To: Director of National Parks (for decision)

Through: Jason Mundy, Assistant Secretary, Marine Protected Areas Branch

PA2018-00041- DNP BRIEF - CONOCO LICENCE APPLICATION - FINAL

Timing: 30 November 2018

Recommendations:

1. That you provide in-principle agreement to issue an activity licence for the construction and operation of a pipeline in the Habitat Protection Zone of the Oceanic Shoals Marine Park.

   Agreed / Not agreed

2. That you note the next steps to finalise the pipeline licence.

   Noted / Please discuss

James Findlay, Director of National Parks: s. 47F(1) Date: 28/11/18

Comments: Please advise when this will become public (if not already) and ensure (proposed) pipeline briefing is provided to the Minister and TPs are included in briefing for estimates in Feb

Clearing Officer: Sent 20/11/2018	s. 22(1)(a)(ii)	A/g Director, Authorisations & Compliance Section	T: s. 22(1)(a)(ii) M: s. 22(1)(a)(ii)
Contact Officer:	s. 22(1)(a)(ii)	A/g Assistant Director, Assessments & Authorisations	T: s. 22(1)(a)(ii)

Background:

1. ConocoPhillips Australia Barossa Pty Ltd (the applicant) applied for an activity licence to construct and operate a 31.5km gas export pipeline through the Habitat Protection Zone (HPZ) of Oceanic Shoals Marine Park (the Marine Park). Background on the project to which the pipeline relates and a map of the proposed pipeline is at **Attachment A**. The complete application is at **Attachment B**.

2. The National Offshore Petroleum Safety and Environmental Management Agency (NOPSEMA) is the sole assessor for offshore petroleum and gas activities in Commonwealth waters, including within Australian Marine Parks. NOPSEMA's assessment process explicitly takes into consideration impacts on matters protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and must have regard to the requirements of Australian Marine Park management plans.

3. The North Marine Parks Network Management Plan (the Management Plan) allows for the Director of National Parks (DNP) to authorise mining activities that are also assessed and approved by other agencies under other legislative regimes.

4. Mining operations in IUCN VI Zones (Special Purpose Zones and Multiple Use Zones) are authorised under a class approval. The Management Plan also enables the DNP to authorise the construction and operation of pipelines through a HPZ or National Park Zone 'if satisfied that alternative routes are not feasible or practicable'[1]. The class approval does not authorise this type of activity through a HPZ. An activity licence is the most suitable form of authorisation.

Considerations:

5. This is the first application for oil and gas industry infrastructure in an HPZ under the new management plans and may therefore attract media and parliamentary attention.

6. NOPSEMA accepted the applicant's Offshore Project Proposal (OPP) for the Barossa Project on 13 March 2018. The OPP identified three potential and 'feasible' pipeline routes within the pipeline corridor. Two routes go through the HPZ, one route is outside the HPZ in close proximity to the eastern boundary of the Marine Park (see Figure 1, **Attachment A**).

7. The Authorisations and Compliance Section have consulted with NOPSEMA throughout the application process. NOPSEMA will not approve an Environmental Plan (EP) for a pipeline constructed in an HPZ unless the applicant has a licence from the DNP. The applicant cannot conduct activities authorised by the licence without an approved EP. A copy of the application was provided to NOPSEMA for their information on 13 September 2018.

8. The DNP is a 'relevant person' under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* where oil and gas activities occur in, or potentially impact on, Australian Marine Parks. This means the DNP must be consulted on all EPs required for the construction, installation, operation, maintenance and eventual decommissioning of the proposed pipeline. Thus the DNP can recommend

[1] North Marine Parks Network Management Plan 2018, prescription 4.2.9.6

additional conditions on, and maintain awareness of, any activities relating to these stages.

9. The Management Plan does not provide definitions or expanded guidance to be taken into account in determining whether or not an alternative route is 'feasible' or 'practicable'.

Assessment:

10. The Management Plan outlines the considerations that the Director must have when making decisions about whether to authorise construction and operation of pipelines. These include:

    - An authorisation for the construction and operation of pipelines through a IUCN IV Habitat Protection Zone may be issued if the Director is satisfied that alternative routes are not feasible or practicable; and
    - The Director must be satisfied that the assessment meets the requirements of the decision-making prescriptions in section 4.3.

11. Section 6 of **Attachment B** presents a feasibility and practicability assessment comparing one route within the HPZ (Proposed Route) and the route outside and adjacent to the HPZ (Eastern Alignment Route). The applicant has provided evidence that whilst both routes are 'feasible', the Eastern Alignment Route is not 'practicable'.

    In determining whether the routes were practicable, the assessment considered whether the Eastern Alignment Route was a reasonable alternative including potential environmental impacts compared to the Proposed Route. In summary, we consider that the Eastern Alignment Route is not practicable when compared to the Proposed Route because:

    - The sea floor along the Eastern Alignment Route is significantly more uneven and the waters are shallower.
    - More significant works in the form of dredging, trenching and dumping of rock would be required to secure the pipeline of the Eastern Alignment Route.
    - Span rectification to support the pipeline over uneven terrain would be much more frequent for the Eastern Alignment Route, resulting in a much larger footprint in terms of direct destruction of benthic communities.
    - Associated engineering works of the Eastern Alignment Route would have the potential, via the plume of disturbed sediments, to impact benthic habitats over a wide area, potentially kilometres from the site of the works.
    - The Eastern Alignment Route includes an area of < 30 m depth which is likely to be inter-nesting habitat of critical importance to Flatback Turtles.
    - The increased works associated with the Eastern Alignment Route will take longer to complete and thus there is increased potential for disturbance to, and impacts on, fauna such as marine turtles and cetaceans.

12. In addition to being satisfied that an alternative route outside the HPZ is not feasible or practicable, the Management Plan requires that the decision-making criteria outlined in Section 4.3 of the Management Plan is considered and satisfied prior to issuing an activity licence. We have conducted a detailed assessment against each of the relevant criteria, which is outlined in **Attachment C**.

In summary, the evaluation of the application against the Section 4.3 decision-making prescriptions is as follows:

- The activity is consistent with the zone objective of conserving benthic habitats and that potential impacts and risks of the activity on values and representativeness are acceptable because: the installation of the pipeline will result in minimal destruction of seafloor habitats; the footprint of the pipeline would occupy 0.0002% of the HPZ; the Proposed Route will not result in destruction of any key ecological or topographically distinct features which generate benthic communities of ecological significance; modelling indicates that approximately 78% of the Proposed Route will be over areas of very low diversity habitat composed of mostly bare sediment; and we consider the direct and indirect impacts are minimal.

- The proponent suitably understands the values of the marine park because the application demonstrates a suitably thorough assessment of the potential impacts of the pipeline on marine park values.

- Our assessment takes into account the potential impacts on marine park users, stakeholders and Indigenous people because the applicant has undertaken consultation with key marine park stakeholders including the fishing industry and traditional owners and we consider that these stakeholder groups are unlikely to be negatively affected by the pipeline installation in the Marine Park.

13. We consider that there is adequate and defined evidence to ascertain these conclusions based on the research undertaken by the applicant and our assessment. The research conclusions rely on an extension of modelling methods recently developed by the Australian Institute of Marine Science researchers as part of Project D1 of the Marine Biodiversity Hub of the National Environmental Science Program[2]. The applicant carried out further surveys using the same methods to obtain modelled habitat distributions for benthic habitats in the pipeline corridor (see summary in **Attachment A**). We conclude that the applicant has used scientifically robust information to support their case for the proposed pipeline route.

14. Comments made by MPA Management North team have been considered and incorporated into the assessment.

15. On the basis of the information presented in the application and our assessment, we consider management plan decision-making and assessment requirements are satisfied. We recommended that you provide in-principle agreement to issue an activity licence for the construction and operation of a pipeline in the Habitat Protection Zone of the Oceanic Shoals Marine Park.

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[2] Relevant publications are publically available on the NESP Marine Biodiversity Hub website (https://www.nespmarine.edu.au) and the outcomes of the habitat modelling are demonstrated on the North West Atlas website (https://northwestatlas.org/node/5449).

Next steps

16. If you agree in-principle to the issuing of a licence, the Authorisations and Compliance Section will notify the applicant and draft a licence contract in consultation with Parks Legal.

S. 45(1)

18. NOPSEMA have indicated they will not proceed with assessment of the pipeline installation Environmental Plan until the licence is issued. This assessment by NOPSEMA (which covers the entire pipeline route) requires that the proponent reduce impacts and risks to 'as low as reasonably practicable' and that the residual environmental impacts and risks of the activity are acceptable. NOPSEMA will assess all future activities regarding pipeline operation and decommissioning, therefore licence conditions around ongoing pipeline activities regulated by NOPSEMA are not required. Instead the licence will require that all activities must be carried out "in accordance with an Environment Plan accepted under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009*". Anticipated timeframe:

- **Early December:** Commence licence negotiations.
- **Late December:** Submit licence signed by applicant and final licence application to you for approval.

