurisdiction are quantified and reduced.	No impacts.	No impacts.
Marine-based threats to the survival and breeding success of albatrosses and giant petrels foraging in waters under Australian jurisdiction are quantified and reduced.	No impacts.	The OPEP takes into account risks to marine bird species and prioritises actions to reduce the spread and extent of oil on the sea surface.
Fishers are educated and public awareness is raised on the threats to albatrosses and giant petrels.	No impacts.	No impacts.
Substantial involvement in the promotion and development of improved and, ultimately, favourable conservation status of albatrosses and giant petrels globally in international conservation and fishing fora is maintained.	No impacts.	No impacts.
Actions to achieve specific objectives		
Research and monitoring of the biology, ecology and population dynamics of albatrosses and giant petrels breeding within Australian jurisdiction is sufficient to understand conservation status and to implement effective and efficient conservation measures.	No impacts.	No impacts.
Quantify and reduce land-based threats to the survival and breeding parameters of albatrosses and giant petrels breeding within areas under Australian jurisdiction.	No impacts.	No impacts.
Quantify and reduce marine-based threats to the survival and breeding parameters of albatrosses and giant petrels foraging in waters under Australian jurisdiction.	No impacts.	The OPEP takes into account risks to marine bird species and prioritises actions to reduce the spread and extent of oil on the sea surface.
Educate fishers and promote public awareness of the threats to albatrosses and giant-petrels.	No impacts.	No impacts.
Achieve substantial progress towards global conservation of albatrosses and giant petrels in international conservation and fishing fora.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the National Recovery Plan for the Australian Grayling (*Prototroctes maraena*) (DSE, 2008)

The following table provides an assessment of routine and non-routine operations against the management objectives of the plan.

Primary conservation objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Identify important populations of Australian Grayling.	No impacts.	No impacts.
Protect and restore habitat for Australian Grayling.	No impacts.	No impacts.
Investigate important life history attributes to acquire targeted information for management.	No impacts.	No impacts.
Investigate and manage threats to populations and habitats.	No impacts.	No impacts.
Increase awareness of Australian Grayling conservation with resource managers and the public.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the National Recovery Plan for the Dwarf Galaxias (*Galaxiella pusilla*) (DSE, 2010)

The following table provides an assessment of routine and non-routine operations against the management objectives of the plan.

Primary conservation objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Determine the distribution and abundance of the Dwarf Galaxias.	No impacts.	No impacts.
Determine the genetic and taxonomic status of Dwarf Galaxias populations.	No impacts.	No impacts.
Determine Dwarf Galaxias habitat characteristics and requirements.	No impacts.	No impacts.
Identify and manage potentially threatening processes impacting on Dwarf Galaxias conservation.	No impacts.	No impacts.
Protect key populations across the range of the Dwarf Galaxias.	No impacts.	No impacts.
Determine population trends at key sights.	No impacts.	No impacts.
Investigate key aspects of biology and ecology of the Dwarf Galaxias.	No impacts.	No impacts.
Establish a captive breeding population of Dwarf Galaxias.	No impacts.	No impacts.
Establish new populations of Dwarf Galaxias.	No impacts.	No impacts.
Increase awareness and involvement.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Australian paint-snipe (*Rostratula australis*) (DSEWPC, 2013)

The following table provides an assessment of routine and non-routine operations against the management aims of the conservation advice.

Regional Priority Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Habitat Loss, Disturbance and Modification		
Develop management guidelines for breeding and non-breeding habitat.	No impacts.	No impacts.
Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.	No impacts.	No impacts.
Ensure there is no disturbance in areas where the species is known to breed, excluding necessary actions to manage the conservation of the species.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response. The impacts related to coastal oil spill clean-up activities will be carefully managed to avoid feeding, roosting or nesting birds.
Control access routes to suitably constrain public access to existing and future breeding sites on public land.	No impacts.	No impacts.
Suitably control and manage access on private land and other land tenure.	No impacts.	No impacts.
Minimise adverse impacts from land use at known sites.	No impacts.	No impacts.
Manage any changes to hydrology that may result in changes to water table levels, run-off, salinity, algal blooms, sedimentation or pollution.	No impacts.	No impacts.
Manage any disruptions to water flows.	No impacts.	No impacts.
Investigate formal conservation arrangements, management agreements and covenants on private land, and for crown and private land investigate/secure inclusion in reserve tenure if possible.	No impacts.	No impacts.

Regional Priority Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Manage any other known, potential or emerging threats including inappropriate fire regimes and coastal port/infrastructure development.	No impacts.	No impacts.
Invasive Weeds		
Implement the Parkinsonia (Parkinsonia aculeata) Strategic Plan (Commonwealth of Australia, 2000) for the control of this species within the range of the Australian painted snipe.	No impacts.	No impacts.
Identify and remove weeds in wetland areas that could become a threat to the Australian painted snipe, using appropriate methods.	No impacts.	No impacts.
Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on the Australian painted snipe	No impacts.	No impacts.
Trampling, Browsing or Grazing		
Develop and implement a stock management plan for roadside verges and travelling stock routes which include swamps, marshes or wetlands.	No impacts.	No impacts.
If livestock grazing occurs in known Australian painted snips habitats, ensure land owners/managers use an appropriate management regime and density that does not detrimentally affect Australian painted snipe nesting.	No impacts.	No impacts.
If appropriate, manage total grazing pressure at important breeding sites through exclusion fencing or other barriers.	No impacts.	No impacts.
Animal Predation or Competition		
Implement the national threat abatement plans for the European red fox (DEWHA, 2008a) and feral cats (DEWHA, 2008b) to control the adverse impacts of foxes (*Vulpes vulpes*) and cats (*Felis catus*) in the species' range.	No impacts.	No impacts.
Continue baiting to control population numbers of feral animals.	No impacts.	No impacts.
Fire		
Develop and implement a suitable fire management strategy for the habitat of the Australian painted snipe.	No impacts.	No impacts.
Conservation Information		

Regional Priority Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Raise awareness of the Australian painted snipe within the local community and the importance of reporting observations to BirdLife Australia, using fact sheets and/or brochures.	No impacts.	No impacts.
Advertise and encourage use of Australian painted snipe survey techniques and survey forms (Birds Australia, 2012).	No impacts.	No impacts.
Organise field days with industry and interest groups to raise awareness and share information on the species. These groups may include natural resource management groups, catchment management authorities, Indigenous groups, conservation organisations, local and state governments, and private landholders.	No impacts.	No impacts.
Engage with private landholders and land managers responsible for the land on which populations occur and encourage these key stakeholders to contribute to the implementation of conservation management actions.	No impacts.	No impacts.
Raise awareness of banded individuals (see BirdLife Australia, 2012) to increase the likelihood of re-sighting and reporting.	No impacts.	No impacts.
Facilitate the exchange of information between interested parties, including sightings, research and management approaches.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Bar-tailed Godwit (northern Siberian) (*Limosa lapponica menzbieri*) (TSSC, 2016)

The following table provides an assessment of routine and non-routine operations against the management aims of the conservation advice.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Work with governments along the East Asian – Australasian Flyway to prevent destruction of key breeding and migratory staging sites.	No impacts.	No impacts.
Protect important habitat in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Support initiatives to improve habitat management at key sites.	No impacts.	No impacts.
Maintain and improve protection of roosting and feeding sites in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Advocate for the creation and restoration of foraging and roosting sites.	No impacts.	No impacts.
Incorporate requirements for bar-tailed godwit (northern Siberian) into coastal planning and management.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Manage important sites to identify, control and reduce the spread of invasive species.	The EP puts in place control measures to reduce the risk of biofouling and introduction of invasive marine species.	No impacts.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Manage disturbance at important sites which are subject to anthropogenic disturbance when bar-tailed godwit (northern Siberian) are present – e.g. discourage or prohibit vehicle access, horse riding and dogs on beaches, implement temporary site closures.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection.
Survey and Monitoring Priorities		
Enhance existing migratory shorebird population monitoring programmes, particularly to improve coverage across northern Australia.	No impacts.	No impacts.
Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.	No impacts.	No impacts.
Information and Research Priorities		
Undertake work to more precisely assess bar-tailed godwit (northern Siberian) life history, population size, distribution and ecological requirements particularly across northern Australia.	No impacts.	No impacts.
Improve knowledge about dependence of bar-tailed godwit (northern Siberian) on key migratory staging sites, and non-breeding sites to the in south-east Asia.	No impacts.	No impacts.
Improve knowledge about threatening processes including the impacts of disturbance and hunting.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Bar-tailed Godwit (western Alaskan) (*Limosa lapponica baueri*) (DoE, 2016)

The following table provides an assessment of routine and non-routine operations against the management aims of this conservation advice.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Work with governments along the East Asian – Australasian Flyway to prevent destruction of key breeding and migratory staging sites.	No impacts.	No impacts.
Support initiatives to improve habitat management at key sites.	No impacts.	No impacts.
Advocate for the creation and restoration of foraging and roosting sites.	No impacts.	No impacts.
Manage important sites to identify, control and reduce the spread of invasive species.	The EP puts in place control measures to reduce the risk of biofouling and introduction of invasive marine species.	No impacts.
Protect important habitat in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Maintain and improve protection of roosting and feeding sites in Australia.	No impacts.	
Incorporate requirements for bar-tailed godwit (western Alaskan) into coastal planning and management.	No impacts.	
Manage disturbance at important sites which are subject to anthropogenic disturbance when bar-tailed godwit (western Alaskan) are present – e.g. discourage or prohibit vehicle access, horse riding and dogs on beaches, implement temporary site closures.	No impacts.	
Survey and Monitoring Priorities		
Enhance existing migratory shorebird population monitoring programmes, particularly to improve coverage across northern Australia.	No impacts.	No impacts.
Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.	No impacts.	No impacts.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Information and Research Priorities		
Undertake work to more precisely assess bar-tailed godwit (western Alaskan) life history, population size, distribution and ecological requirements particularly across northern Australia.	No impacts.	No impacts.
Improve knowledge about dependence of bar-tailed godwit (western Alaskan) on key migratory staging sites, and non-breeding sites to the in south-east Asia.	No impacts.	No impacts.
Improve knowledge about threatening processes including the impacts of disturbance and hunting.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Curlew Sandpiper (*Calidris ferruginea*) (DoE, 2016)

The following table provides an assessment of routine and non-routine operations against the management aims of this conservation advice.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
International Objectives		
Achieve a stable or increasing population.	No impacts.	No impacts.
Maintain and enhance important habitat.	No impacts.	No impacts.
Disturbance at key roosting and feeding sites reduced.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Australian Objectives		
Achieve a stable or increasing population.	No impacts.	No impacts.
Maintain and enhance important habitat.	No impacts.	No impacts.
Disturbance at key roosting and feeding sites reduced.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Raise awareness of curlew sandpiper within the local community.	No impacts.	No impacts.
Conservation and Management Actions		
Work with governments along the East Asian – Australasian Flyway to prevent destruction of key migratory staging sites.	No impacts.	No impacts.
Support initiatives to protect and manage key staging sites of curlew sandpiper.	No impacts.	No impacts.
Manage important sites to identify, control and reduce the spread of invasive species.	No impacts.	No impacts.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.	No impacts.	No impacts.
Maintain and improve protection of roosting and feeding sites in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Incorporate requirements for curlew sandpiper into coastal planning and management.	No impacts.	
Manage disturbance at important sites when curlew sandpipers are present – e.g. discourage or prohibit vehicle access, horse riding and dogs on beaches, implement temporary beach closures.	No impacts.	
Monitoring Priorities		
Enhance existing migratory shorebird population monitoring programmes, particularly to improve coverage across northern Australia.	No impacts.	No impacts.
Information and Research Priorities		
More precisely assess curlew sandpiper population size, distribution and ecological requirements particularly across northern Australia.	No impacts.	No impacts.
Improve knowledge about dependence of curlew sandpiper on key migratory staging sites, and wintering sites to the north of Australia.	No impacts.	No impacts.
Improve knowledge about threatening processes including the impacts of disturbance.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Eastern Curlew (*Numenius madagascariensis*) (DoE, 2015)

The following table provides an assessment of routine and non-routine operations against the primary conservation objectives of the advice.

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
International Objectives		
Achieve a stable or increasing population.	No impacts.	No impacts.
Maintain and enhance important habitat.	No impacts.	No impacts.
Reduce disturbance at key roosting and feeding sites.	No impacts.	No impacts.
Australian Objectives		
Achieve a stable or increasing population.	No impacts.	Main stronghold in Victoria is Corner Inlet and Western Port Bay, which are outside the EMBA.
Maintain and enhance important habitat.	No impacts.	
Reduce disturbance at key roosting and feeding sites.	No impacts.	
Raise awareness of eastern curlew within the local community.	No impacts.	No impacts.
Conservation and Management Actions		
Work with governments along the East Asian – Australasian Flyway to prevent destruction of key migratory staging sites.	No impacts.	No impacts.
Develop and implement an International Single Species Action Plan for eastern curlew with all range states.	No impacts.	No impacts.
Support initiatives to improve habitat management at key sites.	No impacts.	No impacts.
Maintain and improve protection of roosting and feeding sites in Australia.	No impacts.	The impacts related to coastal oil spill clean up activities will be carefully managed to avoid feeding, roosting or nesting birds.
Incorporate requirements for eastern curlews into coastal planning and management.	No impacts.	No impacts.

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Manage important sites to identify, control and reduce the spread of invasive species.	No impacts.	No impacts.
Manage disturbance at important sites when eastern curlews are present – e.g. discourage or prohibit vehicle access, horse riding and dogs on beaches, implement temporary site closures.	No impacts.	No impacts.
Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.	No impacts.	No impacts.
Monitoring Priorities		
Enhance existing migratory shorebird population monitoring programmes, particularly to improve coverage across northern Australia	No impacts.	No impacts.
Information and Research Priorities		
More precisely assess eastern curlew life history, population size, distribution and ecological requirements particularly across northern Australia.	No impacts.	No impacts.
Improve knowledge about dependence of eastern curlew on key migratory staging sites, and wintering sites to the north of Australia.	No impacts.	No impacts.
Improve knowledge about threatening processes including the impacts of disturbance and hunting.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Southern Fairy Prion (*Pachyptila tutur subantarctica*) (TSSC, 2015)

The following table provides an assessment of routine and non-routine operations against the management aims of this conservation advice.

Conservations Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Continue to manage Macquarie Island and its surrounds in such a way that human disturbance is minimised.	No impacts.	No impacts.
Continue strict quarantine management practices for Macquarie Island and surrounding rock stacks to reduce the risk of any invasive species (re)establishing on the island.	No impacts.	No impacts.
Survey and Monitoring Priorities		
Continue to monitor the species, and if decreases become evident in the population, identify potential causes and adapt management actions as required.	No impacts.	No impacts.
Information and Research Priorities		
Continue to monitor breeding population size and success on Macquarie Island offshore rock stacks, including Bishop and Clerk Islands.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Fairy Tern (*Sternula nereis nereis*) (DSEWPC, 2011)

The following table provides an assessment of routine and non-routine operations against the management aims of the conservation advice.

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Regional Priority Actions		
Habitat Loss, Disturbance and Modification		
Monitor the progress of recovery (using a variety of methods such as survey and banding programs, video surveillance of breeding colonies and maintaining a central breeding and sightings database), including the effectiveness of management actions and the need to adapt them if necessary.	Location of fairy tern populations within the EMBA are identified within the EP.	Location of fairy tern populations within the EMBA are identified within the EP.
Identify populations of high conservation priority.	No impacts.	No impacts.
Manage any changes to hydrology that may result in changes to tide levels, increase salinity or pollution.	No impacts.	No impacts.
Manage any disruptions to water flows in wetland areas such as the Coorong in South Australia.	No impacts.	No impacts.
Introduce recreational codes of conduct and license commercial tourism operations utilising the subspecies' habitat.	No impacts.	No impacts.
Animal Predation or Competition		
Develop and implement a management plan for the control or eradication of foxes, dogs, cats and Black Rats where the species is found.	No impacts.	No impacts.
Establish programs to discourage gulls (such as Silver Gulls) competing with Fairy Terns. Examples of activities could include: education programs to raise awareness of the problems of feeding gulls and; minimising night time lighting from oil and gas rigs near the subspecies' habitat to reduce night time feeding opportunities for Silver Gulls.	No impacts.	No impacts.
Local Priority Actions		
Habitat Loss, Disturbance and Modification		
Use nest protection measures to safeguard nests from extreme weather/tides, including sandbagging and nest relocation.	No impacts.	No impacts.
Control access routes to suitably constrain public access to known sites on public and private land.	No impacts.	