Attachments

A: Background information: Barossa Project
B: Pipeline licence application: ConocoPhillips Australia Barossa Pty Ltd
C: Analysis against management plan decision making criteria

Attachment A: Background information: Barossa Project

The pipeline licence application is part of ConocoPhillips Australia Barrosa Pty Ltd's Barossa Project.

The Barossa offshore development area is located in Australian Commonwealth waters within the Bonaparte Basin, approximately 300 kilometres (km) north of Darwin, Northern Territory (NT) (see figure 1 overleaf).

The Barossa Project will comprise a floating production storage and offloading (FPSO) facility, subsea production system, supporting in-field subsea infrastructure, and a dry gas export pipeline (the pipeline). The FPSO facility will be the central processing facility to separate, stabilise, store and offload condensate, and to treat, condition and export gas. The condensate will be periodically exported directly to market from the FPSO by export tankers. The FPSO facility will be permanently moored and remain in the Barossa offshore development area for the life of the project (i.e. outside of the Oceanic Shoals Marine Park).

The extracted dry gas will be exported from the FPSO facility through the proposed gas export pipeline that will tie into the existing Bayu-Undan to Darwin gas export pipeline in Commonwealth waters, to then transport the dry gas to the existing ConocoPhillips operated onshore Darwin LNG facility located at Wickham Point (subject to appropriate commercial arrangements being put in place).

The proposed gas export pipeline will be in the order of 260 – 290km in length in entirety (including 31.5km within the Habitat Protection Zone and 30km in the Multiple Use Zone). It will be between 24 – 26 inches in diameter and installed on the seabed. It is anticipated to take 6 – 12 month to install, pending the final route selection and amount of seabed intervention required.

The estimated production rate of liquefied natural gas from the Barossa Project is 3.7 million tonnes per annum, and 1.5 million barrels of condensate annually. The anticipated operating life of the Barossa Project is 25 years, with production planning to commence in 2023 (subject to required approvals and investment decisions).

NOPSEMA accepted the applicant's Offshore Project Proposal (OPP) for the Barossa Project on 13 March 2018. This OPP is a mandatory requirement under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* for all offshore projects that recover petroleum and/or petroleum products.

The OPP identified a broad corridor within which the pipeline route would be located with final route selection subject to further field surveys. The corridor straddles the HPZ, including areas inside and outside of the Marine Park (see Figure 1).

The OPP defined environmental performance outcomes to be applied to manage potential environmental impacts and risks associated with the project. In consulting with Parks Australia

on the OPP[1], the applicant agreed to include in the OPP an environmental performance outcome "*To minimise impact to representative species, assemblages and associated values of the Oceanic Shoals Marine Park, further studies will be used to inform the final pipeline routing so the pipeline will not be installed on those representative species, assemblages and associated values if they have not been found in the marine park outside the pipeline corridor*".

The applicant, in partnership with the Australian Institute of Marine Science (AIMS), targeted research to:

- survey six key areas to confirm benthic habitat types in the Marine Park
- identify key classes of organisms occupying those habitats
- model the distribution of benthic communities based on key habitats across the marine park; and
- statistically compare modelled habitats inside the pipeline corridor with other areas of the Marine Park.

The research results indicate species assemblages are unlikely to be unique in the pipeline corridor and these benthic communities are well represented elsewhere in the Marine Park.

[1] Consultation is required as the Director of National Parks is a "relevant person" under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009.* This means the Director must be consulted by proponents for petroleum activities that occur in or have the potential to impact on, Australian Marine Parks.

Figure 1: As per the licence application: Location of the Barossa Project and the proposed gas export pipeline route passing through the Multiple Use Zone and Habitat Protection Zone of the Oceanic Shoals Marine Park.

ConocoPhillips

Australia Business Unit West

Barossa Area Development

CONTROLLED DOCUMENT

Title:

Parks Australia Licence Application: Construct and Operate a Pipeline in a Marine Park

Document ID:

BAA-100 0215

REV	REV DATE	DESCRIPTION	PREPARED BY	CHECKED BY	APPROVED BY
A	9th July 2018	Internal review	TM	BH	BSC
B	23 August 2018	Updated draft	WC	TM	
0	6th September 2018	Issued for Use	TM	BSC	MM

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s. 11C(1)(a)		06/09/2018

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CONTENTS

1 INTRODUCTION

1.1 Overview

ConocoPhillips Australia Barossa Proprietary (Pty) Limited (Ltd.) (ConocoPhillips), as proponent on behalf of the current and future co-venturers, is proposing to develop hydrocarbon resources from the Barossa gas and condensate field in the Timor Sea (**Figure 1**). The Barossa area development (the Barossa Project or project) will comprise a floating production storage offloading (FPSO) facility, subsea production system, supporting in-field subsea infrastructure, and a dry gas export pipeline (the pipeline).

The FPSO facility will be the central processing facility to separate, stabilise, store and offload condensate, and to treat, condition and export gas. The condensate will be periodically exported directly to market from the FPSO by export tankers. The FPSO facility will be permanently moored and remain in the Barossa offshore development area for the life of the project (i.e. outside of the Oceanic Shoals marine park **Figure 1**).

The extracted dry gas will be exported from the FPSO facility through a gas export pipeline that will tie into the existing Bayu-Undan to Darwin gas export pipeline in Commonwealth waters. The dry gas will be transported to the existing ConocoPhillips operated onshore Darwin LNG (DLNG) facility located at Wickham Point (subject to appropriate commercial arrangements being put in place).

ConocoPhillips' proposed gas export pipeline route partially overlaps a Multiple Use Zone (MUZ[1]) and a Habitat Protection Zone (HPZ[2]) of the Oceanic Shoals marine park (**Figure 1**). As described in the North Marine Parks Network Management Plan 2018 (Director of National Parks, 2018), the construction and operation of the pipeline is an allowable activity, subject to the Director of National Parks granting an Activity Licence. This document constitutes ConocoPhillips' Activity Licence application to install and operate pipeline.

[1] The MUZ is classified as Category VI (Protected Area with sustainable use of natural resources) under the International Union for the Conservation of Nature (IUCN) protected area categories

[2] The HPZ is classified as Category IV (Habitat / Species Management Area) under the IUCN protected area categories.