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Reduce disturbance during the breeding season from human recreation such as the use of off road vehicles and predation by domestic dogs, using signage and/ or fencing where appropriate. The use of signage can restrict access to the site as well as raise awareness of the sites ecological importance.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response. The impacts related to coastal oil spill clean-up activities will be carefully managed to avoid feeding, roosting or nesting birds.
Ensure appropriate oil-spill contingency plans are in place for the subspecies' breeding sites which are vulnerable to oil spills, such as the breeding colonies in Victoria.	No impacts.	
Weed Control		
Remove weeds which could become a threat to the Fairy Tern, using appropriate methods outside the breeding season.	No impacts.	No impacts.
Manage sites to prevent introduction of invasive weeds, which could become a threat to the Fairy Tern, using appropriate methods.	No impacts.	No impacts.
Animal Predation		
Control introduced pests such as foxes, dogs, cats and Black Rats, using a variety of methods such as trapping and 1080 baiting.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Great Knot (*Calidris tenuirstris*) (TSSC, 2016)

The following table provides an assessment of routine and non-routine operations against the conservation actions of the conservation advice.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Work with governments along the East Asian – Australasian Flyway to prevent destruction of key breeding and migratory staging sites.	No impacts.	No impacts.
Protect important habitat in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Support initiatives to improve habitat management at key sites.	No impacts.	No impacts.
Maintain and improve protection of roosting and feeding sites in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Advocate for the creation and restoration of foraging and roosting sites.	No impacts.	No impacts.
Incorporate requirements for great knot into coastal planning and management.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Manage important sites to identify, control and reduce the spread of invasive species.	The EP puts in place control measures to reduce the risk of biofouling and introduction of invasive marine species.	No impacts.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Manage disturbance at important sites which are subject to anthropogenic disturbance when great knots are present – e.g. discourage or prohibit vehicle access, horse riding and dogs on beaches, implement temporary site closures.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection.
Survey and Monitoring Priorities		
Enhance existing migratory shorebird population monitoring programmes, particularly to improve coverage across northern Australia.	No impacts.	No impacts.
Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.	No impacts.	No impacts.
Information and Research Priorities		
Undertake work to more precisely assess great knot life history, population size, distribution and ecological requirements particularly across northern Australia.	No impacts.	No impacts.
Improve knowledge about dependence of great knot on key migratory staging sites, and non-breeding sites to the in south-east Asia.	No impacts.	No impacts.
Improve knowledge about threatening processes including the impacts of disturbance and hunting.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Great Sand Plover (*Charadrius leschenaultii*) (TSSC, 2016)

The following table provides an assessment of routine and non-routine operations against the conservation actions of the conservation advice.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Work with governments along the East Asian – Australasian Flyway to prevent destruction of key breeding and migratory staging sites.	No impacts.	No impacts.
Protect important habitat in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Support initiatives to improve habitat management at key sites.	No impacts.	No impacts.
Maintain and improve protection of roosting and feeding sites in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Advocate for the creation and restoration of foraging and roosting sites.	No impacts.	No impacts.
Incorporate requirements for greater sand plover into coastal planning and management.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Manage important sites to identify, control and reduce the spread of invasive species.	The EP puts in place control measures to reduce the risk of biofouling and introduction of invasive marine species.	No impacts.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Manage disturbance at important sites which are subject to anthropogenic disturbance when greater sand plovers are present – e.g. discourage or prohibit vehicle access, horse riding and dogs on beaches, implement temporary site closures.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection.
Survey and Monitoring Priorities		
Enhance existing migratory shorebird population monitoring programmes, particularly to improve coverage across northern Australia.	No impacts.	No impacts.
Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.	No impacts.	No impacts.
Information and Research Priorities		
Undertake work to more precisely assess greater sand plover life history, population size, distribution and ecological requirements particularly across northern Australia.	No impacts.	No impacts.
Improve knowledge about dependence of greater sand plover on key migratory staging sites, and non-breeding sites to the in south-east Asia.	No impacts.	No impacts.
Improve knowledge about threatening processes including the impacts of disturbance and hunting.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Hooded Plover (*Thinornis rubricollis rubricollis*) (DoE, 2014)

The following table provides an assessment of routine and non-routine operations against the recovery and impact avoidance guidance of this conservation advice.

Recovery and Impact avoidance guidance	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Primary Conservation Objectives		
1. Achieve stable numbers of adults in the population, and maintain a stable number of occupied and active breeding territories.	No impacts.	No impacts.
2. Improve breeding success, namely increase fledgling rates (which is a combination of improving egg and chick survival rates), via: a. reducing the destruction of nests and chicks, and the disturbance of breeding pairs, by human and human-related activities. b. reducing predation by feral animals and overabundant native predators.	No impacts.	No impacts.
3. Maintain, enhance and restore habitat, and integrate the subspecies' needs into coastal planning.	No impacts.	No impacts.
Information and Research Priorities		
1. Determine demographic trends including population size, breeding success, and status and trends in breeding populations.	No impacts.	No impacts.
2. Determine levels of nest predation and breeding success, in areas with and without predator and stock control programs.	No impacts.	No impacts.
3. Identify the causes of chick mortality, and factors which may mediate chick survival rates.	No impacts.	No impacts.
4. Identify habitat availability and risk of habitat loss due to weed invasion, rising sea levels and dune morphology changes, via: a) incorporating coastal weed mapping data into a single data set. b) utilising SmartLine for all population assessments; this maps coastal geomorphology and can indicate areas of coasts which are vulnerable to erosion and other weather/climate impacts. c) integrating coastal weed, geomorphology and hooded plover (eastern) nesting territory data, in order to provide an assessment of threats from invasive weeds and erosion.	No impacts.	No impacts.

Recovery and Impact avoidance guidance	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
5. For each breeding site/beach, assess the relative impacts of different threats and the likelihood of threat management measures being successful, so that beaches can be prioritised for management.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
6. Monitor the breeding and abundance of hooded plovers on an ongoing basis, ensuring that survey methods and data reporting are standardised as much as possible.	No impacts.	No impacts.
7. Undertake a population viability analysis to set breeding success targets for recovery programs.	No impacts.	No impacts.
Management Actions Required		
1. Manage the use of (and access to) key beaches for recreation when plovers are breeding – e.g. discourage or prohibit vehicle access, horse riding and dogs from beaches; implement temporary beach closures; erect fencing to prevent people entering.	No impacts.	No impacts.
2. Adequately police beaches to ensure compliance with regulations, especially those relating to dog walking, and undertake a review of existing regulations to assess whether there is room for improvement.	No impacts.	No impacts.
3. Educate the public in research, monitoring, management and advocacy efforts.	No impacts.	No impacts.
4. Incorporate requirements for the hooded plover into coastal planning and management, and erosion control activities, including: a) limiting levels of urban development within the coastal zone. b) adopting evidence-based best practice. c) consulting with relevant state and local government departments, research organisations, and community organisations.	No impacts.	No impacts.
5. Construct fencing to prevent livestock entering beaches.	No impacts.	No impacts.
6. Implement predator control programs for invasive species where necessary.	No impacts.	No impacts.
7. Evaluate the efficacy of management techniques such as the use of chick shelters, predator controls, mechanisms to alter human behaviour on beaches, habitat restoration and maintenance, and identify areas for improvement.	No impacts.	No impacts.

Recovery and Impact avoidance guidance	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
8. Further develop methods for reducing or controlling rates of colonisation by invasive plants and rehabilitating dunes colonised by invasive plants, and establish trials to recover habitat degraded by marram grass (*Ammophila arenaria*).	No impacts.	No impacts.
9. Prepare oil spill response plans to ensure effective rehabilitation of oiled birds.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response. The impacts related to coastal oil spill clean-up activities will be carefully managed to avoid feeding, roosting or nesting birds.
10. Reduce in-shore marine debris, including educating fishers and the public to properly dispose of fishing lines.	No impacts.	No impacts.
11. As a last resort, investigate control options for native predators such as ravens, magpies, currawongs and silver gulls, if their impacts are threatening a population and human activities cannot be sufficiently reduced to mitigate their impacts.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Lesser Sand Plover (*Charadrius mongolus*) (TSSC, 2016)

The following table provides an assessment of routine and non-routine operations against the conservation actions of this conservation advice.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Work with governments along the East Asian – Australasian Flyway to prevent destruction of key breeding and migratory staging sites.	No impacts.	No impacts.
Protect important habitat in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Support initiatives to improve habitat management at key sites.	No impacts.	No impacts.
Maintain and improve protection of roosting and feeding sites in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Advocate for the creation and restoration of foraging and roosting sites.	No impacts.	No impacts.
Incorporate requirements for lesser sand plover into coastal planning and management.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Manage important sites to identify, control and reduce the spread of invasive species.	The EP puts in place control measures to reduce the risk of biofouling and introduction of invasive marine species.	No impacts.
Manage disturbance at important sites which are subject to anthropogenic disturbance when lesser sand plovers are present – e.g. discourage or prohibit vehicle access, horse riding and dogs on beaches, implement temporary site closures.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Survey and Monitoring Priorities		
Enhance existing migratory shorebird population monitoring programmes, particularly to improve coverage across northern Australia.	No impacts.	No impacts.
Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.	No impacts.	No impacts.
Information and Research Priorities		
Undertake work to more precisely assess lesser sand plover life history, population size, distribution and ecological requirements particularly across northern Australia.	No impacts.	No impacts.
Improve knowledge about dependence of greater sand plover on key migratory staging sites, and non-breeding sites to the in south-east Asia.	No impacts.	No impacts.
Improve knowledge about threatening processes including the impacts of disturbance and hunting.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the National Recovery Plan for the Orange-bellied Parrot (*Neophema chrysogaster*) (DELWP, 2016)

The following table provides an assessment of routine and non-routine operations against the primary conservation objectives of the plan.

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
To achieve a stable or increasing population in the wild within five years.		
Increase breeding output in the wild.	No impacts.	No impacts.
Increase survival in the wild.	No impacts.	No impacts.
Maintain wild behaviours.	No impacts.	No impacts.
To increase the capacity of the captive population, both to support future releases of captive-bred birds to the wild and to provide a secure long-term insurance population.		
Increase the size of the captive population as quickly as possible.	No impacts.	No impacts.
Manage genetics of the captive population.	No impacts.	No impacts.
Manage the wild and captive populations as a metapopulation.	No impacts.	No impacts.
To protect and enhance habitat to maintain, and support growth of, the wild population.		
Maintain the extent of habitat throughout the breeding and non-breeding range.	No impacts.	No impacts.
Increase the extent of high quality of habitat throughout the breeding and nonbreeding range.	No impacts.	No impacts.
To ensure effective adaptive implementation of the plan.		
Obtain and analyse key information required to measure and improve implementation to achieve the primary objectives.	No impacts.	No impacts.
Employ sound procedures for managing, reviewing and reporting on progress to ensure effective adaptive management.	No impacts.	No impacts.
Secure delivery partners and sufficient funding to ensure very high and high priority actions are implemented.	No impacts.	No impacts.
Foster and maintain relationships with key individuals, organisations and the broader community.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Red Knot (*Calidris canutus*) (TSSC, 2016)

The following table provides an assessment of routine and non-routine operations against the conservation actions of the conservation advice.

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Work with governments along the East Asian – Australasian Flyway to prevent destruction of key migratory staging sites.	No impacts.	No impacts.
Protect important habitat in Australia.	No impacts.	No impacts.
Support initiatives to improve habitat management at key sites.	No impacts.	No impacts.
Maintain and improve protection of roosting and feeding sites in Australia.	No impacts.	The OPEP takes into account beaches of importance to coastal bird species and prioritises those for protection and where necessary, beach clean-up and oiled wildlife response.
Incorporate requirements for red knot into coastal planning and management.	No impacts.	
Advocate for the creation and restoration of foraging and roosting sites in Australia.	No impacts.	No impacts.
Manage important sites to identify, control and reduce the spread of invasive species.	No impacts.	No impacts.
Manage disturbance at important sites which are subject to anthropogenic disturbance when red knot are present – e.g. discourage or prohibit vehicle access, horse riding and dogs on beaches, implement temporary site closures.	No impacts.	No impacts.
Survey and Monitoring Priorities		
Enhance existing migratory shorebird population monitoring programmes, particularly to improve coverage across northern Australia	No impacts.	No impacts.
Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.	No impacts.	No impacts.
Information and Research Priorities		

Conservation Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Undertake work to more precisely assess red knot life history, population size, distribution and ecological requirements.	No impacts.	No impacts.
Improve knowledge about dependence of red knot on key migratory staging sites, and nonbreeding sites in south-east Asia.	No impacts.	No impacts.
Improve knowledge about threatening processes including the impacts of disturbance and hunting.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Swift Parrot (*Lathamus discolor*) (TSSC, 2016)

The following table provides an assessment of routine and non-routine operations against the conservation objectives of the conservation advice.

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Priorities		
Review and update management prescriptions for swift parrots for use in the Forest Practices System and Local Government land use planning and approvals processes across the breeding and non-breeding range of swift parrots.	No impacts.	No impacts.
Revise and update forestry prescriptions to reflect the most recent habitat information available in Victoria and New South Wales.	No impacts.	No impacts.
Develop and implement strategies to reduce predation from sugar gliders when circumstances require.	No impacts.	No impacts.
Consider installing nesting boxes suitable for swift parrots in areas of low sugar glider predation to enhance swift parrot breeding success	No impacts.	No impacts.
Continue to raise public awareness of the risks of collisions and how these can be minimised, targeting known high risk areas such as the greater Hobart, Melbourne and Western Sydney areas, and the central coast region of New South Wales (Wyong, Gosford, Lake Macquarie and Penrith Local Government areas).	No impacts.	No impacts.
Encourage and support the protection, conservation management and restoration of swift parrot nesting and foraging habitat through agreements with landowners, incentive programs and community projects.	No impacts.	No impacts.
Develop and implement a Disease Risk Assessment for swift parrots.	No impacts.	No impacts.
Survey and Monitoring Priorities		
Develop an effective population monitoring program.	No impacts.	No impacts.
Undertake monitoring of breeding locations on an annual basis to develop a better understanding of breeding success; the extent and number of important breeding areas; and the relative importance of non-aggregated breeding behaviour.	No impacts.	No impacts.
Establish a process for the coordination of volunteer surveys throughout breeding habitats to complement the existing mainland monitoring program.	No impacts.	No impacts.
Maintain coordination of the existing long-term volunteer monitoring throughout mainland habitats.	No impacts.	No impacts.

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Information and Research Priorities		
Prioritise conservation actions across the species range.	No impacts.	No impacts.
Identify and map movement patterns and foraging and nesting habitat throughout the breeding range.	No impacts.	No impacts.
Establish habitat phenology data collection in existing research and monitoring studies, analyse findings and incorporate into the recovery program.	No impacts.	No impacts.
Establish and maintain a database for all reported injuries and deaths.	No impacts.	No impacts.
Monitor the incidence of competition from aggressive honeyeaters, as well as introduced birds and invertebrates, for nesting and foraging resources.	No impacts.	No impacts.
Undertake research on breeding success, survival and mortality, as well as genetic structure, to provide insight into currently unknown population regulation parameters.	No impacts.	No impacts.
Update the PVA using data obtained from the above research to provide a greater understanding of the dynamics and long-term viability of the population.	No impacts.	No impacts.
Investigate the potential impact of climate change on the swift parrot and its habitat.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Approved Conservation Advice for the Australasian Bittern (*Botaurus poiciloptilus*) (TSSC, 2019)

The following table provides an assessment of routine and non-routine operations against the management aims of the plan.

Stated management aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Priorities		
Collate all recent location data to establish a list of priority sites for monitoring and for protection and management. Such a list should be updated as new sites are created or found and as knowledge is improved.	No impacts.	No impacts.
Work with key water managers (e.g., Australian, state and local government, water corporations, irrigators) to ensure adequate water flows into known Australasian Bittern habitat, both natural and artificial (e.g., rice paddies, urban ponds etc).	No impacts.	No impacts.
Ensure environmental water allocations are targeted to sustain Australasian Bittern habitat and known populations.	No impacts.	No impacts.
Prevent further vegetation clearance in wetlands, ponds and associated marshy areas known to support Australasian Bitterns	No impacts.	No impacts.
Where appropriate, develop new wetlands with suitable habitats for Australasian Bitterns.	No impacts.	No impacts.
Where possible, create suitable habitats for Australasian Bitterns in existing wetlands.	No impacts.	No impacts.
Where appropriate, develop incentives for rice growers to manage crops with a sufficient period of inundation to facilitate successful breeding before harvest.	No impacts.	No impacts.
Consideration given to strategic land purchases to aid in the protection and better management of Australasian Bittern habitat.	No impacts.	No impacts.
Monitor and manage agricultural and urban runoff into wetlands known to support Australasian Bitterns in order to maintain water quality.	No impacts.	No impacts.
Fence wetlands to exclude grazing animals.	No impacts.	No impacts.
Develop and implement a management strategy for wetlands where Australasian Bitterns occur, with a focus on ensuring appropriate diversity and density of reeds and rushes. Management strategy may include measures such as controlled burns, slashing when the wetland is dry and/or flooding to limit reed re-growth. Management strategy should be informed by research targeted at better understanding optimal habitat conditions.	No impacts.	No impacts.