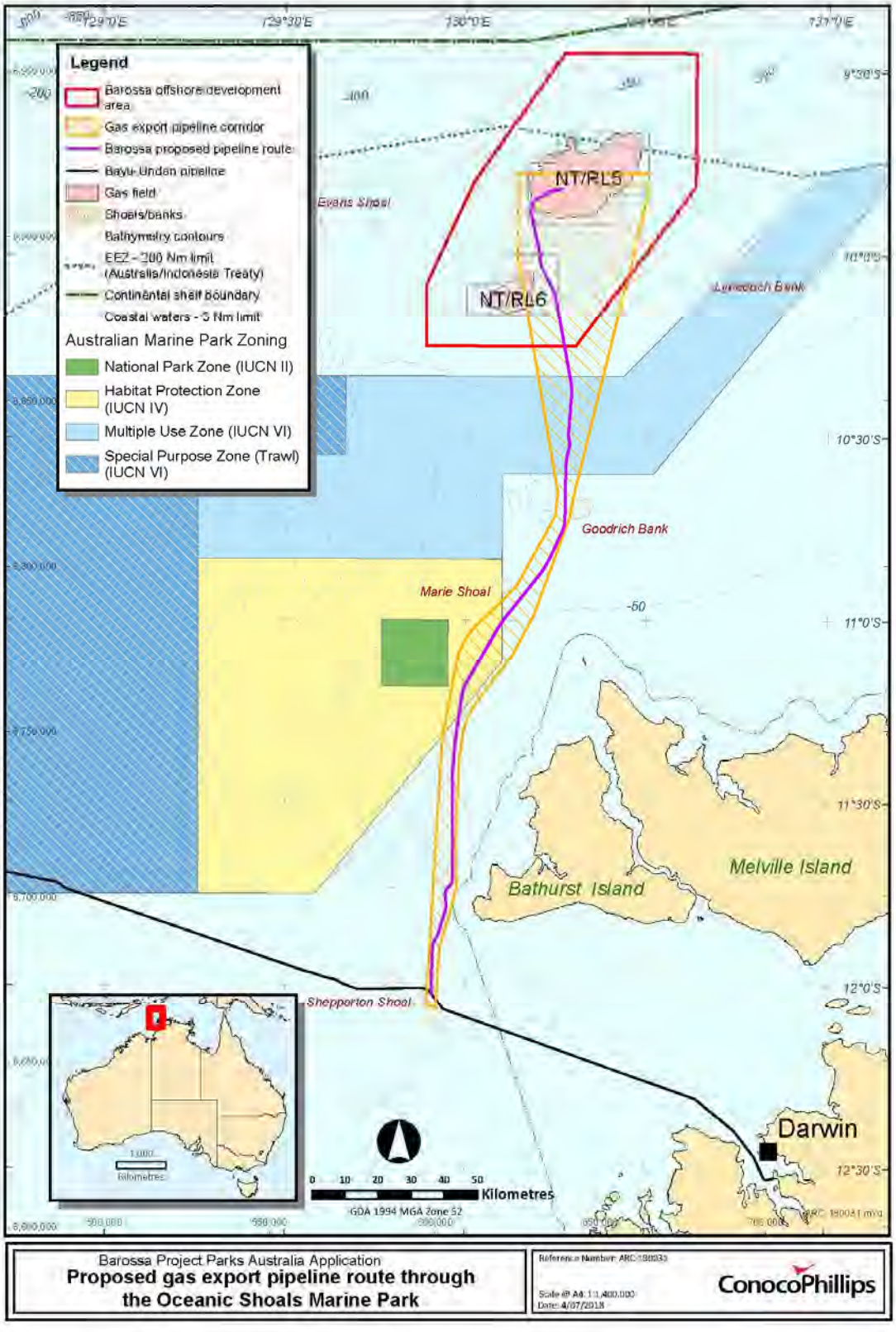


Figure 1: Location of the Barossa Project and the proposed gas export pipeline route passing through the MUZ and HPZ of the Oceanic Shoals marine park

1.2 Scope

This document forms the licence application through which ConocoPhillips is seeking authorisation from the Director of National Parks to construct and operate a petroleum pipeline (and undertake activities required to support those operations) within the MUZ and HPZ of the Oceanic Shoals marine park.

The spatial extent of the area to which the licence application applies is a 250 m buffer around the pipeline route within the MUZ and HPZ, as shown in **Figure 1**.

The activities within the scope of the licence application comprise:

- Construction, including (but not limited to):
    - Pre-construction surveys and seabed interventions
    - Construction activities, including pipe laying
    - Contingency activities (e.g. pipeline wet buckle rectification)
- Operations, including:
    - Pipeline inspection, maintenance and repair (IMR) activities
- Decommissioning

The temporal extent of the licence is requested to cover from the issue of the licence by the Director of National Parks (assumed to be Q3 or Q4 2018) until ConocoPhillips confirms decommissioning of the pipeline has been completed.

1.3 Purpose

The purpose of this document is to demonstrate the application meets the requirements of the prescriptions set out in the North Marine Parks Network Management Plan (Director of National Parks 2018), including:

Prescription 4.2.9.6:

- the Director of National Parks may issue and authorisation under Section 4.4 (Authorisation of allowable activities) of the North Marine Parks Network Management Plan for the construction and operation of pipelines and the carrying on of other activities for the purposes of those operations (e.g. surveys) through a:
    a) Habitat Protection Zone (IV); or
    b) National Park Zone (II),

  if the Director is satisfied that alternative routes are not feasible or practicable.

Prescription 4.3.1.4:

- Before authorising a proposed activity, the Director must be satisfied that:
    a) the proponent suitably understands the marine park values;
    b) environmental impacts and risks on marine park values are understood, evaluated and able to be avoided or reduced to as low as reasonably practicable;
    c) the proponent has the capacity to comply with the conditions of the authorisation; and
    d) that relevant regulatory requirements have been or will be met.

Prescription 4.3.1.5:

- The Director will not authorise an activity unless satisfied that:

  a) the activity is consistent with the zone objectives for the zone or zones in which the activity will be conducted (Part 3); and

  b) the potential impacts and risks of the activity on marine park values will be avoided or reduced to as low as reasonably practicable; and

  c) the potential impacts and risks of the activity on marine park values and representativeness are acceptable.

ConocoPhillips understands that the Director of National Parks may use licence conditions to ensure authorised activities are conducted in ways consistent with the values of the park and the management plan[3].

1.4 Structure of the Application

This application has been prepared in accordance with the requirements of the North Marine Parks Network Management Plan and in consultation with Parks Australia. It describes the process and outcomes by which preliminary and candidate pipeline routes were assessed and provides a justification for ConocoPhillips' determination that alternatives to the proposed pipeline route are either not feasible or not practicable.

This application also identifies and evaluates potential environmental impacts and risks to the values of the Oceanic Shoals marine park from pipeline installation and operations activities. Subsequent management measures to prevent or mitigate potential environmental impacts and risks are also proposed for consideration by Parks Australia.

The structure of the application is summarised in **Table 1**.

Table 1: Summary of application sections

Section	Description
1. Introduction	Outline the context and requirement for the licence application.
2. Regulatory Approvals	Provide regulatory context for existing and future environmental approvals.
3. Description of the Activity	A brief description of the activities related to the pipeline that ConocoPhillips may undertake within the Oceanic Shoals marine park MUZ and HPZ. This provides context for the assessment of candidate pipeline routes, description of impacts and risks, and proposed risk management.
4. Values of the Oceanic Shoals Marine Park	Describes the environmental values of the Oceanic Shoals marine park that may be affected by ConocoPhillips' proposed construction, operation and decommissioning of the pipeline. This provides context for the assessment of candidate pipeline routes, description of impacts and risks, and proposed risk management.
5. Consultation	Outline the consultation undertaken with stakeholders to date and summarise key consultation outcomes. These outcomes were used to inform the assessment of candidate pipeline routes and proposed impact and risk management.

[3] As detailed on the Parks Australia website, Permit and licence conditions, https://onlineservices.environment.gov.au/parks/permit-licence-conditions?theme=parks (accessed 3 July 2018).

6. Pipeline Route Assessment	This section outlines the deliberations made by ConocoPhillips in selecting the nominated pipeline route. This considers the feasibility and practicability of each of the candidate pipeline routes.
7. Alignment with Oceanic Shoals Marine Park Management Objectives	This section provides a summary of alignment with the Oceanic Shoals marine park IUCN principles, and objectives of the management zones of the marine park.
8. Summary of Environmental Impacts and Risks	This section summarises the potential impacts and risks the construction, operation and decommissioning of the proposed pipeline on the MUZ and HPZ of the Oceanic Shoals marine park.
9. Impact and Risk Management	This section outlines the measures ConocoPhillips proposes to put in place to prevent or mitigate the impacts and risks to the MUZ and HPZ of the Oceanic Shoals marine park.

1.5 Description of the Applicant

ConocoPhillips Australia Barossa Pty Ltd (previously registered as ConocoPhillips Australia Exploration Pty Ltd until 17 May 2018) is the applicant. ConocoPhillips Australia Barossa Pty Ltd was the also the proponent for the Barossa Area Development OPP, and as Operator of NT/RL5 and NT/ RL6 (on behalf of the current co-venturers, SK E&S Australia Pty Ltd and Santos Offshore Pty Ltd), will most likely be the nominated titleholder (i.e. petroleum production and pipeline licensee) that submits subsequent EPs for implementation of activities undertaken as part of the Barossa Project, as required under Regulation 4 of the OPGGS (E) Regulations.

ConocoPhillips Company (United States) is the world's largest independent exploration and production company. Through various Australian registered company subsidiaries, ConocoPhillips Company undertakes exploration activities, and holds and operates assets in the Timor Sea, Northern Territory (NT), Western Australia (WA) and Queensland. ConocoPhillips has been operating in Australia and the Joint Petroleum Development Area since the mid-1990s. Its activities in Australia are currently managed, operated and administered through its Australian Business Units (BUs).

Australia Business Unit-West (ABU-W) oversees the operation of the Bayu-Undan gas condensate field in the Timor Sea, the DLNG facility in the NT and the 502 km gas export pipeline linking the two facilities. ABU- W has also been safely and successfully undertaking exploration and appraisal activities in its offshore acreage in both the Bonaparte Basin (the Barossa appraisal drilling campaign, 2017; the Caldita-Barossa 3D marine seismic survey, 2016; the Bonaparte Basin Barossa appraisal drilling campaign, 2013/14) and the Browse Basin (the Browse exploration drilling campaign, 2012-14).

Australia Business Unit-East (ABU-E) oversees the operation of the Australia Pacific LNG (APLNG) facilities located on Curtis Island in Queensland.

2 REGULATORY APPROVALS

2.1 Barossa Offshore Project Proposal

Environmental management of petroleum activities in Commonwealth waters, including the Oceanic Shoals marine park, is governed under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act) and subsidiary Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (OPGGS (E) Regulations). The OPGGS (E) Regulations are administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA). As an offshore project, the OPGGS (E) Regulations required ConocoPhillips to submit an Offshore Project Proposal (OPP) for the Barossa Project, which was submitted by ConocoPhillips to NOPSEMA in October 2016. Following publication, public comment and revision, the Barossa OPP was accepted by NOPSEMA in March 2018. NOPSEMA's acceptance was prior to the North Marine Parks Network Management Plan 2018 coming into force.