Stated management aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Ensure adequate water volume and quality at urban and peri-urban wetlands where Australasian Bitterns have been detected.	No impacts.	No impacts.
Investigate opportunities to encourage state and local government and private landholders to undertake conservation of wetlands on their properties for the benefit of Australasian Bitterns.	No impacts.	No impacts.
Survey and Monitoring Priorities		
Agree on standard monitoring protocols that can be applied across the Australasian Bitterns' range.	No impacts.	No impacts.
Undertake regular and systematic monitoring at identified priority sites on an annual basis.	No impacts.	No impacts.
Using information from monitoring program, identify population trends across the Australasian Bitterns' range.	No impacts.	No impacts.
Investigate the use of predictive modelling to improve estimates of the number of mature individuals and to predict population trends and distribution	No impacts.	No impacts.
Information and Research Priorities		
Research to determine critical habitat values being targeted by Australasian Bitterns, with differentiation of needs during different parts of the breeding cycle. Factors such as water quality, salinity, vegetation composition and fire history should be investigated.	No impacts.	No impacts.
Determine prey availability in Australasian Bitterns habitat and identify methods for improving prey availability in order to improve the species breeding success.	No impacts.	No impacts.
Undertake genetic analyses to determine Australasian Bittern population structure. If population structuring occurs, this information should be used to inform management strategies.	No impacts.	No impacts.
Assess the relative importance for Australasian Bitterns occupancy and breeding success of: - introduced predators, - mortality associated with fixed structures, such as fence lines and towers, - grazing by introduced herbivores, - fire regimes.	No impacts.	No impacts.
Ensure processes to allow outcomes of research to influence ongoing management and monitoring programs, and to influence the development of new actions where required.	No impacts.	No impacts.
Stakeholder Engagement and Governance		

Stated management aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Develop broad promotional material to raise awareness about the Australasian Bittern, its status and the importance of protecting vegetated freshwater wetlands, and share this material with conservation groups and the general public.	No impacts.	No impacts.
Develop targeted fact sheets for landholders to increase awareness of the Australasian Bittern, including advice regarding improved wetland management for the species, and provide an avenue for reporting sightings.	No impacts.	No impacts.
Engage with private landholders, agricultural producers and public land managers responsible for land on which Australasian Bittern populations occur, and encourage them to contribute to the implementation of conservation management actions.	No impacts.	No impacts.
Promote the important ecosystem functions of wetlands, and their aesthetic and recreational values, to increase the interest of conservation groups and general public in their protection and restoration.	No impacts.	No impacts.

Assessment of BassGas operations against the stated objectives of the Gould's Petrel (*Pterodroma leucoptera leucoptera)* Recovery Plan (DEC, 2006)

The following table provides an assessment of routine and non-routine operations against the management objectives of the plan.

Stated management objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
To identify and manage the threats operating at sites where the subspecies occur.	No impacts.	No impacts.
To establish and maintain a translocated second colony at Boondelbah Island.	No impacts.	No impacts.
To raise awareness of the subspecies with the local community and involve volunteers in the recovery program.	No impacts.	No impacts.
To promote research and continue monitoring that will assist with the management of the subspecies.	No impacts.	No impacts.
To co-ordinate recovery actions through a recovery team and annual reporting on Recovery Plan implementation.	No impacts.	No impacts.

Assessment of BassGas operations against the stated actions of the Approved Conservation Advice for the Soft-plumaged petrel (*Pterodroma Mollis*) (TSSC, 2015)

The following table provides an assessment of routine and non-routine operations against the management actions of the plan.

Stated management actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Continue to manage Maatsuyker and Macquarie Island in such a way that human disturbance is minimised.	No impacts.	No impacts.
Continue strict quarantine management practices for Maatsuyker and Macquarie Island to reduce the risk of any invasive species (re)establishing on the islands.	No impacts.	No impacts.
Survey and Monitoring Priorities		
Continue to monitor population numbers on Maatsuyker Island.	No impacts.	No impacts.
Include monitoring for soft-plumaged petrels in monitoring programs occurring on Macquarie Island to detect any breeding occurrences.	No impacts.	No impacts.

Assessment of BassGas operations against the stated actions of the Approved Conservation Advice for the Blue Petrel (*Halobaena caerulea*). (TSSC, 2015)

The following table provides an assessment of routine and non-routine operations against the management actions of the plan.

Stated management actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Continue to manage Macquarie Island and its surrounds in such a way that human disturbance is minimised.	No impacts.	No impacts.
Continue strict quarantine management practices for Macquarie Island to reduce the risk of any invasive species (re)establishing on the island.	No impacts.	No impacts.
Survey and Monitoring Priorities		
Continue monitoring the species, and if decreases become evident in the population, identify potential causes and adapt management actions as required.	No impacts.	No impacts.
Include monitoring for blue petrels in monitoring programs occurring on Macquarie Island to detect any future breeding occurrences	No impacts.	No impacts.
Information and Research Priorities		
Monitor breeding population size and success on Macquarie Island offshore rock stacks.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Management Plan for the Blue Whale (*Balaenoptera musculus*) 2015-2025 (DSEWPC, 2011)

The following table provides an assessment of routine and non-routine operations against the conservation objectives of the plan.

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Interim Recovery Objectives		
The conservation status of blue whale populations is assessed using cost effective and robust methodology.	No impacts.	No impacts.
The spatial and temporal distribution, identification of biologically important areas, and population structure of blue whales in Australian waters is described.	No impacts.	No impacts.
Current levels of legal and management protection for blue whales are maintained or improved and an appropriate adaptive management regime is in place.	No impacts.	No impacts.
Anthropogenic threats are demonstrably minimised.	No impacts.	No impacts.
Assess and Address Threats		
Maintain and improve existing legal and management protection.	No impacts.	No impacts.
Assess and addressing anthropogenic noise.	EPBC Act Policy 2.1 requirements will be implemented during wireline activities.	No impacts.
Understand impacts of climate variability and change.	No impacts.	No impacts.
Minimise vessel collisions.	Vessel collision guidelines are implemented.	Vessel collision guidelines will be implemented.
Enable and Measure Recovery		
Measure and monitor population recovery.	No impacts.	No impacts.
Investigate population structure.	No impacts.	No impacts.
Describe spatial and temporal distribution and define biologically important habitat.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Advice for the Humpback Whale (*Megaptera novaeangliae*) (TSSC, 2015)

The following table provides an assessment of routine and non-routine operations against the conservation and management actions of the conservation advice.

Conservation and Management Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Maintain and improve existing legal and management protection		
Continue or improve existing legislative management actions under the EPBC Act, including the Australian Whale Sanctuary provisions.	No impacts.	No impacts.
Australia should maintain its position on promoting high levels of protection for humpback whales in all relevant international agreements including the IWC, Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), Convention on the Conservation of Migratory Species of Wild Animals (CMS), fisheries related agreements, and the Antarctic Treaty Consultative Meetings (ATCM).	No impacts.	No impacts.
Understanding impacts of climate variability and change		
Continue to meet Australia's international commitments to reduce greenhouse gas emissions and regulate the krill fishery in Antarctica.	No impacts.	No impacts.
Assessing and addressing anthropogenic noise; shipping, industrial and seismic surveys		
All seismic surveys must be undertaken consistently with the EPBC Act Policy Statement 2.1 – Interaction between offshore seismic exploration and whales. Should a survey be undertaken in or near a calving, resting, foraging area, or a confined migratory pathway then Part B. Additional Management Procedures must also be applied.	No impacts.	No impacts.
For actions involving acoustic impacts (example pile driving, explosives) on humpback whale calving, resting, feeding areas, or confined migratory pathways site specific acoustic modelling should be undertaken (including cumulative noise impacts).	EPBC Act Policy 2.1 requirements will be implemented during wireline activities.	No impacts.
Should acoustic impacts on humpback calving, resting, foraging areas, or confined migratory pathways be identified a noise management plan should be developed.		No impacts.
Addressing infrastructure and coastal development impacts		
Environmental assessment processes must ensure that existing information about coastal habitat requirements of humpback whales, environmental suitability of coastal locations, historic high use and emerging areas are taken into consideration.	No impacts.	No impacts.

Conservation and Management Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Environmental assessment and approval processes must ensure that the impacts of coastal development on humpback whales are addressed and minimised. Mitigation and management measures for the construction stage and the ongoing operational impacts are to be included in any plans of management. Significant residual impacts must be offset.	No impacts.	No impacts.
Reducing commercial fishing entanglements		
Commonwealth and state governments with the pot and set net fishing industries to develop and implement codes of conduct to minimise interactions between commercial fishers and humpback whales.	No impacts.	No impacts.
Investigate alternative fishing techniques and technologies to reduce the risk of entanglement.	No impacts.	No impacts.
Minimising vessel collisions		
Develop a national vessel strike strategy that investigates the risk of vessel strikes on humpback whales and also identifies potential mitigation measures to reduce the risk of collision.	No impacts.	No impacts.
Maximise the likelihood that all vessel strike incidents are reported in the National Ship Strike Database. All cetaceans are protected in Commonwealth waters and, the EPBC Act requires that all collisions with whales in Commonwealth waters are reported. Vessel collisions can be submitted to the National Ship Strike Database at https://data.marinemammals.gov.au/report/shipstrike	No impacts.	No impacts.
Ensure the risk of vessel strike on humpback whales is considered when assessing actions that increase vessel traffic in areas where humpback whales occur and, if required appropriate mitigation measures are implemented to reduce the risk of vessel strike.	No impacts.	No impacts.
Enhance education programs to inform vessel operators of best practice behaviours and regulations for interacting with humpback whales.	No impacts.	No impacts.
Measuring and monitoring population recovery		
Continue long-term monitoring of east and west coast populations at appropriate multi-annual intervals to quantify rates of population increase, abundance, migratory interchange and population structure	No impacts.	No impacts.
Information and research priorities		
Assess impacts of increasing anthropogenic threats and undertake a risk assessment to determine the increased exposure of these expanding populations to entanglement, ship strike and acoustic noise.	No impacts.	No impacts.

Conservation and Management Actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Expand genetic analyses to better define population structure and extent of interchange between subpopulations. In particular the genetic structure of the east coast population and interchange with Pacific humpback whale populations.	No impacts.	No impacts.
Assess the impact of whale watching on humpback whales detailing the benefits and negatives of human interactions and the potential for cumulative impacts on the species as they migrate along the coast.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Conservation Management Plan for the Southern Right Whale (*Eubalaena australis*) 2011-2021 (DSEWPC, 2012)

The following table provides an assessment of routine and non-routine operations against the primary conservation objectives of the plan.

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Interim Recovery Objectives		
Demonstrate that the number of southern right whales occurring off south-west Australia (nominally south-west Australian population) is increasing at or near the maximum biological rate.	No impacts.	No impacts.
Demonstrate that the number of southern right whales occurring off south-east Australia (nominally south-east Australian population) is showing signs of increase.	No impacts.	No impacts.
The nature and degree of difference between the south-eastern and south-western Australian populations of southern right whales is clearly understood.	No impacts.	No impacts.
Current levels of legal and management protection for southern right whales are maintained or improved and an appropriate adaptive management regime is in place.	No impacts.	No impacts.
Anthropogenic threats are demonstrably minimised.	No impacts.	No impacts.
Assess and Address Threats		
Maintain and improve existing legal and management protection.	No impacts.	No impacts.
Assess and address anthropogenic noise (shipping, industrial and seismic).	EPBC Act Policy 2.1 requirements will be implemented during wireline activities.	No impacts.
Reduce commercial fishing entanglements.	No impacts.	No impacts.
Impacts of climate variability and change.	No impacts.	No impacts.
Address vessel collisions.	Vessel collision guidelines are implemented.	Vessel collision guidelines will be implemented.
Address infrastructure and coastal development impacts.	No impacts.	No impacts.

Primary Conservation Objectives	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Measure Recovery		
Measure and monitor population recovery	No impacts.	No impacts.
Investigate the two-population model	No impacts.	No impacts.
Understand offshore distribution and migration	No impacts.	No impacts.
Characterise behaviour and movements	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the National Recovery Plan for the White Shark (*Carcharodon carcharias*) (DSEWPC, 2013)

The following table provides an assessment of routine and non-routine operations against the primary conservation objectives of the plan.

Conservation and Management Objectives	**Assessment of impacts of routine activities against management aims**	**Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives**
Develop and apply quantitative measures to assess population trends and any recovery of the white shark in Australian waters and monitor population trends.	No impacts.	No impacts.
Quantify and minimise the impact of commercial fishing, including aquaculture, on the white shark through incidental (illegal and/or accidental) take, throughout its range in Australian waters.	No impacts.	No impacts.
Quantify and minimise the impact of recreational fishing on the white shark through incidental (illegal and/or accidental) take, throughout its range in Australian waters.	No impacts.	No impacts.
Where practicable, minimise the impact of shark control activities on the white shark.	No impacts.	No impacts.
Investigate and manage (and where necessary reduce) the impact of tourism on the white shark.	No impacts.	No impacts.
Quantify and minimise the impact of international trade in white shark products through implementation of CITES provisions.	No impacts.	No impacts.
Continue to identify and protect habitat critical to the survival of the white shark and minimise the impact of threatening processes within these areas.	No impacts.	
Continue to develop and implement relevant research programs to support the conservation of the white shark.	No impacts.	No impacts.
Promote community education and awareness in relation to white shark conservation and management.	No impacts.	No impacts.
Encourage the development of regional partnerships to enhance the conservation and management of the white shark across national and international jurisdictions.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Approved Conservation Advice for the Fin Whale (*Balaenoptera physalus*) (TSSC, 2015)

The following table provides an assessment of routine and non-routine operations against the management aims of the plan.

Stated management aims	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Continue or improve existing legislative management actions under the Environment Protection and Biodiversity Act 1999, including the Australian Whale Sanctuary provisions.	No impacts.	No impacts.
Australia should maintain its position on promoting high levels of protection for Fin whales in all relevant international agreements including the International Whaling Commission (IWC), Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), Convention on the Conservation of Migratory Species of Wild Animals (CMS), fisheries related agreements, and the Antarctic Treaty Consultative Meetings (ATCM).	No impacts.	No impacts.
Continue to meet Australia's international commitments to reduce greenhouse gas emissions and regulate the krill fishery in Antarctica.	No impacts.	No impacts.
Once the spatial and temporal distribution (including biologically important areas) of fin whales is further defined an assessment of the impacts of increasing anthropogenic noise (including from seismic surveys, port expansion, and coastal development) should be undertaken on this species.	EPBC Act Policy 2.1 requirements will be implemented during wireline activities.	No impacts.
If required, additional management measures should be developed and implemented to ensure the ongoing recovery of Fin whales.	No impacts.	No impacts.
Develop a national vessel strike strategy that investigates the risk of vessel strikes on Fin Whales and also identifies potential mitigation measures.	No impacts.	No impacts.
Ensure all vessel strike incidents are reported in the National Vessel Strike Database.	Vessel collision guidelines are implemented.	Vessel collision guidelines are implemented.
Information and Research Priorities		
Determine population abundance, trends and population structure for Fin whales, and establish a long-term monitoring program in Australian waters.	No impacts.	No impacts.
Describe the spatial and temporal distribution of Fin Whales and further define biologically important areas (feeding and breeding), and migratory routes within Australian and Antarctic waters.	No impacts.	No impacts.

Assessment of BassGas operations against the stated targets of the Recovery Plan for Marine Turtles in Australia (DoEE, 2017)

The following table provides an assessment of routine and non-routine operations against the management targets of the plan.

Conservation management targets	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Domestic and international legislation and other agreements that support the recovery of Australian marine turtles are maintained, and, where possible, strengthened.	No impacts.	No impacts.
Robust scientific information is available and used to support decision making.	No impacts.	No impacts.
The sustainable management of marine turtles by Aboriginal and Torres Strait Islander communities and ranger groups to maintain long-term cultural, spiritual and economic associations with marine turtles is supported.	No impacts.	No impacts.
The capacity of programs throughout northern Australia to conduct effective monitoring, management and research of marine turtles at nesting beaches and feeding grounds is maintained and increased.	No impacts.	No impacts.
Robust and adaptive management regimes that lead to a reduction in anthropogenic threats to marine turtles and their habitats are in place.	No impacts.	No impacts.
Threat mitigation strategies are supported by high quality information.	No impacts.	No impacts.
Effective monitoring programs are implemented and maintained at index beaches and foraging areas for each of the six species.	No impacts.	No impacts.
Measures of success identified for each stock are achieved within the life of the plan.	No impacts.	No impacts.

Assessment of BassGas operations against the stated aims of the Approved Conservation Advice for the Sei Whale (*Balaenoptera borealis*) (TSSC, 2015)

The following table provides an assessment of routine and non-routine operations against the management aims of the plan.

Management aims and actions	Assessment of impacts of routine activities against management aims	Assessment of impacts of Level 2 or 3 hydrocarbon spill against objectives
Conservation and Management Actions		
Continue or improve existing legislative management actions under the Environment Protection and Biodiversity Act 1999, including the Australian Whale Sanctuary provisions.	No impacts.	No impacts.
Australia should maintain its position on promoting high levels of protection for sei whales in all relevant international agreements including the International Whaling Commission (IWC), Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), Convention on the Conservation of Migratory Species of Wild Animals (CMS), fisheries related agreements, and the Antarctic Treaty Consultative Meetings (ATCM).	No impacts.	No impacts.
Continue to meet Australia's international commitments to reduce greenhouse gas emissions and regulate the krill fishery in Antarctica.	No impacts.	No impacts.
Once the spatial and temporal distribution (including biologically important areas) of sei whales is further defined an assessment of the impacts of increasing anthropogenic noise (including from seismic surveys, port expansion, and coastal development) should be undertaken on this species.	EPBC Act Policy 2.1 requirements will be implemented during wireline activities.	No impacts.
If required, additional management measures should be developed and implemented to ensure the ongoing recovery of sei whales.	No impacts.	No impacts.
Develop a national vessel strike strategy that investigates the risk of vessel strikes on Sei Whales and also identifies potential mitigation measures.	No impacts.	No impacts.
Ensure all vessel strike incidents are reported in the National Vessel Strike Database.	Vessel collision guidelines are implemented.	Vessel collision guidelines are implemented.
Information and Research Priorities		
Determine population abundance, trends and population structure for sei whales, and establish a long-term monitoring program in Australian waters.	No impacts.	No impacts.
Describe the spatial and temporal distribution of Sei Whales and further define biologically important areas (feeding and breeding), and migratory routes within Australian and Antarctic waters.	No impacts.	No impacts.