The Barossa OPP presented a pipeline corridor (shown in **Figure 1**), within which the gas export pipeline would be installed. The Barossa OPP identified the activities associated with the installation and operation of the pipeline and considered and risk assessed the potential impacts and risks from undertaking pipeline installation and operations activities within that corridor. The location of the final pipeline route within the corridor was subject to further field survey and engineering studies and subject to the requirements of the (then) yet to be endorsed North Marine Parks Network Management Plan. Subsequent field investigations and engineering studies have provided further information on potential pipeline routes both inside and outside of the HPZ. ConocoPhillips has undertaken a comparative assessment of these candidate pipeline routes and determined a proposed pipeline route. The proposed pipeline route is the subject of this application. Refer to **Section 6** for further information on the assessment of candidate pipeline routes.

A more detailed description of the Barossa Project can be found in the Offshore Project Proposal (Barossa OPP, accepted 13 March 2018). The Barossa OPP was accepted by NOPSEMA and is available on the NOPSEMA website at:

- https://www.nopsema.gov.au/environmental-management/assessment-process/offshore-project-proposals/offshore-project-proposals-public-comment/barossa-area-development-offshore-project-proposal/

The Barossa OPP, including links to additional information (e.g. factsheets and current concept image) is also available on the ConocoPhillips Australia website at:

- http://www.conocophillips.com.au/what-we-do/our-projects-activities/barossa-project/

2.2 Environment Plans

In addition to the OPP, all petroleum activities (including pipeline construction, operation and decommissioning) must have an accepted EP in place prior to commencing the activity. Environment Plans (EPs) are assessed and accepted (or refused) by NOPSEMA. NOPSEMA requires that EPs demonstrate that all environmental impacts and risks associated with a petroleum activity will be managed to a level that is 'As Low As Reasonably Practicable' (ALARP) and acceptable.

The EP(s) relating to the construction, operation and decommissioning of the pipeline will, along with the licence granted by the DNP and the OPP, constitute the key environmental regulatory approvals documents relating to the pipeline. ConocoPhillips will align the requirements and commitments within each of these documents to ensure consistency across environmental approvals relating to the pipeline.

Activities that may credibly result in the unplanned and accidental release of hydrocarbons to the environment are required to include an Oil Pollution Emergency Plan (OPEP) as part of the EP, which outlines the arrangements in place to respond to oil pollution events. The pipeline will only transport dry gas (i.e. no liquid-phase hydrocarbons will credibly be released from the pipeline), however vessel-related activities have the potential to release oil (e.g. fuel). ConocoPhillips will have in place OPEPs associated with each of the EPs relating to the pipeline. These OPEPs are expected to include ConocoPhillips' Operational and Scientific Monitoring Program (OSMP) arrangements for informing oil spill response operations and monitoring potential damage to, and subsequent recovery of, environmental sensitivities.

2.3 Other Regulatory Approvals

In addition to the environmental approvals, a range of other regulatory approvals have been obtained, or will be required, including:

- Safety cases for the operation of the pipeline and the FPSO (subject to acceptance by NOPSEMA),
- Petroleum titles and a pipeline licence (granted by the National Offshore Petroleum Titles Administrator (NOPTA)).

3 DESCRIPTION OF THE ACTIVITY

3.1 Location and Timing

Figure 1 shows the location of the proposed pipeline route within the MUZ and HPZ of the Oceanic Shoals marine park. **Table 2** presents the coordinates where the proposed pipeline route enters and exits the multiple use zone and HPZ of the Oceanic Shoals marine park.

Installation of the proposed pipeline is expected to commence as early as the second half of 2021 or as late as the second half of 2022, subject to vessel availability and other operational constraints. Pipelay operations, including survey, span correction and flood/gauge/testing operations, will take six to twelve months to complete in total. Installation of the specific pipeline sections within the marine park are expected to take in the order of one month to complete.

Operation of the proposed pipeline is expected to commence in the 4th Quarter of 2023 and continue for 25 years, until end of field life.

Table 2: Pipeline route coordinates within the multiple use zone and HPZ of the Oceanic Shoals marine park

Marine Park zone	Easting (m)	Northing (m)	Distance
Enters MUZ	640682.6	8857433.9	Approx. 30.0 km
Exits MUZ	639349.6	8827955.8	
Enters HPZ	620172.2	8783211.3	Approx. 31.5 km
Exits HPZ	607233.5	8755254.5	

3.2 Pipeline Installation Activities

3.2.1 Planned Installation Activities

The proposed pipeline will be laid using a continuous assembly pipe-welding installation method with sections of pipe gradually lowered to the seabed behind the pipelay vessel using an S-lay method. This method is commonly used in offshore pipeline installation in comparable water depths. Refer to Section 4.3.3.2 of the Barossa OPP for further detail on the pipeline installation method.

The type of pipelay vessel used will be dependent on the installation contractor, the availability of suitable pipelay vessels in the region and the pipeline parameters (such as wall thickness and concrete weight coating thickness). A dynamically positioned pipelay vessel is expected to be used for installation of the proposed pipeline within the Oceanic Shoals marine park, eliminating the requirement for anchoring during routine installation operations.

The primary method of maintaining pipeline stability on the seabed, where required, will be through a concrete weight coating of the pipeline. Where the required stability cannot be achieved through this means alone, several seabed intervention techniques may be used to stabilise the proposed pipeline.

The proposed pipeline route has been refined such that the occurrence of areas of significant seabed features has been minimised as much as practicable and seeks to avoid uneven seabed features wherever possible. However, some route rectification, specifically span correction to reduce the distance between seabed contact points (spanning beyond prescribed limits can create over stressing of the pipeline), may be required to mitigate rough terrain that cannot be feasibly avoided without incurring grossly disproportionate costs to the project, such as areas of irregular seabed topography.

A range of seabed intervention techniques (including pre-lay and post-lay span rectification) may be used (refer to Figure 4-13 of the Barossa OPP for example schematics of seabed intervention techniques). Rectification methods could include concrete mattresses, sand/grout bags, steel structures, rock bolting and gravity anchors. Current span assessments indicate a maximum of 27 span rectifications required within the HPZ of the Oceanic Shoals marine park respectively. Secondary stabilisation such as trenching/dredging or rock dumping is not required during installation. Rock dumping may be used as a post-lay span rectification technique within the MUZ only..

The specific requirements for seabed intervention techniques will depend on the extent of rectification, seabed properties, equipment availability and water depth at the locations for which the intervention is required. ConocoPhillips is currently undertaking further geophysical and geotechnical survey work along the proposed pipeline route, with additional engineering studies to follow to further understand potential engineering design constraints while incorporating environmental considerations.

Following installation of the proposed pipeline, the following activities will be undertaken:

- flooding, cleaning and gauging of the pipeline
- hydrostatic pressure testing of the pipeline with treated seawater to confirm the structural integrity and to identify any potential leaks (see Section 4.3.5.8 of the Barossa OPP for further details on hydrotesting)
- dewatering of flooding fluid at the Barossa field (see Section 4.3.5.8 of the Barossa OPP for further details on dewatering)
- conditioning of the pipeline in readiness for the introduction of gas. Options being considered include conditioning the pipeline with dry air, slugs of inhibited freshwater, mono-ethylene glycol (MEG) or triethylene glycol (TEG). This is followed by purging with nitrogen and line packing, which involves a pig train driven by nitrogen being run through the pipeline (if required)
- during pre-commissioning, commissioning and operation, pigging of the pipeline will be required for dewatering, cleaning, gauging and to assure the integrity of the pipeline.

None of the above post installation activities will be managed from within, or have the potential to result in impacts to, the Oceanic Shoals marine park.

3.2.2 Unplanned Installation Activities

While highly unlikely, an unplanned 'wet buckle' event may occur during installation should the pipeline become compromised and the pipeline rupture during pipelay, thereby causing flooding of the pipeline with seawater. In the event of a 'wet buckle' the seawater will need to be displaced from the pipeline with chemically-inhibited (e.g. corrosion and scale inhibitors and biocides) seawater to prevent internal corrosion, and then dewatered to facilitate continued installation of the pipeline.

3.3 Pipeline Operations

The pipeline will be operated continuously to transport gas from the FPSO facility to the DLNG facility. The pipeline inventory will consist of dry natural gas that has been processed from the reservoir fluids onboard the FPSO. The composition of the dry gas will be similar to the current dry gas in the Bayu-Undan to Darwin pipeline to meet the operating requirements of the DLNG facility. The composition of the dry natural gas is expected to be primarily methane (approximately 80%), with some carbon dioxide (CO2, approximately 6%) and 10% volatile organic compounds. There will only be a very small fraction of liquid hydrocarbons in the dry gas composition (approximately 0.05%).