Appendix 3

Stakeholder consultation flyer

BassGas

The Yolla-A platform

October 2018

Environment Plan Revision

Beach Energy is revising the Environment Plan for its BassGas offshore operations in Victoria.

This information sheet provides an overview of the offshore operations, the regulatory framework for safety and environment requirements, potential impacts and risks in continuing these operations, and measures to reduce and manage these in accordance with State and Commonwealth regulations.

About Beach

Beach Energy (Beach) is an ASX listed oil and gas, exploration and production company headquartered in Adelaide. It has operated and non-operated, onshore and offshore, oil and gas production from five production basins across Australia and New Zealand and is a key supplier to the Australian east coast gas market. Beach is the operator of BassGas, including the Lang Lang Gas Plant, Yolla offshore platform, subsea pipeline, raw gas and sales gas pipelines.

For more information, visit:

beachenergy.com.au

BassGas overview

Construction of BassGas began in 2001, with gas production commencing in 2006. The Yolla gas field is located in Bass Strait, approximately 145km south of Kilcunda in Victoria and 135km north of Burnie in Tasmania.

Gas and liquids within the Yolla field are extracted from a sandstone reservoir over 3km in depth through four wells via the Yolla offshore platform which is located in 80 metres of water. Once extracted, over 147km of subsea pipeline transports the gas and liquids from the Yolla field to shore, intersecting land near Kilcunda beach. There, it joins the 32km-long raw gas pipeline to the processing plant.

Beach Energy (Beach) is the operating partner of the BassGas joint venture which also includes AWE Limited and Prize Petroleum International Pte Ltd[1].

Beach operates in compliance with the NOSPEMA accepted safety cases (for more information see: www.nopsema.gov.au/safety/safety-case/what-is-a-safety-case/).

The risk of a loss of containment of hydrocarbons or chemicals is managed through the equipment design process and the implementation of asset integrity and maintenance programs. In addition, process parameters are monitored 24 hours per day by trained and competent personnel who must follow documented procedures.

Contractors utilised by Beach are subject to a pre-qualification process and assurance over their activities to ensure compliance with the accepted Environment Plan and Safety Case.

1. Lattice Energy Limited (37.5%), Lattice Energy Resources (BassGas) Ltd (5%), Beach Energy Limited (11.25%) AWE Petroleum Pty Ltd (22.5%), AWE (BassGas) Pty Ltd (12.5%), Prize Petroleum International Pte.Ltd (11.25%).

BassGas has been developed over several stages:

Stage 1:

The installation of an offshore platform (referred to as Yolla-A), drilling of Yolla-3 and Yolla-4 development wells, and the construction of an export pipeline and onshore processing facility was completed in 2004.

Yolla Mid-Life Enhancement (MLE):

A mid-life enhancement project involving the installation of a new accommodation unit and associated safety facilities was completed in 2012.

Stage 2:

Two additional production wells, Yolla-5 and Yolla-6, were drilled in 2015 and commenced production in August of that year.

Our Traditional Custodians

Beach would like to respectfully acknowledge the Bunurong people, the Traditional Custodians of the land on which BassGas operates. Beach respects their historical and ongoing connection to country through cultural and spiritual sites, language and ceremony, and would like to pay our respect to their Elders past, present and future.

BassGas Facilities

BassGas consists of the following elements:

Offshore

- Yolla-A offshore production platform (Yolla platform) in 80m water depth at the Yolla Field located in Bass Strait, which supports the wellheads and topsides facilities required to cool and dehydrate the well fluids prior to export to shore
- Four gas production wells
- 147km subsea section of the Raw Gas Pipeline from the Platform to the shore crossing near Kilcunda.

Onshore

- 32.4 km section of the Raw Gas Pipeline running from the shore crossing to the gas plant
- Gas plant located near the township of Lang Lang – a continuously manned facility which processes the raw gas and liquids to produce sales gas and hydrocarbon liquids - LPG and condensate - and provides the overall control for the onshore and offshore facilities
- 35.1km onshore Sales Gas Pipeline, to carry sales gas from the gas plant to connect with the existing Longford to Dandenong gas transmission pipeline near Pakenham
- Multinet tie in for distribution of sales gas to local consumers via the South Gippsland Natural Gas Pipeline
- Road transport of condensate from the gas plant to refining and road transport of LPG products to local distribution centres
- Carbon dioxide rich off-gas stream to adjacent Air Liquide Australia (ALA/Air Liquide) facility.

Yolla-A is a steel gravity-based, self-installing platform, with a cantilevered helideck and flare boom. The platform was originally designed for unmanned operation, however, it has now been converted to enable manned operations with the installation of permanent accommodation modules and upgrade of the safety systems.

The Lang Lang Gas Plant is designed as a single train and separates the two phase stream into gas and liquid streams. Liquids storage and truck loading facilities are provided for export of these hydrocarbon liquid products by road tankers to markets.

Sales gas is exported via the Sales Gas Pipeline to the south eastern Australian gas market.

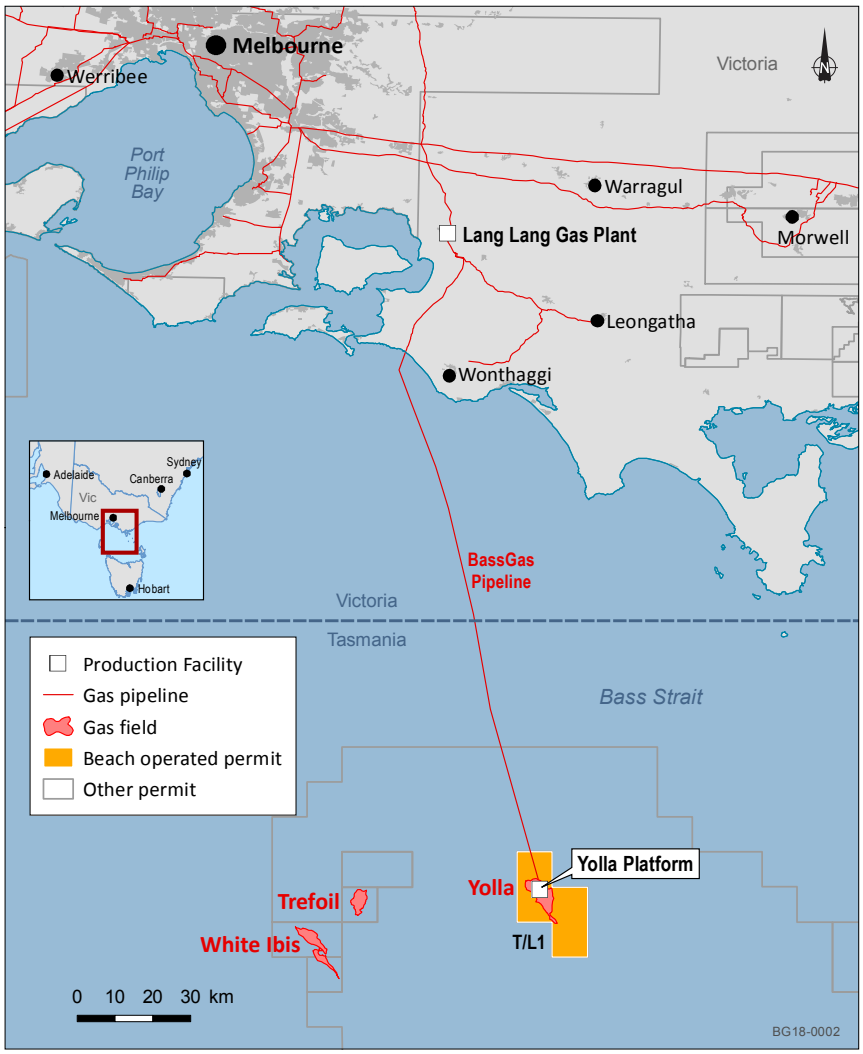
A carbon dioxide rich off-gas stream is piped to the adjacent Air Liquide facility for recovery of carbon dioxide.

As a continuation of the MLE Project, the Platform has been further modified with the following:

- Installation of export gas compression and condensate pumping systems to assist maximising recovery of the reservoir fluids and extending production life at plateau production rates
- Drilling of additional wells.

The Yolla-A facility has been designed such that it can be fully operated from either the onshore gas plant Central Control Room at Lang Lang or the offshore control panel on the platform. Post-MLE Project, the platform has continued to be primarily operated from the onshore Central Control Room which is continuously manned.

Maintenance of the platform is generally undertaken by work crews accommodated on the Yolla platform. The types of activities undertaken are routine operational checks and maintenance including instrument and mechanical maintenance, shutdown resets, corrosion monitoring and chemical replenishment. The platform is also visited approximately once per month by a supply vessel for the provision of fuel, chemicals, maintenance consumables, accommodation consumables and equipment. Vessels are also required for specific activities such as subsea inspection work using Remotely Operated Vehicles (ROVs) and/or divers.



The Yolla gas field is located in the Bass Strait approximately 145 km from Kilcunda on Victoria's south coast and 120 km from the north coast of Tasmania.

Regulatory Framework

Beach's BassGas offshore operations are regulated by the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006* and the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (the Regulations), which are administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

Operations in Victorian state waters (from the high water mark out to three nautical miles), which are limited to the asset's pipeline, are regulated by the Victorian *Offshore Petroleum and Greenhouse Gas Storage Regulations 2011* (the Victorian Regulations) and are administered by the Department of Economic Development, Jobs, Transport and Resources (DEDJTR).

The Environment Plan was previously updated and accepted by NOPSEMA on October 2014 for a period of five years, in line with the provisions in the Regulations. A revision of the Environment Plan is required now that the five-year period is drawing closer. Beach has completed an environmental risk review and no new significant risks have been identified since the current EP was accepted.

The revised Environment Plan will be submitted to both NOPSEMA and DEDJTR for acceptance.

Safety

Safety on the Yolla-A platform is managed in line with its associated Safety Case. A Safety Case is a document that describes the Yolla-A facility, the associated hazards and risks, and the safety management system in place to control and manage these risks. The Safety Case is revised every five years and is submitted to NOPSEMA for acceptance. The purpose of the Safety Case is to demonstrate that the facility complies with the relevant requirements of the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009*.

Environment Plan

The Environment Plan describes the operations of BassGas, the existing marine and shoreline environments and identifies environmental and socio-economic impacts. The Environment Plan also identifies risks and details a range of mitigation and management measures to reduce impacts and risks to As Low As Reasonably Practicable (ALARP) and to acceptable levels. These include:

- The Yolla platform and offshore pipeline are marked on navigational charts and the platform has a 500-metre safety exclusion zone
- Vessels servicing the platform comply with all applicable marine regulations and observe the minimum approach distances to whales and dolphins set out in national guidelines
- Gas venting is limited to the minimum required for safe operations
- The platform, pipeline and support vessels are maintained in good working condition in accordance with a suite of management system procedures, with regular inspections and audits undertaken to ensure these procedures are being effectively implemented.

Key changes and updates for the revised Environment Plan include:

- A description of Beach as the new asset owner
- A description of Beach's health, safety and environment management system (HSEMS)
- A revised impact and risk assessment that meets NOPSEMA's various guidelines released since acceptance of the current Environment Plan to demonstrate that the environmental impacts and risks are ALARP and acceptable
- A revised Oil Pollution Emergency Plan (OPEP) detailing the potential impacts of a hydrocarbon spill and Beach's response strategy to minimise environmental impact, in light of revised oil spill modelling
- Revised environmental performance outcomes and environmental performance standards that reflect current best practice and will allow Beach to measure and report on its environmental performance.

Questions and Answers

What is an Environment Plan and who assesses it?

An Environment Plan must be prepared by an operator and accepted by the regulator prior to conducting petroleum exploration, production or decommissioning activities.

- In Commonwealth waters, this is regulated under the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* and is administered by NOPSEMA.
- In Victorian state waters this is regulated under the Victorian *Offshore Petroleum and Greenhouse Gas Storage Regulations 2011* and administered by DEDJTR.

The contents of an Environment Plan are prescribed by the respective Commonwealth and Victorian regulations, and broadly include the requirement for a description of the activity and the existing environment, an evaluation of the impacts and risks associated with the activities, environmental performance outcomes and standards, implementation strategy and reporting requirements.

An Environment Plan must also include an OPEP, which describes how Beach will respond in the event of an oil spill.

Why is the Environment Plan being revised?

Environment Plans must be revised and re-submitted to the regulator every five years and this is scheduled to happen in 2019.

What is ALARP?

ALARP stands for "As Low As Reasonably Practicable". It is a safety assessment principle commonly used in the oil and gas industry to assess and reduce potential risks and impacts that cannot be eliminated. For information on how NOPSEMA assesses ALARP, see: https://www.nopsema.gov.au/assets/Guidelines/A524696.pdf

What does the Oil Pollution Emergency Plan (OPEP) cover?

An OPEP describes the arrangements for responding to and monitoring an oil spill and includes:

- An identification of environmental protection priorities;
- The suitability of various response measures for the two key hydrocarbon types (gas condensate and marine diesel);

Continued overleaf...

- A description of the arrangements and capabilities to ensure timely implementation of response measures and how these measures are maintained operationally ready at all times; and
- A description of the arrangements and capabilities to monitor the effects of oil pollution.

These arrangements are based on the results of scientific modelling of oil spill scenarios from a loss of control from a well, the pipeline and vessel.

Can I fish or scuba dive near the platform?

No. There is a 500m safety exclusion zone around the platform that vessels and divers cannot enter. This is to ensure the safety of the public and the platform.

Have potential impacts on marine life been considered?

Yes. The Environment Plan is a comprehensive document that identifies and assesses all impacts (known events) and risks (unplanned events) from platform, pipeline and vessel operations.

An Environment Plan summary is available at the NOPSEMA website at https://www.nopsema.gov.au/environmental-management/activity-status-and-summaries/details/248.

Do the offshore activities impact commercial fisheries?

There is limited impact to commercial fishing operations during routine operations. The platform has a 500m safety exclusion zone which is a relatively small area compared to the jurisdictions of the State- and Commonwealth-managed fisheries that are licensed to operate this area. In general, there is limited fishing activity near the platform.

Have potential impacts on whales been considered?

The current Environment Plan includes a description of whale populations and distribution in the Bass Strait and Beach has assessed the potential impacts of its activities on whales. Vessels and helicopters utilised by Beach are required to comply with the separation distances in the Australian National Guidelines for Whale and Dolphin Watching (DEH 2005) to minimise the impacts of noise and the risk of a vessel collision.

Contact us

Beach values stakeholder feedback as it is an important part of the process of revising the Environment Plan. Beach has prepared this information sheet to inform stakeholders and invite feedback from those who may be affected by Beach's offshore operations or who have an interest in the environmental performance of its offshore operations.

If you are seeking further information about the offshore operations of BassGas and the revision of the Environment Plan specific to your functions, interests or activities, or you wish to provide feedback, or meet with Beach to discuss, please contact us. Beach welcomes consultation with stakeholders potentially affected by these operations, including those stakeholders with specific local knowledge or an interest in the environmental performance of this asset. Feedback and consultation will inform the revision of the Environment Plan.

For further information please contact:

1800 797 011

community@beachenergy.com.au

Please be advised that all stakeholder feedback, records of consultation, copies of correspondence, including emails, will be provided to NOPSEMA and DEDJTR in the preparation of the Environment Plan as required by the OPGGS regulations.

BEACH ENERGY

Appendix 4

Stakeholder communications

(provided to NOPSEMA separately as sensitive information under Regulation 9(8) of the OPGGS(E))

Appendix 5

EPBC Act Protected Matters Search Tool results

Australian Government
Department of the Environment and Energy

EPBC Act Protected Matters Report

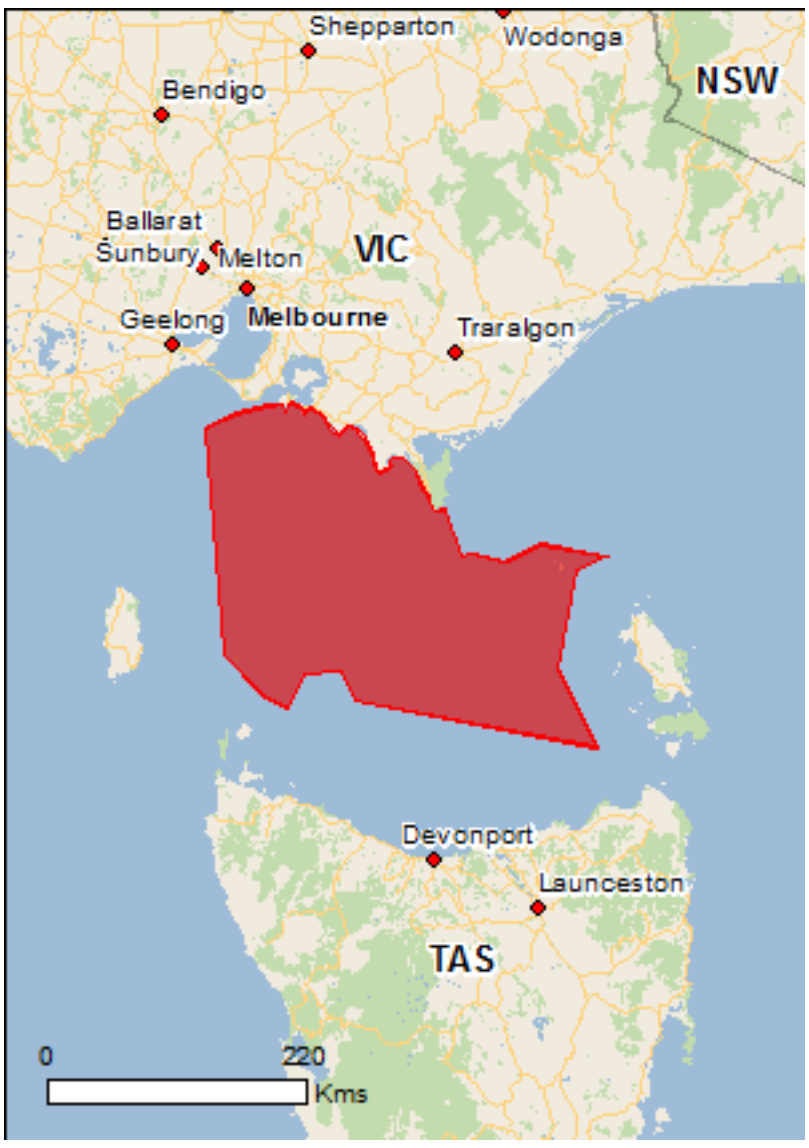
This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

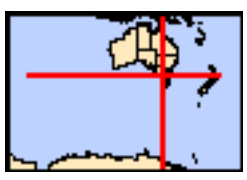
Report created: 12/09/18 12:25:27

Note: EPBC PMST checked again on 19 September 2019 for the same area, with no difference in MNES listed.



Coordinates

Buffer: 1.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	1
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	69
Listed Migratory Species:	69

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	1
Commonwealth Heritage Places:	1
Listed Marine Species:	114
Whales and Other Cetaceans:	15
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	2

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	11
Regional Forest Agreements:	1
Invasive Species:	40
Nationally Important Wetlands:	3
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar) [Resource Information]

Name	Proximity
Corner inlet	Within 10km of Ramsar
Western port	Within Ramsar site

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside the Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area. Generally the Commonwealth Marine Area stretches from three nautical miles to two hundred nautical miles from the coast.

Name
EEZ and Territorial Sea

Marine Regions [Resource Information]

If you are planning to undertake action in an area in or close to the Commonwealth Marine Area, and a marine bioregional plan has been prepared for the Commonwealth Marine Area in that area, the marine bioregional plan may inform your decision as to whether to refer your proposed action under the EPBC Act.

Name
South-east

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Giant Kelp Marine Forests of South East Australia	Endangered	Community may occur within area
Natural Damp Grassland of the Victorian Coastal Plains	Critically Endangered	Community likely to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area

Name	Status	Type of Presence
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within

Name	Status	Type of Presence
		area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta cauta Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta steadi White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726]	Vulnerable	Species or species habitat known to occur within area
Fish		
Galaxiella pusilla Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Vulnerable	Species or species habitat likely to occur within area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat likely to occur within area
Frogs		
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog [1828]	Vulnerable	Species or species habitat known to occur within area
Insects		
Synemon plana Golden Sun Moth [25234]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Antechinus minimus maritimus Swamp Antechinus (mainland) [83086]	Vulnerable	Species or species habitat known to occur within area

Name	Status	Type of Presence
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Dasyurus maculatus maculatus (SE mainland population)		
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area
Eubalaena australis		
Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Isoodon obesulus obesulus		
Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern) [68050]	Endangered	Species or species habitat known to occur within area
Mastacomys fuscus mordicus		
Broad-toothed Rat (mainland), Tooarrana [87617]	Vulnerable	Species or species habitat may occur within area
Megaptera novaeangliae		
Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus		
Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat known to occur within area
Pseudomys fumeus		
Smoky Mouse, Konoom [88]	Endangered	Species or species habitat may occur within area
Pseudomys novaehollandiae		
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat known to occur within area
Pteropus poliocephalus		
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Plants		
Amphibromus fluitans		
River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat known to occur within area
Caladenia orientalis		
Eastern Spider Orchid [83410]	Endangered	Species or species habitat known to occur within area
Caladenia tessellata		
Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat likely to occur within area
Glycine latrobeana		
Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area
Prasophyllum frenchii		
Maroon Leek-orchid, Slaty Leek-orchid, Stout Leek-orchid, French's Leek-orchid, Swamp Leek-orchid [9704]	Endangered	Species or species habitat likely to occur within area
Prasophyllum spicatum		
Dense Leek-orchid [55146]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
[Pterostylis chlorogramma](#) Green-striped Greenhood [56510]	Vulnerable	Species or species habitat likely to occur within area
[Pterostylis cucullata](#) Leafy Greenhood [15459]	Vulnerable	Species or species habitat likely to occur within area
[Pterostylis tenuissima](#) Swamp Greenhood, Dainty Swamp Orchid [13139]	Vulnerable	Species or species habitat may occur within area
[Thelymitra matthewsii](#) Spiral Sun-orchid [4168]	Vulnerable	Species or species habitat may occur within area
[Xerochrysum palustre](#) Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
Sharks		
[Carcharodon carcharias](#) White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
[Rhincodon typus](#) Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
[Ardenna carneipes](#) Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
[Ardenna tenuirostris](#) Short-tailed Shearwater [82652]		Breeding known to occur within area
[Diomedea antipodensis](#) Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Diomedea epomophora](#) Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Diomedea exulans](#) Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Diomedea sanfordi](#) Northern Royal Albatross [64456]	Endangered	Foraging, feeding or

Name	Threatened	Type of Presence
		related behaviour likely to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Sternula albifrons Little Tern [82849]		Species or species habitat may occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaena glacialis australis Southern Right Whale [75529]	Endangered*	Species or species habitat known to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or

Name	Threatened	Type of Presence
		related behaviour known to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area
[Isurus oxyrinchus](#) Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
[Lagenorhynchus obscurus](#) Dusky Dolphin [43]		Species or species habitat may occur within area
[Lamna nasus](#) Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
[Megaptera novaeangliae](#) Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
[Orcinus orca](#) Killer Whale, Orca [46]		Species or species habitat likely to occur within area
[Rhincodon typus](#) Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
[Hirundapus caudacutus](#) White-throated Needletail [682]		Species or species habitat known to occur within area
[Monarcha melanopsis](#) Black-faced Monarch [609]		Species or species habitat known to occur within area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat known to occur within area
[Rhipidura rufifrons](#) Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat known to occur within area
[Arenaria interpres](#) Ruddy Turnstone [872]		Roosting known to occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]		Roosting known to occur within area
[Calidris alba](#) Sanderling [875]		Roosting known to occur within area
[Calidris canutus](#) Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting known to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Thalasseus bergii Crested Tern [83000]		Breeding known to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Roosting known to occur within area
Tringa glareola Wood Sandpiper [829]		Foraging, feeding or related behaviour known to occur within area

Name	Threatened	Type of Presence
Tringa incana		
Wandering Tattler [831]		Foraging, feeding or related behaviour known to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis		
Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
Xenus cinereus		
Terek Sandpiper [59300]		Roosting known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land -

Commonwealth Heritage Places [Resource Information]

Name	State	Status
Historic		
Wilsons Promontory Lighthouse	VIC	Listed place

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat known to occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat may occur within area
Arenaria interpres		
Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba		
Sanderling [875]		Roosting known to occur within area
Calidris canutus		
Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species

Name	Threatened	Type of Presence
		habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Catharacta skua Great Skua [59472]		Species or species habitat may occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Roosting known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Eudyptula minor Little Penguin [1085]		Breeding known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting known to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Breeding known to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Heteroscelus incanus Wandering Tattler [59547]		Foraging, feeding or

Name	Threatened	Type of Presence
		related behaviour known to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Larus dominicanus Kelp Gull [809]		Breeding known to occur within area
Larus novaehollandiae Silver Gull [810]		Breeding known to occur within area
Larus pacificus Pacific Gull [811]		Breeding known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur

Name	Threatened	Type of Presence
		within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Pelecanoides urinatrix Common Diving-Petrel [1018]		Breeding known to occur within area
Phalacrocorax fuscescens Black-faced Cormorant [59660]		Breeding known to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Puffinus tenuirostris Short-tailed Shearwater [1029]		Breeding known to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Foraging, feeding or related behaviour known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Sterna albifrons Little Tern [813]		Species or species habitat may occur within area
Sterna bergii Crested Tern [816]		Breeding known to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or

Name	Threatened	Type of Presence
		related behaviour likely to occur within area
Thalassarche sp. nov. Pacific Albatross [66511]	Vulnerable*	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat known to occur within area
Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726]	Vulnerable	Species or species habitat known to occur within area
Tringa glareola Wood Sandpiper [829]		Foraging, feeding or related behaviour known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area
Fish		
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippocampus abdominalis Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Hippocampus minotaur Bullneck Seahorse [66705]		Species or species habitat may occur within area
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]		Species or species habitat may occur within area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Hypselognathus rostratus Knifesnout Pipefish, Knife-snouted Pipefish [66245]		Species or species habitat may occur within area
Kaupus costatus Deepbody Pipefish, Deep-bodied Pipefish [66246]		Species or species habitat may occur within area
Kimblaeus bassensis Trawl Pipefish, Bass Strait Pipefish [66247]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Leptoichthys fistularius Brushtail Pipefish [66248]		Species or species habitat may occur within area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys mollisoni Mollison's Pipefish [66260]		Species or species habitat may occur within area
Mitotichthys semistriatus Halfbanded Pipefish [66261]		Species or species habitat may occur within area
Mitotichthys tuckeri Tucker's Pipefish [66262]		Species or species habitat may occur within area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus robustus Robust Pipehorse, Robust Spiny Pipehorse [66274]		Species or species habitat may occur within area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Stipecampus cristatus Ringback Pipefish, Ring-backed Pipefish [66278]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Vanacampus margaritifer		
Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Vanacampus phillipi		
Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus		
Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammals		
Arctocephalus forsteri		
Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Arctocephalus pusillus		
Australian Fur-seal, Australo-African Fur-seal [21]		Breeding known to occur within area
Reptiles		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area

Whales and other Cetaceans [Resource Information]

Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata		
Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Caperea marginata		
Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
Delphinus delphis		
Common Dophin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis		
Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Globicephala macrorhynchus		
Short-finned Pilot Whale [62]		Species or species habitat may occur within area
Grampus griseus		
Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area

Name	Status	Type of Presence
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat likely to occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Australian Marine Parks [Resource Information]

Name	Label
Beagle	Multiple Use Zone (IUCN VI)
Boags	Multiple Use Zone (IUCN VI)

Extra Information

State and Territory Reserves [Resource Information]

Name	State
Anser Island	VIC
Cape Liptrap Coastal Park	VIC
Cone Islet	TAS
Curtis Island	TAS
Phillip Island Nature Park	VIC
Rodondo Island	TAS
Southern Wilsons Promontory	VIC
Sugarloaf Rock	TAS
Wilsons Promontory Islands	VIC
Wilsons Promontory National Park	VIC
Wonthaggi Heathlands N.C.R	VIC

Regional Forest Agreements [Resource Information]

Note that all areas with completed RFAs have been included.

Name	State
Gippsland RFA	Victoria

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Carduelis chloris European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Turdus philomelos Song Thrush [597]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus scandens Asparagus Fern, Climbing Asparagus Fern [23255]		Species or species habitat likely to occur within area
Carrichtera annua Ward's Weed [9511]		Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella neesiana Chilean Needle grass [67699]		Species or species habitat likely to occur within area
Nassella trichotoma Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) [18884]		Species or species habitat likely to occur within area
Olea europaea Olive, Common Olive [9160]		Species or species habitat may occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii		
Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Ulex europaeus		
Gorse, Furze [7693]		Species or species habitat likely to occur within area

Nationally Important Wetlands

[Resource Information]

Name	State
Anderson Inlet	VIC
Powlett River Mouth	VIC
Western Port	VIC

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-38.518033 145.093318,-38.513735 145.098811,-38.509437 145.186702,-38.548112 145.225154,-38.518033 145.23614,-38.500839 145.274592,-38.530926 145.34051,-38.565295 145.367976,-38.530926 145.406428,-38.573884 145.499812,-38.642565 145.549251,-38.689745 145.631648,-38.638274 145.697566,-38.655435 145.752498,-38.706893 145.812923,-38.788292 145.873347,-38.899531 145.906306,-38.912355 145.928279,-38.899531 145.994197,-38.873876 146.021663,-38.839655 146.01617,-38.826818 146.032649,-38.826818 146.10406,-38.861045 146.153499,-38.903805 146.213924,-38.98071 146.241389,-39.040467 146.296321,-39.09591 146.3128,-39.14705 146.351253,-39.134269 146.428157,-39.410681 146.549007,-39.397947 146.636897,-39.444625 146.895076,-39.338494 147.175227,-39.406436 147.647639,-39.487033 147.427913,-39.728261 147.372981,-40.057 147.285091,-40.517924 147.581721,-40.250132 145.747005,-40.078019 145.653621,-40.090628 145.362483,-40.296235 145.23614,-40.220778 145.049373,-39.985486 144.758235,-38.655435 144.615413,-38.565295 144.840633,-38.518033 145.093318

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-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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Appendix 6

Victorian Biodiversity Atlas
search tool results

VICTORIAN BIODIVERSITY ATLAS
OFFSHORE RESULTS - BASSGAS HYDROCARBON SPILL EMBA

Status	Scientific Name	Common Name	Sightings
Fish (79 spp)			
	Acanthaluteres vittiger	Toothbrush Leatherjacket	174
	Aetapcus maculatus	Warty Prowfish	4
	Anguilla australis	Southern Shortfin Eel	2
	Aplodactylus arctidens	Marblefish	68
	Aracana aurita	Shaw's Cowfish	15
	Aracana ornata	Ornate Cowfish	4
	Atypichthys strigatus	Mado	55
	Caesioperca lepidopterus	Butterfly Perch	12
	Caesioperca rasor	Barber Perch	298
	Cephaloscyllium laticeps	Draughtboard Shark	14
	Cheilodactylus nigripes	Magpie Perch	286
	Cheilodactylus spectabilis	Banded Morwong	50
	Chromis hypsilepis	Onespot Puller	11
	Chrysophrys auratus	Snapper	1
	Conger verreauxi	Southern Conger	1
	Dactylophora nigricans	Dusky Morwong	21
	Dinolestes lewini	Longfin Pike	143
	Diodon nicthemerus	Globefish	56
	Enoplosus armatus	Old Wife	212
	Eubalichthys gunnii	Gunn's Leatherjacket	33
	Eupetrichthys angustipes	Snakeskin Wrasse	2
	Genypterus tigerinus	Rock Ling	1
	Girella elevata	Rock Blackfish	5
	Girella tricuspidata	Luderick	9
	Girella zebra	Zebra fish	133
	Gnathanacanthus goetzeei	Red Velvetfish	2
	Gymnothorax prasinus	Green Moray	1
	Haletta semifasciata	Blue Weed Whiting	1
	Helicolenus percoides	Reef Ocean Perch	2
	Heteroclinus johnstoni	Johnston's Weedfish	2
	Heteroclinus perspicillatus	Common Weedfish	4
	Heteroclinus tristis	Longnose Weedfish	1
	Heterodontus portusjacksoni	Port Jackson Shark	11
	Hypoplectrodes annulatus	Blackbanded Seaperch	1
	Hypoplectrodes maccullochi	Halfbanded Seaperch	1
	Latridopsis forsteri	Bastard Trumpeter	20
	Macquaria colonorum	Estuary Perch	1
	Meuschenia australis	Brownstriped Leatherjacket	9
	Meuschenia flavolineata	Yellowstriped Leatherjacket	86
	Meuschenia freycineti	Six-spine Leatherjacket	90
	Meuschenia galii	Blue-lined Leatherjacket	2
	Meuschenia hippocrepis	Horse-shoe leatherjacket	88
	Meuschenia trachylepis	Yellow-finned Leatherjacket	2
	Myliobatis australis	Southern Eagle Ray	1
	Neoodax balteatus	Little Weed Whiting	6
	Notolabrus fucicola	Purple Wrasse	348
	Notolabrus tetricus	Blue Throated Wrasse	455