3.3.1 Inspection, Maintenance and Repair Activities

Although the IMR philosophy for the proposed pipeline is yet to be finalised, it is expected to be similar to the IMR philosophy in place for the current Bayu-Undan to Darwin pipeline that the proposed pipeline will tie into, outlined below. Inspections of the proposed pipeline may occur more frequently in the first years of operations.

Inspections of the pipeline will generally involve a vessel travelling along the route of the pipeline using towed acoustic instruments. Inspections may involve using a Remotely Operated Vehicle (ROV) (tethered to the vessel via an umbilical) or an Autonomous Underwater Vehicle (AUV) (not tethered to a vessel), which would be launched and recovered from the vessel. In-line inspections (ILI) using 'smart pigs' may also be undertaken but would not have any impact on the Oceanic Shoals marine park.

Typically, vessels will conduct IMR activities for 5 - 60 days per year depending on the type of inspection. Events such as cyclones, known dropped/dragged objects that could affect the pipeline may also trigger inspections. Foreseeable IMR activities that may occur within, or impact on, the Oceanic Shoals marine park are outlined below.

Acoustic Survey

Surveys of the pipeline may be undertaken using sidescan sonar (SSS) or multibeam echo sound (MBES). These methods are used as a screening inspection prior to a detailed inspection (e.g. using a ROV/ AUV).

External Inspection

External inspections of the pipeline, e.g. general visual inspections (GVI), close visual inspections (CVI), or cathodic protection (CP) inspections, may be undertaken, typically using an ROV/ AUV. Visual inspections can be used to confirm the results of other inspection methods, and aid in the planning of maintenance and repair activities.

Inspection Intervals

After installation, baseline inspections, will be performed using ROV/ AUV and/or towed acoustic instruments (Tow Fish). Future inspection intervals follow a risk-based inspection (RBI) schedule as defined in **Table 3**.

Table 3: Indicative Risk-Based Inspection Program

Hazard Register	Risk Ranking	Inspection Nominal Frequency (yrs)	Inspection Method	Inspection Platform
Excessive environmental loading (extreme weather/cyclone)	Medium	Event based	MBES	Tow Fish Vessel ROV/ AUV
Excessive free spans resulting in movement and overstressing or fatigue	Medium	5Y	SSS / MBES GVI	Tow Fish ROV/ AUV
Excess marine growth	Medium	5Y	GVI CVI	ROV/ AUV
Seismic activity	Medium	Event based 5Y	SSS / MBES GVI	Tow Fish ROV/ AUV
Local overstress (overloading) due to pressure and thermal expansion	Medium	5Y	SSS / MBES GVI	Tow Fish ROV/ AUV
Materials or weld failure	Medium	5Y 10Y - ILI	GVI,	ROV/ AUV
External corrosion – Export pipeline	Medium	10Y (ILI) 5Y (CP)	CP	ROV/ AUV Trailing Wire
Early consumption of sacrificial anodes	Medium	5Y	CP	ROV/ AUV Trailing wire
Abrasion at crossing points	Medium	5Y 10Y (ILI)	GVI	ROV/ AUV
Fishing Activities – impact of pipeline by trawl boards	Medium	5Y 10Y (ILI)	SSS / MBES GVI	Tow Fish ROV/ AUV
Dropped Object from Passing Ship	Medium	5Y 10Y (ILI)	SSS / MBES GVI	Tow Fish ROV/ AUV

Non-urgent and Emergency Repairs

Anomalies identified from planned inspections and condition monitoring will be reviewed, risk assessed, and managed. The risk is mitigated either by repair, re-rating, upgrade or monitoring as appropriate.

Non-urgent and emergency repairs that could occur within the marine park during the operating life of the pipeline include:

- excavation of the pipeline to establish the extent of any damage and to provide access for repairs to be carried out. A jetting tool or air-lifting tool operated by a ROV or divers would be used to remove sand and rocks from around the pipeline and to excavate beneath the pipeline, as required
- removal of concrete weight coating (CWC) and corrosion coating by ROV, divers, or special designed CWC removal tools, using high pressure water jets or hydraulic saws
- pipeline cutting and pipe end preparation where the damaged section of the pipeline must be removed. This would be performed by ROV or divers using wire cutters and deburring tools. The damaged section of the pipeline would then be removed, and the pipeline repaired. This can be carried out by either ROV or divers, supported by an appropriate diving or ROV support vessel

- free span correction using rock dumping, sand or grout bags using an ROV or divers from a support vessel. Free span correction is expected to be highly localised. The proposed route has been selected to reduce the likelihood of span formation.

IMR Vessel Activities

IMR activities that may occur within the Oceanic Shoals marine park will be vessel based, infrequent (as per the risk-based inspection intervals in **Table 3**) and of relatively short duration (less than two to three months, more typically days). These activities will be preferentially undertaken from May to November, outside of cyclone season, to minimise or avoid operational disruptions. However, depending on maintenance requirements, maintenance activities could occur at any time during the year.

Vessels used for IMR activities are expected to range between approximately 15 m and 130 m in length. The vessel type and specifications will depend on availability and specific activity requirements. Typical activity vessels use a dynamic positioning (DP) system to allow manoeuvrability and to avoid anchoring when undertaking works due to the proximity of the pipeline. The vessel may be sourced locally or from an international location. Bunkering of the vessel may take place either at sea or in port. Vessels may use marine diesel or marine gas oil (MDO or MGO).

3.4 Decommissioning

The pipeline will be decommissioned at the end of its operating life when production from the Barossa offshore development area is no longer economically viable.

Considering that the project is in the early design phase and given the expected life of the project is approximately 25 years, it is premature to define a decommissioning strategy that aims to address environmental impacts in detail. While key decommissioning risks have been broadly addressed in the accepted Barossa OPP (refer Section 4.3.4 of the Barossa OPP), an activity-specific decommissioning EP will provide detailed information and descriptions of the nature and scale of the activity, potential environmental impacts and risks, and the control measures that will be implemented.

The overarching objective of decommissioning will be to ensure that activities do not cause unacceptable environmental impacts and are the most appropriate for the circumstances at the time at which decommissioning is undertaken. The project will be decommissioned in accordance with applicable legislation and taking into account industry learnings given the future decommissioning activities that are anticipated over the intervening period.

The current OPGGS Act (Section 572(3)) outlines that a titleholder must remove "…all structures that are, and all equipment and other property that is, neither used nor to be used in connection with the operations". However, this obligation is subject to other provisions of the Act and allows titleholders to make alternative arrangements for the treatment of equipment (e.g. partial removal or abandonment in situ) through the submission of an EP that includes decommissioning activities, provided that these arrangements ensure that impacts and risk are acceptable and ALARP (NOPSEMA 2015b).

Consideration may also be given to the requirements of the Environmental Protection (Sea Dumping) Act 1981, which is administered by the Department of the Environment and Energy (DoEE), or future contemporary legislative requirements at the time, should any equipment be proposed to be left on the seabed.

Prior to decommissioning, an EP will be submitted to NOPSEMA for acceptance after considering a range of decommissioning options for the pipeline infrastructure. The Decommissioning EP will present an ALARP assessment of the appropriate strategy at that time, and may include total removal, leave in-situ, or partial removal.

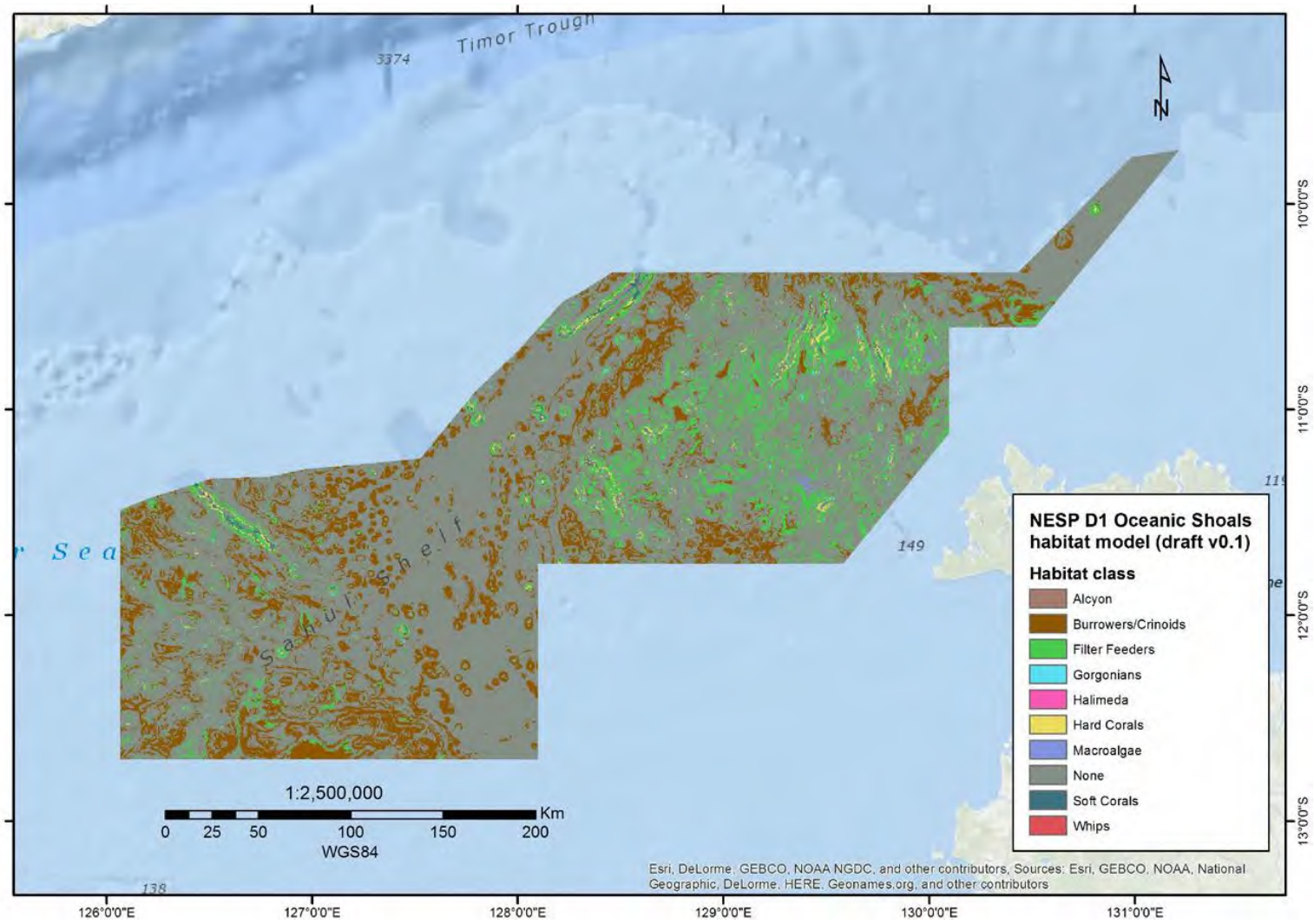
4 VALUES OF THE OCEANIC SHOALS MARINE PARK

The following summary described the environmental values of the Oceanic Shoals marine park within the MUZ and HPZ that may credibly be affected by planned activities associated with the construction, operation and decommissioning of the pipeline. The summary has been drawn from a review of the environmental values of the Oceanic Shoals marine park undertaken by ConocoPhillips.

4.1 Benthic Habitats

The Oceanic Shoals marine park contains a range of benthic habitats. Habitat modelling, developed by AIMS as part of the Australian National Environmental Science Programme (NESP) to determine the spatial heterogeneity of the benthic environment and key classes of organisms within the reserve, indicates a range of habitats occur within the Oceanic Shoals marine park, including bare sand (71%), burrowers / crinoids (18%) and filter feeders (9%), with remaining habitat classes comprising < 1% each (**Figure 2**with an interactive version available at https://northwestatlas.org/node/1710). The benthic habitats within the area of the pipeline corridor, under the alternative pipeline route alignments (**Figure 3**) comprise predominantly of burrowers/crinoids, filter feeders and abiotic areas that support no benthic habitat with some small areas of corals and macroalgae. More broadly within the marine park, areas of benthic habitat diversity occur distant to the west of the proposed pipeline route, and include hard corals, macroalgae, soft corals and gorgonians (**Figure 4**).

ConocoPhillips collaborated with AIMS to undertake additional survey work to provide targeted benthic habitat and fish biodiversity information for six key areas inside and outside the Oceanic Shoals marine park and HPZ (**Figure 5**). Using the same methods used to develop the NESP habitat model (described in Radford and Puotinen 2016), AIMS developed benthic habitat models and maps of the six sampled sites (refer **Appendix A**). These data were used to confirm our understanding that the majority of habitats present across the pipeline corridor within the marine park are filer feeders and abiotic areas that support no benthic habitat which are well represented elsewhere in the HPZ and wider marine park. The three sites where higher diversity was observed were all further into the marine park and included site 3, the national park zone, which included some hard coral, soft coral and *Halimeda*, site 2, which had sparse areas of macroalgae and site 1 which had hard coral, soft coral in addition to filter feeders.



(source: North West Atlas 2017)

Figure 2: Benthic habitat of the Oceanic Shoals marine park as modelled by AIMS (https://northwestatlas.org/node/1710)

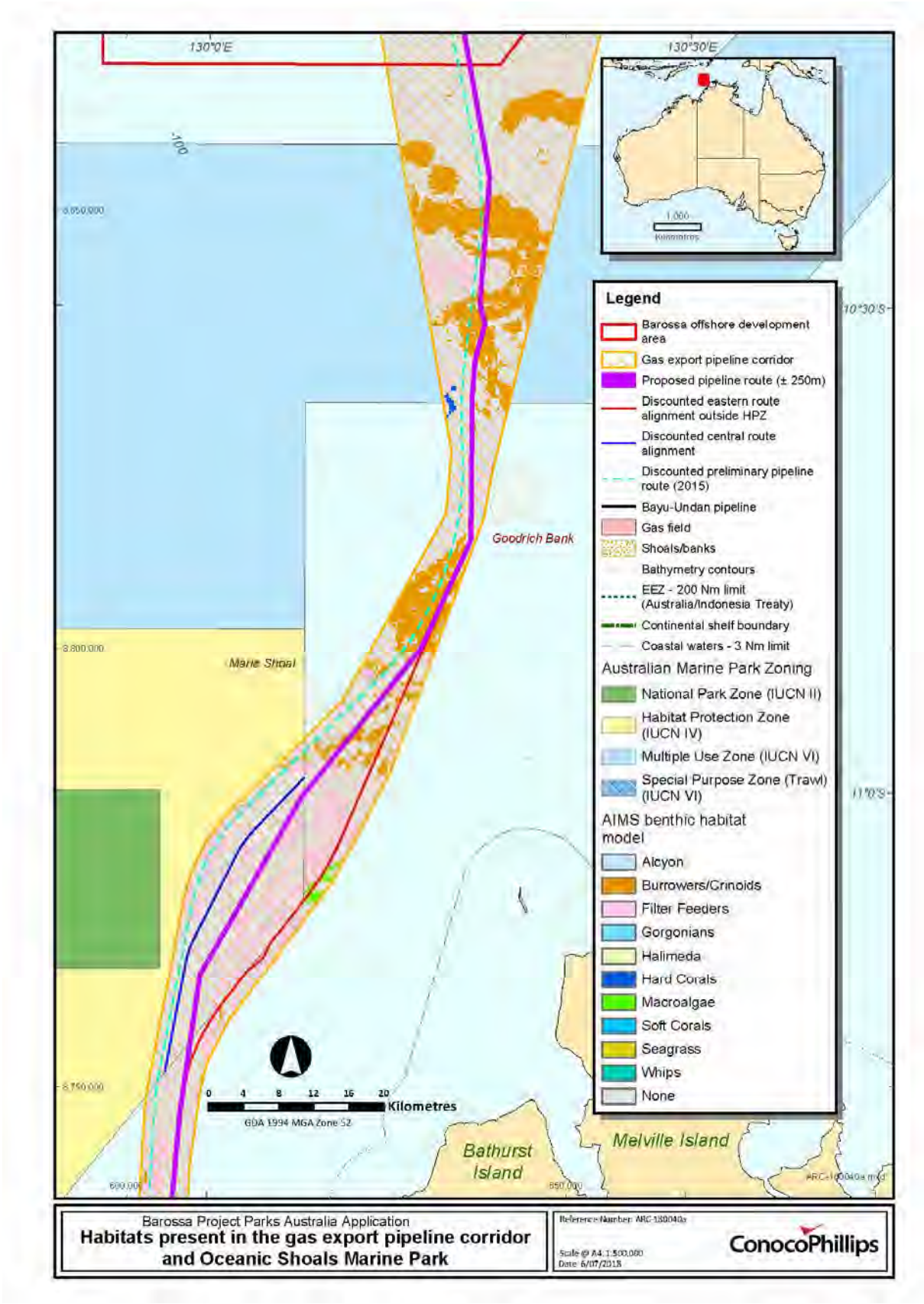


Figure 3: The benthic habitats present in relation to the location of the alternative pipeline route alignments