Odax Olisthops cyanomelas	Herring Cale	359
Ophthalmolepis lineolatus	Southern Maori Wrasse	3
Parablennius tasmanianus	Tasmanian Blenny	1
Parascyllium variolatum	Varied Catshark	9
Parequula melbournensis	Silverbelly	1
Parma microlepis	White-ear	17
Parma victoriae	Scalyfin	229
Pentaceropsis recurvirostris	longsnout boarfish	22
Pictilabrus laticlavius	Senator Wrasse	151
Pseudocaranx georgianus	Silver Trevally	2
Pseudocaranx wrighti	Skipjack Trevally	1
Pseudolabrus mortonii	Rosy Wrasse	60
Pseudophycis bachus	Red Rock Cod	5
Pseudophycis barbata	Bearded Rock Cod	4
Scobinichthys granulatus	Rough Leatherjacket	2
Scorpaena papillosa	Southern Red Scorpionfish	2
Scorpis aequipinnis	Sea Sweep	230
Scorpis lineolata	Silver Sweep	68
Sepia apama	Giant Cuttlefish	1
Sepioteuthis australis	Southern Calamari Squid	4
Sillaginodes punctatus	King George Whiting	1
Siphonognathus attenuatus	Slender Weed Whiting	5
Siphonognathus beddomei	Pencil Weed Whiting	74
Siphonognathus radiatus	Longray Weed Whiting	1
Tetractenos glaber	Smooth Toadfish	20
Thyrsites atun	Barracouta	1
Tilodon sexfasciatus	Moonlighter	14
Trachinops caudimaculatus	Southern Hulafish	83
Trinorfolkia clarkei	Clarks Threefin	16
Upeneichthys vlamingii	Bluespotted Goatfish	50
Urolophus paucimaculatus	Sparsely-spotted Stingaree	1
Vincentia conspersa	Southern Cardinalfish	2
Snails (24 spp)		
Amoria undulata	Benthic Volute	1
Astele ciliare	Calliope Top Shell	1
Astralium tentoriformis	Common Tent Shell	2
Cabestana spengleri	Spengler's Triton	18
Cabestana tabulata	Ploughed Triton	2
Calliostoma (Fautor) armillatum	Jewelled Top Shell	1
Chromodoris tasmaniensis	sea slug	2
Chromodoris tinctoria	sea slug	2
Cymatium (Monoplex) parthenopeum	Hairy Triton	2
Dicathais orbita	Cart-wheel Purple	172
Digidentis perplexa	sea slug	1
Echinaster arcystatus	seastar	104
Haliotis laevigata	Green-lip Abalone	22
Haliotis rubra	Black-lip Abalone	806
Lunella (Subninella) undulatus	Common Warrener	172
Notocypraea angustata	Brown Cowry	1
Penion mandarinus	Waite's Buccinum Whelk	4
Penion maximus	whelk	1

	Phasianella ventricosa	Common Pheasant Shell	3
	Phasianotrochus eximius	Kelp Shell	4
	Pleuroploca australasia	Australian Horse Conch	39
	Sagaminopteron ornatum	bubble snail	4
	Scutus (Scutus) antipodes	Boat Shell	60
	Tambja verconis	sea slug	3
Mammals (17 spp)			
X	Arctocephalus pusillus doriferus	Australian Fur Seal	6
vu	Arctophoca forsteri	Long-nosed Fur Seal	11
	Balaenoptera acutorostrata	Common Minke Whale	1
EN cr L	Balaenoptera musculus	Blue Whale	3
VU dd	Balaenoptera physalus	Fin Whale	1
	Delphinus delphis	Short-beaked Common Dolphin	34
EN cr L	Eubalaena australis	Southern Right Whale	35
	Globicephala melas	Long-finned Pilot Whale	1
	Hydrurga leptonyx	Leopard Seal	6
	Kogia breviceps	Pygmy Sperm Whale	1
VU vu L	Megaptera novaeangliae australis	Southern Humpback Whale	21
	Mesoplodon grayi	Gray's Beaked Whale	1
VU	Mirounga leonina	Southern Elephant Seal	2
	Orcinus orca	Killer Whale	3
X	Physeter macrocephalus	Sperm Whale	2
en L	Tursiops australis	Burrunan Dolphin	1
	Tursiops truncatus	Common Bottle-nosed dolphin	3
Reptiles (1 sp)			
EN cr L	Dermochelys coriacea	Leathery Turtle	4
Marine invertebrates (33 spp)			
	Cenolia tasmaniae	feather star	18
	Cenolia trichoptera	feather star	316
	Centrostephanus rodgersii	Black Sea Urchin	2
	Coscinasterias muricata	Eleven-armed Seastar	5
	Engaeus cunicularius	Granular Burrowing Crayfish	2
	Goniocidaris tubaria	Thorny Sea Urchin	1
	Guinusia chabrus	Cleft-fronted Shore Crab	175
	Heliocidaris erythrogramma	sea urchin	353
	Heliocidaris tuberculata	sea urchin	1
	Holopneustes inflatus	Seagrass Sea Urchin	7
	Holopneustes porossimus	sea urchin	4
	Holopneustes purpurascens	sea urchin	9
	Hypselodoris bennetti	sea slug	4
	Jasus edwardsii	Red Rock Lobster	81
	Meridiastra gunnii	seastar	180
	Mimachlamys asperrima	Doughboy Scallop	2
	Nectocarcinus tuberculosus	Rough Rock Crab	20
	Nectria macrobrachia	seastar	171
	Nectria multispina	seastar	75
	Nectria ocellata	seastar	286
	Pagurid sp. (grey)	Right-handed hermit crab	5
	Paguristes frontalis	Common Hermit Crab	3

	Paguroidea sp.	Hermit crab	3
	Pentagonaster duebeni	Vermillion Seastar	107
	Petricia vernicina	Velvet Seastar	137
	Phyllopteryx taeniolatus	Common Seadragon	1
	Plectaster decanus	seastar	145
	Plectaster decanus	seastar	145
	Pseudonepanthia troughtoni	seastar	126
	Strigopagurus strigimanus	Stridulating Hermit Crab	62
	Tosia australis	Biscuit Star	101
	Tosia magnifica	Biscuit Star	5
	Uniophora granifera	Five-armed Seastar	15
Corals (1 sp)			
	Erythropodium hicksoni	Gorgonian coral	3
Algae (127 spp)			
	Acrocarpia paniculata	brown alga	509
	Acrotylus australis	Red alga	30
k	Amphibolis antarctica	Sea Nymph	2
	Amphiroa anceps	Red alga	252
	Amphiroa gracilis	Red alga	1
	Apjohnia laetevirens	green alga	8
	Arthrocardia wardii	Red alga	86
	Asparagopsis armata	Red alga	4
	Ballia callitricha	Red alga	503
	Bovichtus angustifrons	Red alga	14
	Callophycus laxus	Red alga	8
	Callophyllis lambertii	Red alga	5
	Callophyllis rangiferina	Red alga	61
	Camontagnea oxyclada	Red alga	1
	Carpoglossum confluens	brown alga	13
	Carpomitra costata	brown alga	98
	Caulerpa brownii	green alga	41
	Caulerpa cactoides	green alga	3
	Caulerpa flexilis	green alga	33
	Caulerpa flexilis var. muelleri	green alga	34
	Caulerpa geminata	green alga	8
	Caulerpa hodkinsoniae	green alga	4
	Caulerpa longifolia	green alga	2
	Caulerpa obscura	green alga	10
	Caulerpa scalpelliformis	green alga	5
	Caulerpa simpliciuscula	green alga	17
	Caulerpa trifaria	green alga	1
	Caulocystis cephalornithos	brown alga	19
	Cheilosporum sagittatum	Red alga	191
	Chlanidophora microphylla	brown alga	17
	Cladostephus spongiosus	brown alga	1
	Codium duthieae	green alga	7
	Codium harveyi	green alga	1
	Codium pomoides	green alga	4
	Corallina officinalis	Red alga	11
	Cordylecladia furcellata	Red alga	2

Craspedocarpus tenuifolius	Red alga	6
Curdiea angustata	Red alga	4
Cystophora expansa	brown alga	2
Cystophora monilifera	brown alga	79
Cystophora moniliformis	brown alga	189
Cystophora platylobium	Red alga	4
Cystophora retorta	brown alga	77
Cystophora retroflexa	brown alga	119
Cystophora siliquosa	brown alga	1
Cystophora subfarcinata	brown alga	1
Delisea pulchra	Red alga	33
Dictymenia harveyana	Red alga	1
Dictyopteris acrostichoides	brown alga	2
Dictyopteris muelleri	brown alga	1
Dictyota dichotoma	brown alga	36
Dictyota diemensis	brown alga	1
Dictyota sp.	Brown Algae	7
Distromium flabellatum	brown alga	8
Dotalabrus aurantiacus	Red alga	29
Durvillaea potatorum	brown alga	2
Echinothamnion hystrix	Red alga	1
Ecklonia radiata	brown alga	981
Euptilota articulata	Red alga	5
Exallosorus olsenii	Red alga	2
Fromia polypora	seastar	134
Gelidium asperum	Red alga	10
Gelidium australe	Red alga	13
Gracilaria secundata	Red alga	4
Hemineura frondosa	Red alga	4
Hypnea ramentacea	Red alga	1
Jania rosea	Red alga	786
Homoeostrichus sinclairii	brown alga	108
Laurencia elata	Red alga	4
Laurencia filiformis	Red alga	7
Lotella rhacina	Red alga	1
Lobophora variegata	brown alga	5
Lobospira bicuspidata	brown alga	66
Macrocystis pyrifera	brown alga	28
Mastophoropsis canaliculata	Red alga	2
Melanthalia abscissa	Red alga	29
Melanthalia concinna	Red alga	5
Melanthalia obtusata	Red alga	260
Metagoniolithon radiatum	Red alga	272
Metamastophora flabellata	Red alga	24
Nemadactylus douglasi	Red alga	2
Nemadactylus macropterus	Red alga	3
Neodoris chrysoderma	sea slug	5
Nizymenia australis	Red alga	20
Odax acroptilus	Red alga	55
Other thallose red alga	Red alga	223
Pempheris multiradiata	Red alga	37
Perithalia caudata	brown alga	61

Peyssonnelia novaehollandiae	Red alga	1
Phacelocarpus alatus	Red alga	3
Phacelocarpus peperocarpus	Red alga	530
Phyllospora comosa	brown alga	1830
Phyllotricha decipiens	brown alga	24
Phyllotricha sonderi	brown alga	78
Phyllotricha varians	brown alga	13
Phyllotricha verruculosum	brown alga	109
Plocamium angustum	Red alga	498
Plocamium cartilagineum	Red alga	59
Plocamium costatum	Red alga	27
Plocamium dilatatum	Red alga	212
Plocamium leptophyllum	Red alga	17
Plocamium mertensii	Red alga	77
Plocamium patagiatum	Red alga	7
Plocamium pressianum	Red alga	10
Polyopes constrictus	Red alga	9
Pterocladia lucida	Red alga	147
Pterocladiella capillacea	Red alga	19
Ptilonia australasica	Red alga	24
Rhaphidorrhynchium amoenum var. an	Red alga	1
Rhodopeltis australis	Red alga	2
Rhodophyllis multipartita	Red alga	2
Rhodymenia australis	Red alga	141
Rhodymenia obtusa	Red alga	3
Rhodymenia prolificans	Red alga	2
Rugulopteryx okamurae	brown alga	1
Sargassum fallax	brown alga	39
Sargassum lacerifolium	brown alga	6
Sargassum spinuligerum	brown alga	13
Sargassum vestitum	brown alga	25
Seirococcus axillaris	brown alga	254
Solieria robusta	Red alga	1
Sonderopelta coriacea	Red alga	112
Xiphophora chondrophylla	brown alga	71
Zonaria angustata	brown alga	14
Zonaria spiralis	brown alga	26
Zonaria spp.	Brown Algae	3
Zonaria turneriana	brown alga	206

VICTORIAN BIODIVERSITY ATLAS
BIRD RESULTS - BASSGAS HYDROCARBON SPILL EMBA

Status	Scientific Name	Common Name	Sightings
Mostly terrestrial species			
	Acanthiza chrysorrhoa	Yellow-rumped Thornbill	78
	Acanthiza lineata	Striated Thornbill	55
	Acanthiza nana	Yellow Thornbill	13
	Acanthiza pusilla	Brown Thornbill	156
	Acanthiza reguloides	Buff-rumped Thornbill	5
	Acanthorhynchus tenuirostris	Eastern Spinebill	82
	Accipiter cirrhocephalus	Collared Sparrowhawk	10
	Accipiter fasciatus	Brown Goshawk	47
vu L	Accipiter novaehollandiae	Grey Goshawk	5
*	Acridotheres tristis	Common Myna	95
	Aegotheles cristatus	Australian Owlet-nightjar	5
*	Alauda arvensis	European Skylark	72
nt	Alcedo azurea	Azure Kingfisher	4
	Anas querquedula	Garganey	1
nt L	Anseranas semipalmata	Magpie Goose	2
	Aphelocephala leucopsis	Southern Whiteface	1
	Apus pacificus	Fork-tailed Swift	7
	Ardea pacifica	White-necked Heron	37
	Alisterus scapularis	Australian King-Parrot	10
	Anthochaera carunculata	Red Wattlebird	123
	Anthochaera chrysoptera	Little Wattlebird	123
CR cr L	Anthochaera phrygia	Regent Honeyeater	2
	Anthus novaeseelandiae	Australasian Pipit	95
cr L	Ardeotis australis	Australian Bustard	3
	Artamus cyanopterus	Dusky Woodswallow	31
	Acrocephalus australis	Australian Reed Warbler	11
	Artamus personatus	Masked Woodswallow	4
	Artamus superciliosus	White-browed Woodswallow	8
	Barnardius zonarius zonarius	Australian Ringneck	2
EN en L	Botaurus poiciloptilus	Australasian Bittern	4
en L	Burhinus grallarius	Bush Stone-curlew	1
	Cacatua galerita	Sulphur-crested Cockatoo	22
	Cacomantis flabelliformis	Fan-tailed Cuckoo	51
	Cacomantis variolosus	Brush Cuckoo	4
	Callocephalon fimbriatum	Gang-gang Cockatoo	39
	Caligavis chrysops	Yellow-faced Honeyeater	61
	Calyptorhynchus funereus	Yellow-tailed Black-Cockatoo	59
*	Carduelis carduelis	European Goldfinch	124
	Cacatua tenuirostris	Long-billed Corella	4
	Calamanthus fuliginosus	Striated Fieldwren	27
vu L	Calamanthus pyrrhopygius	Chestnut-rumped Heathwren	5
	Cincloramphus cruralis	Brown Songlark	10
nt	Circus assimilis	Spotted Harrier	5

	Climacteris erythrops	Red-browed Treecreeper	2
nt	Climacteris picumnus	Brown Treecreeper	4
*	Columba livia	Rock Dove	27
	Corcorax melanorhamphos	White-winged Chough	6
	Cygnus atratus	Black Swan	137
	Chenonetta jubata	Australian Wood Duck	23
*	Chloris chloris	European Greenfinch	45
vu L	Chthonicola sagittatus	Speckled Warbler	1
	Cincloramphus mathewsi	Rufous Songlark	5
nt	Cinclosoma punctatum	Spotted Quail-thrush	6
	Circus approximans	Swamp Harrier	86
	Cisticola exilis	Golden-headed Cisticola	29
	Colluricincla harmonica	Grey Shrike-thrush	162
	Coracina novaehollandiae	Black-faced Cuckoo-shrike	67
	Cormobates leucophaeus	White-throated Treecreeper	53
	Corvus coronoides	Australian Raven	74
	Corvus mellori	Little Raven	68
*	Corvus splendens	House Crow	1
	Corvus tasmanicus	Forest Raven	41
	Coturnix pectoralis	Stubble Quail	18
	Cracticus tibicen	Australian Magpie	278
	Chrysococcyx basalis	Horsfield's Bronze-Cuckoo	40
	Chrysococcyx lucidus	Shining Bronze-Cuckoo	23
nt	Chrysococcyx osculans	Black-eared Cuckoo	1
	Cracticus torquatus	Grey Butcherbird	85
	Dacelo novaeguineae	Laughing Kookaburra	125
	Dendrocygna arcuata	Wandering Whistling-Duck	2
	Dendrocygna eytoni	Plumed Whistling-Duck	1
	Dicrurus bracteatus	Spangled Drongo	3
	Daphoenositta chrysoptera	Varied Sittella	18
	Dicaeum hirundinaceum	Mistletoebird	14
nt	Dromaius novaehollandiae	Emu	11
	Elanus scriptus	Letter-winged Kite	5
	Eopsaltria australis	Eastern Yellow Robin	123
	Epthianura albifrons	White-fronted Chat	88
	Eurostopodus mystacalis	White-throated Nightjar	2
	Elanus axillaris	Black-shouldered Kite	67
	Eolophus roseicapilla	Galah	55
	Eurystomus orientalis	Dollarbird	2
	Falco cenchroides	Nankeen Kestrel	103
	Falco longipennis	Australian Hobby	14
	Falco peregrinus	Peregrine Falcon	48
	Falco berigora	Brown Falcon	65
vu N	Falco subniger	Black Falcon	6
	Falcunculus frontatus	Eastern Shrike-tit	13
	Fulica atra	Eurasian Coot	30
nt	Gallinago hardwickii	Latham's Snipe	17
	Gallinula tenebrosa	Dusky Moorhen	27