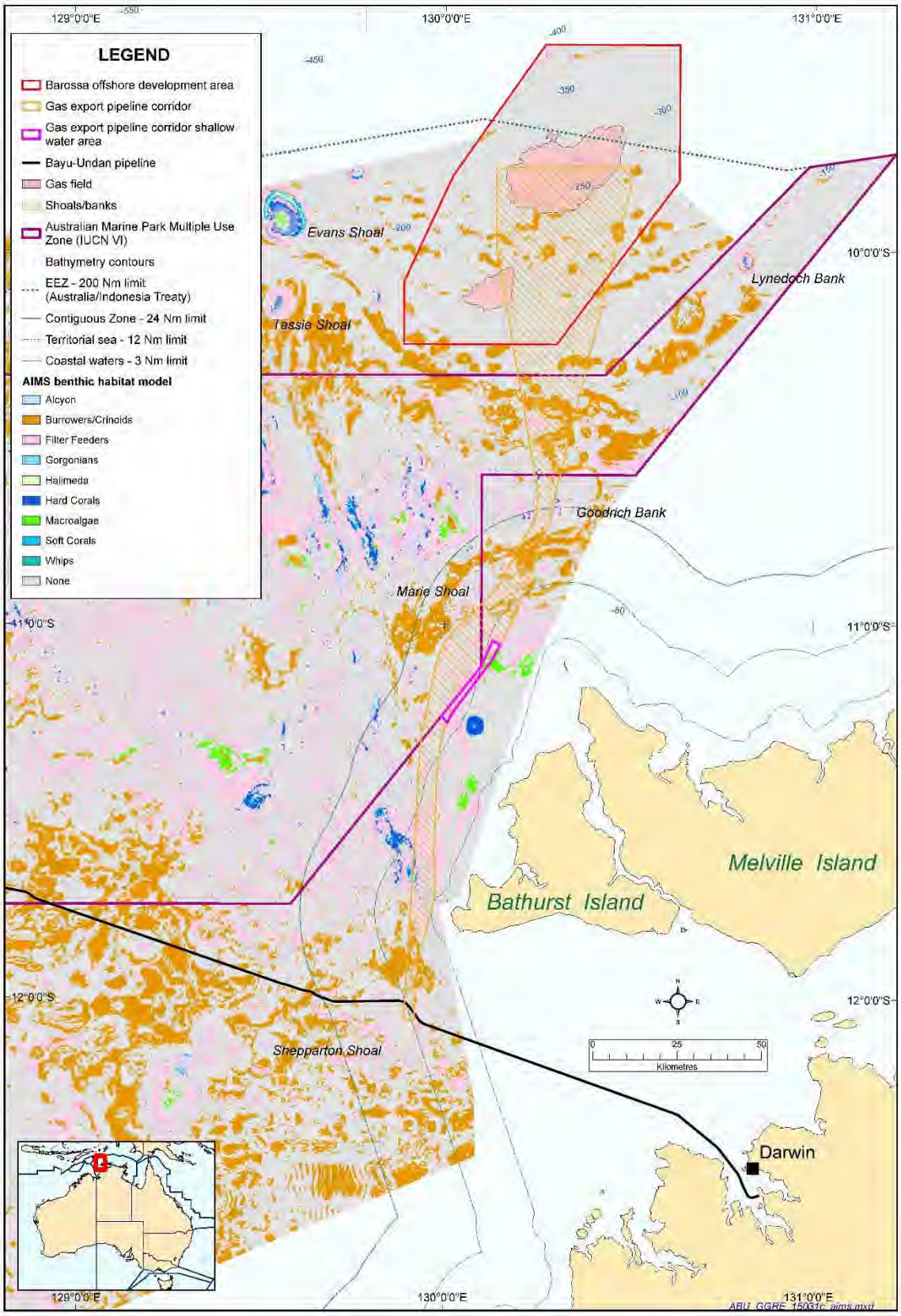


Figure 4: Benthic habitat of the Oceanic Shoals marine park and surrounds (extended model) as modelled by AIMS (presented as Figure 5-9 in the Barossa OPP)

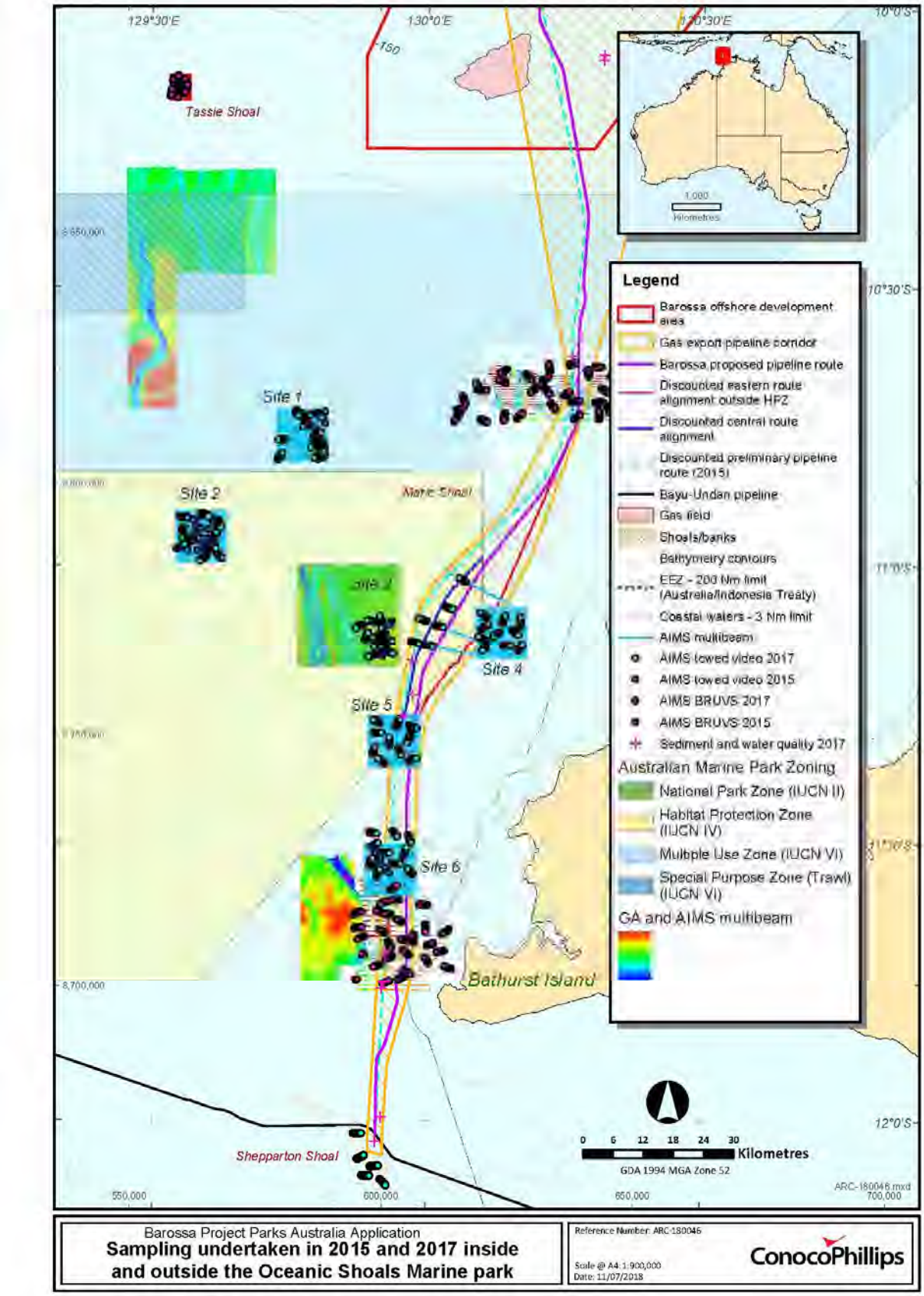


Figure 5: Sampling undertaken in 2015 and 2017, including towed video and fish sampling by AIMS inside and outside the Oceanic Shoals marine park

4.2 Key Ecological Features

KEFs are of importance for either a marine region's biodiversity or ecosystem function and integrity. Of the KEFs that occur within the marine park, the proposed pipeline route traverses the following two KEFS within the multiple use zone only (**Figure 6**):

- Carbonate bank and terrace system of the Van Diemen Rise
- Shelf break and slope of the Arafura Shelf

All candidate pipeline routes overlap both KEFs within the MUZ of the Oceanic Shoals marine park. The proposed pipeline route does not overlap any KEFs within the HPZ of the Oceanic Shoals marine park.

4.2.1 Carbonate Bank and Terrace System of the Van Diemen Rise

The bank and terrace system of the Van Diemen Rise covers approximately 31,278 km^2 and forms part of the larger system associated with the Sahul Banks to the north and Londonderry Rise to the east. The feature is characterised by carbonate terrace, banks, channels and valleys, with variability in water depth and substrate composition considered to contribute to the presence of unique ecosystems in the channels. The variability in water depth and substrate composition across the feature may contribute to the presence of unique ecosystems in the channels. The carbonate banks and shoals found within the Van Diemen Rise make up 80% of the banks and shoals, 79% of the channels and valleys, and 63% of the terrace found across the NMR. The carbonate banks and shoals rise from depths of 100–200 m to within 10–40 m of the sea surface (Anderson et al. 2011).