	Gallirallus philippensis	Buff-banded Rail	4
	Gavicalis virescens	Singing Honeyeater	28
	Geopelia striata	Peaceful Dove	2
	Glossopsitta pusilla	Little Lorikeet	8
	Grallina cyanoleuca	Magpie-lark	168
	Glossopsitta concinna	Musk Lorikeet	5
	Glossopsitta porphyrocephala	Purple-crowned Lorikeet	5
	Heteroscenes pallidus	Pallid Cuckoo	27
	Hieraaetus morphnoides	Little Eagle	6
	Haliastur sphenurus	Whistling Kite	30
vu	Hirundapus caudacutus	White-throated Needletail	43
	Hirundo neoxena	Welcome Swallow	232
en L	Ixobrychus dubius	Australian Little Bittern	2
	Lalage sueurii	White-winged Triller	3
CR en L	Lathamus discolor	Swift Parrot	4
vu L	Lewinia pectoralis	Lewin's Rail	6
vu	Lichenostomus cratitius	Purple-gaped Honeyeater	1
	Lichenostomus melanops	Yellow-tufted Honeyeater	4
	Lopholaimus antarcticus	Topknot Pigeon	1
	Malacorhynchus membranaceus	Pink-eared Duck	3
	Malurus cyaneus	Superb Fairy-wren	217
	Manorina melanocephala	Noisy Miner	24
	Manorina melanophrys	Bell Miner	5
nt L	Melanodryas cucullata	Hooded Robin	3
	Melithreptus brevirostris	Brown-headed Honeyeater	23
	Meliphaga lewinii	Lewin's Honeyeater	8
	Melopsittacus undulatus	Budgerigar	1
	Menura novaehollandiae	Superb Lyrebird	5
	Microeca fascinans	Jacky Winter	11
	Milvus migrans	Black Kite	1
	Mirafra javanica	Horsfield's Bushlark	6
	Melithreptus lunatus	White-naped Honeyeater	32
	Merops ornatus	Rainbow Bee-eater	5
	Morus serrator	Australasian Gannet	121
	Myiagra cyanoleuca	Satin Flycatcher	16
	Myiagra inquieta	Restless Flycatcher	4
	Myiagra rubecula	Leaden Flycatcher	5
	Neochmia temporalis	Red-browed Finch	78
CR cr L	Neophema chrysogaster	Orange-bellied Parrot	5
	Neophema chrysostoma	Blue-winged Parrot	24
	Nesoptilotis leucotis	White-eared Honeyeater	72
	Ninox boobook	Southern Boobook	38
en L	Ninox connivens	Barking Owl	4
vu L	Ninox strenua	Powerful Owl	6
nt	Nycticorax caledonicus	Nankeen Night Heron	8
	Nymphicus hollandicus	Cockatiel	2
	Ocyphaps lophotes	Crested Pigeon	1
en L	Oxyura australis	Blue-billed Duck	7

	Oriolus sagittatus	Olive-backed Oriole	8
	Pachycephala olivacea	Olive Whistler	57
	Pachycephala pectoralis	Golden Whistler	66
	Pachycephala rufiventris	Rufous Whistler	35
	Pardalotus punctatus punctatus	Spotted Pardalote (coastal)	40
	Pardalotus striatus	Striated Pardalote	17
*	Passer montanus	Eurasian Tree Sparrow	8
*	Passer domesticus	House Sparrow	137
	Petrochelidon ariel	Fairy Martin	18
	Petrochelidon nigricans	Tree Martin	14
	Petroica boodang	Scarlet Robin	45
	Petroica goodenovii	Red-capped Robin	1
	Petroica phoenicea	Flame Robin	81
	Petroica rodinogaster	Pink Robin	9
	Petroica rosea	Rose Robin	9
en L	Pezoporus wallicus	Ground Parrot	7
	Phaps chalcoptera	Common Bronzewing	26
	Phaps elegans	Brush Bronzewing	37
	Philemon corniculatus	Noisy Friarbird	3
	Phylidonyris melanops	Tawny-crowned Honeyeater	21
	Phylidonyris novaehollandiae	New Holland Honeyeater	156
	Phylidonyris pyrrhoptera	Crescent Honeyeater	79
	Platalea flavipes	Yellow-billed Spoonbill	33
nt	Platalea regia	Royal Spoonbill	60
	Platycercus elegans	Crimson Rosella	122
	Platycercus eximius	Eastern Rosella	74
	Podargus strigoides	Tawny Frogmouth	7
	Podiceps cristatus	Great Crested Grebe	8
en L	Pomatostomus temporalis	Grey-crowned Babbler	5
	Poodytes gramineus	Little Grassbird	13
	Porphyrio melanotus	Australasian Swamphen	46
vu L	Porzana pusilla	Baillon's Crake	4
	Porzana tabuensis	Spotless Crake	3
	Psephotus haematonotus	Red-rumped Parrot	6
	Psophodes olivaceus	Eastern Whipbird	46
	Ptilonorhynchus violaceus	Satin Bowerbird	4
	Porzana fluminea	Australian Spotted Crake	6
	Ptilotula ornatus	Yellow-plumed Honeyeater	1
	Ptilotula penicillatus	White-plumed Honeyeater	56
	Ptilotula fusca	Fuscous Honeyeater	2
	Rhipidura albiscapa	Grey Fantail	177
	Rhipidura leucophrys	Willie Wagtail	153
	Rhipidura rufifrons	Rufous Fantail	21
	Sericornis frontalis	White-browed Scrubwren	157
	Smicrornis brevirostris	Weebill	5
vu	Spatula rhynchotis	Australasian Shoveler	17
nt L	Stagonopleura guttata	Diamond Firetail	4
	Strepera graculina	Pied Currawong	27

	Strepera versicolor	Grey Currawong	44
	Stagonopleura bella	Beautiful Firetail	32
en L	Stictonetta naevosa	Freckled Duck	3
	Stipiturus malachurus	Southern Emu-wren	24
*	Streptopelia chinensis	Spotted Turtle-Dove	66
*	Sturnus vulgaris	Common Starling	212
en L	Synoicus chinensis	King Quail	3
	Synoicus ypsilophorus	Brown Quail	5
	Tachybaptus novaehollandiae	Australasian Grebe	30
	Tadorna tadornoides	Australian Shelduck	46
	Todiramphus sanctus	Sacred Kingfisher	13
	Trichoglossus moluccanus	Rainbow Lorikeet	29
vu	Tringa nebularia	Common Greenshank	18
vu	Tringa stagnatilis	Marsh Sandpiper	2
	Tribonyx ventralis	Black-tailed Native-hen	2
*	Turdus merula	Common Blackbird	192
*	Turdus philomelos	Song Thrush	2
	Turnix varia	Painted Button-quail	7
nt	Turnix velox	Little Button-quail	3
	Tyto alba	Barn Owl	21
	Tyto longimembris	Eastern Grass Owl	1
en L	Tyto novaehollandiae	Masked Owl	2
vu L	Tyto tenebricosa	Sooty Owl	1
	Vanellus miles	Masked Lapwing	183
	Vanellus tricolor	Banded Lapwing	17
	Zoothera lunulata	Bassian Thrush	31

Mostly marine spp			
	Aquila audax	Wedge-tailed Eagle	57
nt	Chlidonias hybridus	Whiskered Tern	7
nt	Chlidonias leucopterus	White-winged Black Tern	1
	Daption capense	Cape Petrel	12
VU vu L	Diomedea epomophora	Southern Royal Albatross	3
VU en L	Diomedea exulans	Wandering Albatross	24
	Eudyptes chrysocome	Rockhopper Penguin	2
	Eudyptes pachyrhynchus	Fiordland Penguin	5
	Eudyptes sclateri	Erect-crested Penguin	1
	Eudyptula minor	Little Penguin	231
	Fulmarus glacialoides	Southern Fulmar	12
	Garrodia nereis	Grey-backed Storm-Petrel	1
nt L	Gelochelidon nilotica macrotarsa	Gull-billed Tern	4
	Haliaeetus leucogaster	White-bellied Sea-Eagle	51
vu L	Halobaena caerulea	Blue Petrel	13
	Hydroprogne caspia	Caspian Tern	45
	Lugensa brevirostris	Kerguelen Petrel	6
	Macronectes giganteus	Southern Giant-Petrel	15
EN vu L	Macronectes halli	Northern Giant-Petrel	9

VU nt L	Oceanites oceanicus	Wilson's Storm-Petrel	1
	Macronectes sp.	Giant-Petrel species	5
	Pachyptila belcheri	Slender-billed Prion	22
	Pachyptila desolata	Antarctic Prion	9
	Pachyptila salvini	Salvin's Prion	7
	Pachyptila turtur	Fairy Prion	79
vu	Pandion cristatus	Osprey	1
	Pachyptila vittata	Broad-billed Prion	1
	Pelagodroma marina	White-faced Storm-Petrel	18
vu	Pelecanoides urinatrix	Common Diving-Petrel	54
nt	Phoebetria fusca	Sooty Albatross	1
VU	Procellaria cinerea	Grey Petrel	1
VU L	Pterodroma inexpectata	Mottled Petrel	4
	Pterodroma lessonii	White-headed Petrel	9
	Pterodroma leucoptera	Gould's Petrel	4
EN	Puffinus bulleri	Buller's Shearwater	1
	Puffinus carneipes	Flesh-footed Shearwater	5
	Puffinus gavia	Fluttering Shearwater	44
	Puffinus grisea	Sooty Shearwater	13
	Puffinus huttoni	Hutton's Shearwater	6
	Puffinus tenuirostris	Short-tailed Shearwater	240
	Pterodroma macroptera	Great-winged Petrel	10
	Stercorarius parasiticus	Arctic Jaeger	18
	Stercorarius pomarinus	Pomarine Jaeger	8
	Sterna hirundo	Common Tern	8
	Sterna paradisaea	Arctic Tern	3
	Sterna striata	White-fronted Tern	26
nt	Sternula albifrons	Little Tern	8
vu L	Sternula nereis	Fairy Tern	12
VU en L	Stercorarius skua	Great Skua	14
	Thalassarche bulleri	Buller's Albatross	2
VU L	Thalassarche carteri	Indian Yellow-nosed Albatross	27
VU vu L	Thalassarche cauta	Shy Albatross	75
VU vu L	Thalassarche chrysostoma	Grey-headed Albatross	10
EN vu L	Thalassarche melanophris	Black-browed Albatross	55
en L	Thalasseus bergii	Crested Tern	192
VU vu	Thinornis cucullatus	Hooded Plover	398
VU vu L	Zosterops lateralis	Silvereye	179

Mostly shoreline species

vu	Actitis hypoleucos	Common Sandpiper	6
	Anas castanea	Chestnut Teal	35
	Anas gracilis	Grey Teal	29
	Anas superciliosa	Pacific Black Duck	70
	Anhinga novaehollandiae	Darter	10
en L	Ardea plumifera	Plumed Egret	7
vu	Arenaria interpres	Ruddy Turnstone	16

vu L	Ardea alba	Great Egret	59
vu	Aythya australis	Hardhead	10
vu	Biziura lobata	Musk Duck	27
	Bubulcus coromandus	Eastern Cattle Egret	21
	Calidris acuminata	Sharp-tailed Sandpiper	26
CR en	Calidris ferruginea	Curlew Sandpiper	23
	Calidris ruficollis	Red-necked Stint	34
CR en L	Calidris tenuirostris	Great Knot	7
nt	Calidris alba	Sanderling	12
EN en	Calidris canutus	Red Knot	10
nt	Calidris melanotos	Pectoral Sandpiper	1
	Cereopsis novaehollandiae	Cape Barren Goose	101
	Chroicocephalus novaehollandiae	Silver Gull	399
	Charadrius bicinctus	Double-banded Plover	35
VU cr	Charadrius leschenaultii	Greater Sand Plover	8
EN cr	Charadrius mongolus	Lesser Sand Plover	9
	Charadrius ruficapillus	Red-capped Plover	80
	Cladorhynchus leucocephalus	Banded Stilt	4
en L	Egretta garzetta	Little Egret	12
	Egretta novaehollandiae	White-faced Heron	219
	Egretta sacra	Eastern Reef Egret	1
	Elseyornis melanops	Black-fronted Dotterel	21
	Erythrogonys cinctus	Red-kneed Dotterel	6
	Glareola maldivarum	Oriental Pratincole	2
vu L	Grus rubicunda	Brolga	4
nt	Haematopus fuliginosus	Sooty Oystercatcher	165
	Haematopus longirostris	Pied Oystercatcher	50
	Himantopus leucocephalus	Pied Stilt	13
	Larus dominicanus	Kelp Gull	26
nt	Larus pacificus	Pacific Gull	385
	Limosa lapponica	Bar-tailed Godwit	24
vu	Limosa limosa	Black-tailed Godwit	7
	Microcarbo melanoleucos	Little Pied Cormorant	143
CR vu	Numenius madagascariensis	Eastern Curlew	41
	Numenius minutus	Little Curlew	2
vu	Numenius phaeopus	Whimbrel	16
nt	Phalacrocorax fuscescens	Black-faced Cormorant	79
	Phalacrocorax sulcirostris	Little Black Cormorant	80
	Phalacrocorax carbo	Great Cormorant	122
nt	Phalacrocorax varius	Pied Cormorant	70
vu	Pluvialis fulva	Pacific Golden Plover	13
en	Pluvialis squatarola	Grey Plover	10
	Pelecanus conspicillatus	Australian Pelican	104
nt	Plegadis falcinellus	Glossy Ibis	1
	Recurvirostra novaehollandiae	Red-necked Avocet	6
EN cr L	Rostratula australis	Australian Painted-snipe	9
vu	Tringa glareola	Wood Sandpiper	3
	Threskiornis molucca	Australian White Ibis	166

	Threskiornis spinicollis	Straw-necked Ibis	83
cr L	Tringa brevipes	Grey-tailed Tattler	8
en L	Xenus cinereus	Terek Sandpiper	3

VICTORIAN BIODIVERSITY ATLAS
ONSHORE RESULTS - BASSGAS HYDROCARBON SPILL EMBA

Status	Scientific Name	Common Name
Mammals (29 spp)		
	Antechinus agilis	Agile Antechinus
	Antechinus mimetes	Mainland Dusky Antechinus
VU nt L	Antechinus minimus maritimus	Swamp Antechinus
*	Axis porcinus	Hog Deer
*	Capra hircus	Goat (feral)
nt X	Cercartetus nanus	Eastern Pygmy-possum
EN en L	Dasyurus maculatus maculatus	Spot-tailed Quoll
*	Felis catus	Domestic Cat (feral)
EN nt L	Isoodon obesulus obesulus	Southern Brown Bandicoot
*	Lepus europeaus	European Brown Hare
	Macropus giganteus	Eastern Grey Kangaroo
L	Miniopterus schreibersii	Common Bent-wing Bat
*	Mus musculus	House Mouse
	Ornithorhynchus anatinus	Platypus
*	Oryctolagus cuniculus	European Rabbit
	Petaurus breviceps	Sugar Glider
	Phascolarctos cinereus	Koala
VU nt L	Potorous tridactylus trisulcatus	Long-nosed Potoroo
	Pseudocheirus peregrinus	Eastern Ring-tailed Possum
VU vu L	Pteropus poliocephalus	Grey-headed Flying-fox
	Rattus fuscipes	Bush Rat
	Rattus lutreolus	Swamp Rat
*	Rattus rattus	Black Rat
nt L	Sminthopsis leucopus	White-footed Dunnart
	Tachyglossus aculeatus	Short-beaked Echidna
	Trichosurus vulpecula	Common Brush-tailed Possum
	Vombatus ursinus	Bare-nosed Wombat
*	Vulpes vulpes	Red Fox
	Wallabia bicolor	Black-tailed Wallaby
Reptiles (11 spp)		
	Acritoscincus duperreyi	Eastern Three-lined Skink
	Austrelaps superbus	Lowland Copperhead
	Drysdalia coronoides	White-lipped Snake
	Lampropholis guichenoti	Garden Skink
	Liopholis whitii GROUP	White's Skink
	Niveoscincus metallicus	Metallic Skink
	Notechis scutatus	Tiger Snake
	Pseudemoia entrecasteauxii	Southern Grass Skink
	Pseudemoia spenceri	Spencer's Skink
	Saproscincus mustelinus	Weasel Skink
	Tiliqua nigrolutea	Blotched Blue-tongued Lizard
Amphibians (12 spp)		
	Crinia signifera	Common Froglet
	Geocrinia victoriana	Victorian Smooth Froglet
	Limnodynastes dumerilii	Southern Bullfrog (ssp. unknown)

	Limnodynastes dumerilii insularis	Pobblebonk Frog
	Limnodynastes peronii	Striped Marsh Frog
	Limnodynastes tasmaniensis	Spotted Marsh Frog (race unknown)
	Litoria ewingii	Southern Brown Tree Frog
	Litoria ewingii SOUTHERN	Southern Brown Tree Frog SOUTHERN
VU en L	Litoria raniformis	Growling Grass Frog
	Litoria verreauxii (ssp. unknown)	Unknown Tree Frog
	Litoria verreauxii verreauxii	Verreaux's Tree Frog
vu	Pseudophryne semimarmorata	Southern Toadlet

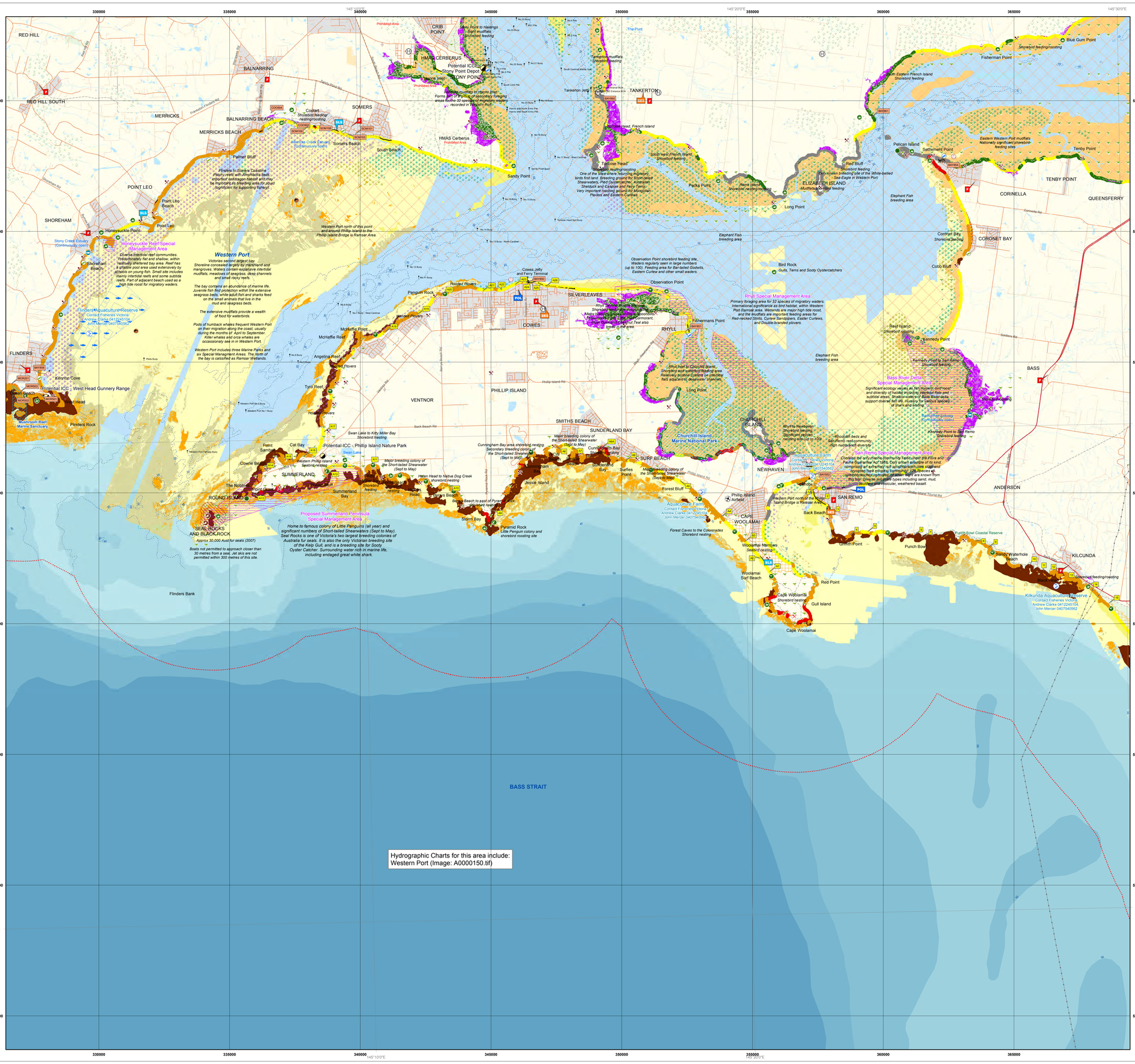
Plant (753 spp)

Not included in this summary. There are 753 species recorded. None of these are in the EMBA, as the EMB only extends to the high tide mark.

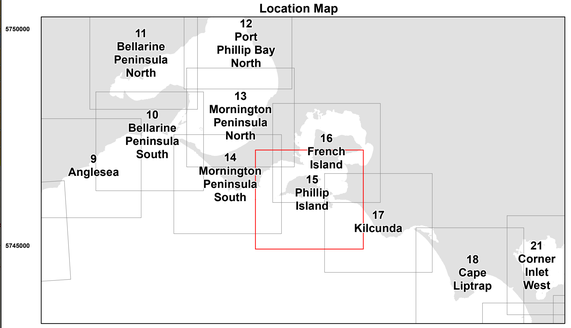
Appendix 7

Oil Spill Response Atlas maps
for the coastline of the EMBA

15 Phillip Island
Oil Spill Response Map



Location Map



Legend

- Helipads
- Airports and Airfields
- Potential ICC Locations
- Fire Station
- Lifesaving Club
- Police Station
- SES Unit
- Estuarine Fish Habitats
- Australian Fur Seal Colonies
- Little Penguin Colonies
- Dolphin Habitat
- Hooded Plover Habitat
- Shorebird Roosting Sites
- Tern Nesting Sites
- Aquaculture License Sites
- Coastal Bird Habitat
- River Entrance - Continuously Open
- River Entrance - Intermittently Open
- Beach Emergency Signs
- ESTA Emergency Markers
- Boat Launch
- Boat Ramp
- Boat Slipway
- Boat Mooring
- Breakwater
- Pier, Jetty, Wharf
- BOM Observation Station
- Navigation Aids
- Coastal Ramsar Sites in Victoria
- Victoria - 3nm Boundary
- Oil/Gas Pipeline

Geological Sites
- International, National Significance
- Regional, State, Unknown Significance
- Western Port Bathymetry 25k

- Highway
- Other Roads
- Tracks
- Walking Path
- Watercourse
- Aquaculture Reserve
- Marine Mammals Protected Area
- Marine Special Management Area
- Marine National Park/Sanctuary

Aquatic Vegetation
- Amphibolis
- Macroalgae
- Other Seagrass

Inter-tidal Vegetation
- Saltmarsh
- Mangrove
- Western Port Rhodolith Beds

Shoreline Habitat Type
- Artificial Shoreline
- Cobble/Shingle Beach
- Intertidal Mud-Sand Flat
- Intertidal Shore Platform
- Mangroves
- Mixed Cobble/Shingle Beach/Shore Platform
- Mixed Sand Beach/Shore Platform
- Sand Beach

Coastal Types
- Cobble/Shingle Beach
- Intertidal Mud-Sand Flat
- Intertidal Sand Flat
- Intertidal Shore Platform
- Sand Beach
- Sand Dunes
- Steep Shoreline (rocky cliffs/embankments)
- Subtidal Rocky Reef
- Subtidal Sandy Substrate
- Water Body
- Swamp
- Sewage Pond
- Tree Cover
- Parks and Reserves

LiDAR Substrates
- Reef
- Reef/Sediment
- Sediment

Note: Symbols on the map for biological resources (bird and mammal species) are indicative of the resource being in the general vicinity only

Map not suitable for navigation purposes

0 2 4 6 8 10 Km

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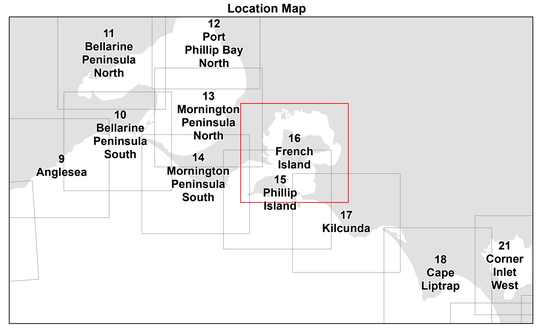
16 French Island

Oil Spill Response Map

Location Map



Legend

- Helipads
- Airports and Airfields
- Potential ICC Locations
- Marine Pollution Equipment Storage
- Fire Station
- Lifesaving Club
- Police Station
- SES Unit
- Estuarine Fish Habitats
- Australian Fur Seal Colonies
- Little Penguin Colonies
- Dolphin Habitat
- Hooded Plover Habitat
- Shorebird Roosting Sites
- Tern Nesting Sites
- Aquaculture License Sites
- Coastal Bird Habitat
- River Entrance - Continuously Open
- River Entrance - Intermittently Open
- Beach Emergency Signs
- ESTA Emergency Markers
- Boat Launch
- Boat Ramp
- Boat Slipway
- Boat Mooring
- Breakwater
- Pier, Jetty, Wharf
- BOM Observation Station
- Navigation Aids
- Coastal Ramsar Sites in Victoria
- Oil/Gas Facility
- Oil/Gas Pipeline

Geological Sites

- International, National Significance
- Regional, State, Unknown Significance
- Western Port Bathymetry 25k

- Freeway
- Highway
- Other Roads
- Tracks
- Walking Path
- Watercourse
- Marine Mammals Protected Area
- Marine Special Management Area
- Marine National Park/Sanctuary

Aquatic Vegetation

- Amphibolis
- Macroalgae
- Other Seagrass

Inter-tidal Vegetation

- Saltmarsh
- Mangrove
- Western Port Rhodolith Beds

Shoreline Habitat Type

- Artificial Shoreline
- Cobble/Shingle Beach
- Intertidal Mud-Sand Flat
- Intertidal Shore Platform
- Mangroves
- Mixed Cobble/Shingle Beach/Shore Platform
- Mixed Sand Beach/Shore Platform
- Sand Beach

Coastal Types

- Cobble/Shingle Beach
- Intertidal Mud-Sand Flat
- Intertidal Sand Flat
- Intertidal Shore Platform
- Sand Beach
- Sand Dunes
- Steep Shoreline (rocky cliffs/embankments)
- Subtidal Rocky Reef
- Subtidal Sandy Substrate
- Water Body
- Swamp
- Sewage Pond
- Tree Cover
- Parks and Reserves

LiDAR Substrates

- Reef
- Reef/Sediment
- Sediment

Hydrographic Charts for this area include:
Western Port (Image: A0000150.tif)
Western Port (Entrance and North Arm) (Image: A0000151.tif)

Note: Symbols on the map for biological resources (bird and mammal species) are indicative of the resource being in the general vicinity only

Map not suitable for navigation purposes

0 2 4 6 8 10 Km

GDA

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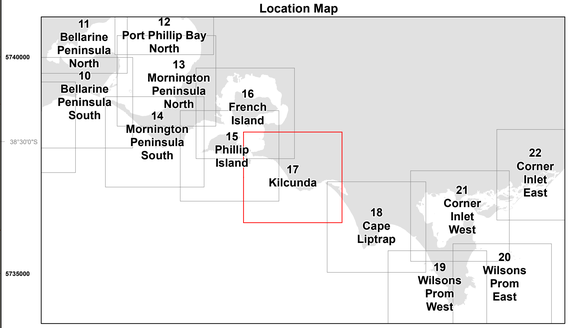
17 Kilcunda

Oil Spill Response Map

Location Map



Legend

- Helipads
- Airports and Airfields
- Fire Station
- Lifesaving Club
- Police Station
- SES Unit
- Estuarine Fish Habitats
- Hooded Plover Habitat
- Shorebird Roosting Sites
- Aquaculture License Sites
- Coastal Bird Habitat
- River Entrance - Continuously Open
- River Entrance - Intermittently Open
- Beach Emergency Signs
- ESTA Emergency Markers
- Boat Launch
- Boat Ramp
- Boat Slipway
- Boat Mooring
- Breakwater
- Pier, Jetty, Wharf
- BOM Observation Station
- Coastal Ramsar Sites in Victoria
- Victoria - 3nm Boundary
- Oil/Gas Pipeline

Geological Sites
- International, National Significance
- Regional, State, Unknown Significance
- Western Port Bathymetry 25k

- Highway
- Other Roads
- Tracks
- Walking Path
- Watercourse
- Marine Special Management Area
- Marine National Park/Sanctuary
- Other Marine Park

Aquatic Vegetation
- Amphibolis
- Macroalgae
- Other Seagrass

Inter-tidal Vegetation
- Saltmarsh
- Mangrove
- Western Port Rhodolith Beds

Shoreline Habitat Type
- Cobble/Shingle Beach
- Intertidal Mud-Sand Flat
- Intertidal Shore Platform
- Mangroves
- Mixed Cobble/Shingle Beach/Shore Platform
- Mixed Sand Beach/Shore Platform
- Sand Beach

Coastal Types
- Cobble/Shingle Beach
- Intertidal Mud-Sand Flat
- Intertidal Sand Flat
- Intertidal Shore Platform
- Sand Beach
- Sand Dunes
- Steep Shoreline (rocky cliffs/embankments)
- Subtidal Rocky Reef
- Subtidal Sandy Substrate
- Water Body
- Swamp
- Tree Cover
- Parks and Reserves

LiDAR Substrates
- Reef
- Reef/Sediment
- Sediment

Hydrographic Charts for this area include:
Western Port (Image: A0000150.tif)
Cape Schanck to Cape Liptrap (Image: A0000801.tif)

Note: Symbols on the map for biological resources (bird and mammal species) are indicative of the resource being in the general vicinity only

Map not suitable for navigation purposes

0 2 4 6 8 10 Km

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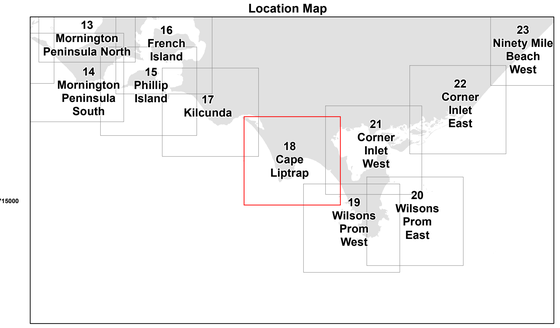
18 Cape Liptrap
Oil Spill Response Map

Location Map



Legend

- Helipads
- Fire Station
- Lifesaving Club
- Police Station
- SES Unit
- Estuarine Fish Habitats
- Little Penguin Colonies
- Hooded Plover Habitat
- Shorebird Roosting Sites
- Common Bent-wing Bat Roost
- Coastal Bird Habitat
- River Entrance - Continuously Open
- River Entrance - Intermittently Open
- Boat Launch
- Boat Ramp
- Breakwater
- Pier, Jetty, Wharf
- BOM Observation Station
- Coastal Ramsar Sites in Victoria
- Victoria - 3nm Boundary

Geological Sites
- International, National Significance
- Regional, State, Unknown Significance

- Highway
- Other Roads
- Tracks
- Walking Path
- Watercourse
- Marine National Park/Sanctuary

Aquatic Vegetation
- Macroalgae
- Other Seagrass

Inter-tidal Vegetation
- Saltmarsh
- Mangrove

Shoreline Habitat Type
- Intertidal Mud-Sand Flat
- Intertidal Shore Platform
- Mangroves
- Mixed Cobble/Shingle Beach/Shore Platform
- Mixed Sand Beach/Shore Platform
- Sand Beach

Coastal Types
- Cobble/Shingle Beach
- Intertidal Mud-Sand Flat
- Intertidal Sand Flat
- Intertidal Shore Platform
- Sand Beach
- Sand Dunes
- Steep Shoreline (rocky cliffs/embankments)
- Subtidal Rocky Reef
- Subtidal Sandy Substrate
- Water Body
- Swamp
- Sewage Pond
- Tree Cover
- Parks and Reserves

LiDAR Substrates
- Reef
- Reef/Sediment
- Sediment

Hydrographic Charts for this area include:
Cape Schanck to Cape Liptrap (Image: A0000801.tif)
Cape Liptrap to Cliffy Island (Image: A0000802.tif)

Note: Symbols on the map for biological resources (bird and mammal species) are indicative of the resource being in the general vicinity only

Map not suitable for navigation purposes

0 2 4 6 8 10 Km

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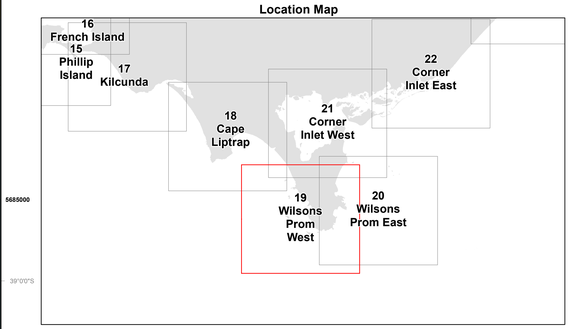
19 Wilsons Prom West
Oil Spill Response Map



Legend

- Helipads
- Potential ICC Locations
- Estuarine Fish Habitats
- Australian Fur Seal Colonies
- NZ Fur Seal Colonies
- Little Penguin Colonies
- Hooded Plover Habitat
- Common Bent-wing Bat Roost
- Short-tailed Shearwater
- Coastal Bird Habitat
- River Entrance - Continuously Open
- River Entrance - Intermittently Open
- Boat Launch
- BOM Observation Station
- Tasmania - 3nm Boundary
- Victoria - 3nm Boundary

Geological Sites
- International, National Significance
- Regional, State, Unknown Significance

- Other Roads
- Tracks
- Walking Path
- Watercourse
- Marine Mammals Protected Area
- Commonwealth Marine Reserve
- Marine National Park/Sanctuary

Shoreline Habitat Type
- Intertidal Shore Platform
- Mixed Sand Beach/Shore Platform
- Sand Beach
- Water Body
- Swamp
- Tree Cover
- Parks and Reserves

LiDAR Substrates
- Reef
- Reef/Sediment
- Sediment

Hydrographic Charts for this area include:
Cape Liptrap to Cliffy Island (Image: A0000802.tif)

Note: Symbols on the map for biological resources (bird and mammal species) are indicative of the resource being in the general vicinity only

Map not suitable for navigation purposes

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