The feature provides habitat for a high diversity of sponges, soft corals and other sessile filter feeders; epifauna and infauna; and olive ridley turtles, sea snakes and sharks. Rich sponge gardens and octocorals have been identified on the eastern Joseph Bonaparte Gulf along the banks, ridges and some terraces. Plains and deep hole/valleys are characterised by scattered epifauna and infauna that include polychaetes and ascidians. Epibenthic communities such as the sponges found in the channels are likely to support first and second-order consumers. Pelagic fish such as mackerel, red snapper and a distinct gene pool of gold band snapper are found in the Van Diemen Rise.

This KEF is traversed by the proposed pipeline route within the MUZ of the Oceanic Shoals marine park, however the ecological values associated with this unique seafloor feature were not observed during the Barossa marine studies program, nor are these topographically distinct features evident from the bathymetry data derived from multiple geophysical and geotechnical undertaken across this area.

4.2.2 Shelf Break and Slope of the Arafura Shelf

The shelf break and slope of the Arafura Shelf covers approximately 10,844 km^2 and is characterised by continental slope and patch reefs and hard substrate pinnacles. The ecosystem processes of the shelf break/slope are largely unknown. However, the ITF and surface wind-driven circulation are expected to influence nutrients, pelagic dispersal and species, and biological productivity in the region.

Marine biota associated with the feature is largely of Timor–Indonesian Malay affinity. Records show at least 284 demersal fish species are found in the area, including commercially fished red snapper species (*Lutjanus erythropterus*). The area is also likely to support protected whale sharks, sharks and marine turtles.

This KEF is traversed by the proposed pipeline route within the MUZ of the Oceanic Shoals marine park, however the ecological values associated with this unique seafloor feature (i.e. patch reefs and hard substrate pinnacles) were not observed during the Barossa marine studies program, nor are these topographically distinct features evident from the bathymetry data derived from multiple geophysical and geotechnical undertaken across this area.

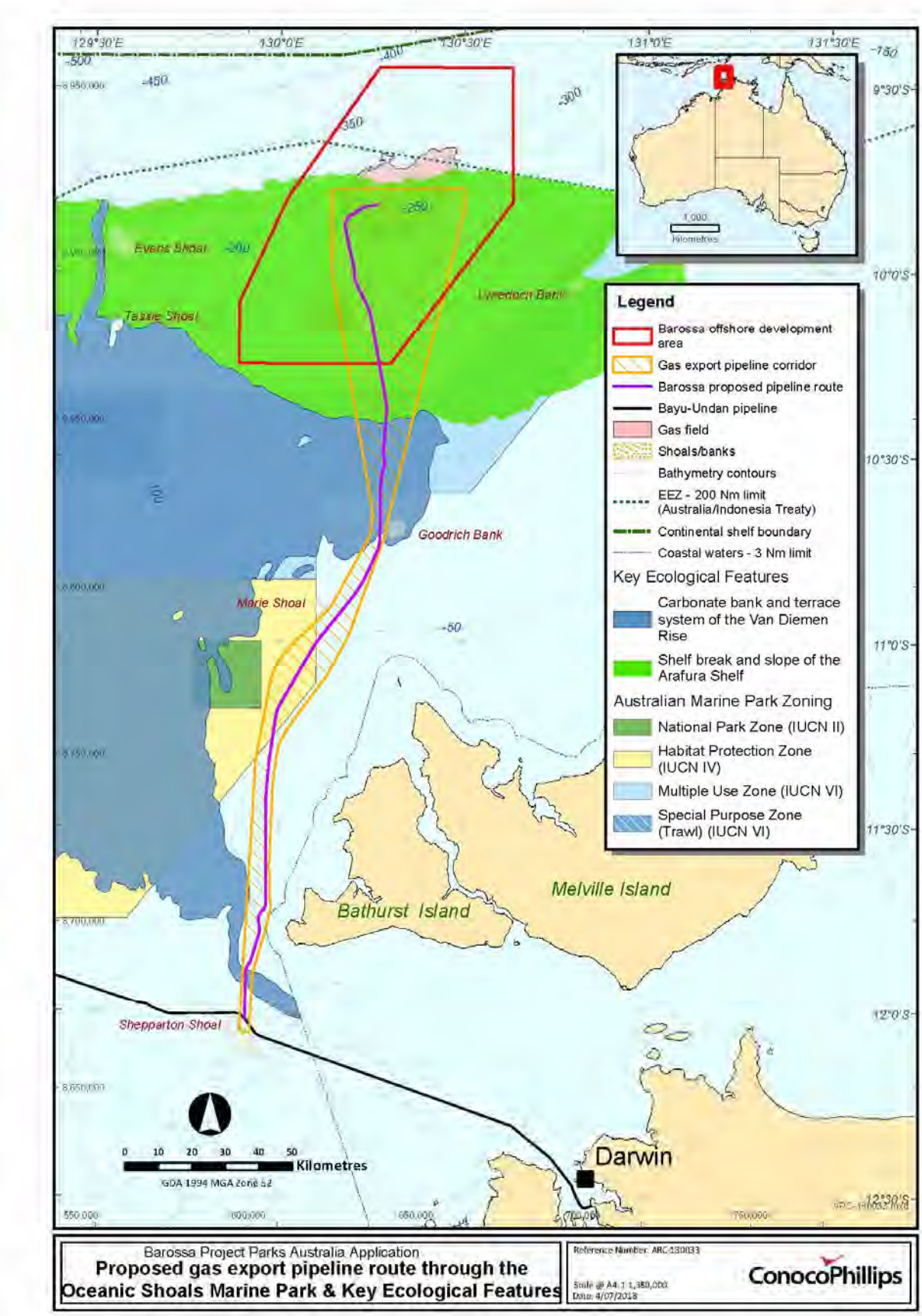


Figure 6: Location of the proposed gas export pipeline route in relation to the key ecological features present in the area

4.3 Marine Fauna of Conservation Significance

A search of the online EPBC Act Protected Matters database was conducted (dated 20th June, 2018, **Appendix B**) to identify threatened species and communities that may occur within the Oceanic Shoals marine park. The area used to generate the search tool report was defined using the boundaries of the MUZ and HPZ of the marine park and included a 1 km buffer (**Appendix B**). The search area is considered adequate to represent those threatened marine species that may occur or have habitat within the vicinity of the proposed pipeline route that could potentially be impacted by pipeline activities.

The EPBC Act Protected Matters database identified 20 species listed as threatened species and 38 species listed as migratory (**Table 4**).

Table 4: EPBC threatened and listed migratory marine species potentially occurring in the vicinity of the pipeline route within the Oceanic Shoals marine park

Scientific name	Common name	Threatened status	Listed as migratory	Comments
Cetaceans and Sirenians				
Balaenoptera borealis	Sei whale	Vulnerable	x	Unlikely to occur in areas of the Oceanic Shoals marine park credibly affected by the pipeline. Sei whales appear to prefer continental slope and oceanic waters. Sei whale calls were not detected during long-term acoustic monitoring undertaken as part of the Barossa Project baseline environmental studies program. No sei whale BIAs or critical habitat within the areas of the Oceanic Shoals marine park credibly affected by the pipeline.
Balaenoptera physalus	Fin whale	Vulnerable	x	Unlikely to occur in areas of the Oceanic Shoals marine park credibly affected by the pipeline. Like sei whales, fin whales appear to prefer continental slope and oceanic waters. Fin whale calls were not detected during long-term acoustic monitoring undertaken as part of the Barossa Project baseline environmental studies program. No fin whale BIAs or critical habitat within the areas of the Oceanic Shoals marine park credibly affected by the pipeline.
Balaenoptera musculus	Blue whale	Endangered	x	Seasonally present in Timor Sea during annual migrations between feeding areas in the Southern Ocean and breeding areas in the Indonesian Archipelago. Migratory routes thought to follow continental slope waters (based on tagging studies). Detected during annual migrations by the Barossa Project baseline environmental studies program. No blue whale BIAs or critical habitat within the areas of the Oceanic Shoals marine park credibly affected by the pipeline.
Megaptera novaeangliae	Humpback whale	Vulnerable	x	Rarely encountered in Timor Sea; northernmost extent of migration is typically south of the Oceanic Shoals marine park. Humpback whale calls were not detected during long-term acoustic monitoring undertaken as part of the Barossa Project baseline environmental studies program. No humpback whale BIAs or critical habitat within the areas of the Oceanic Shoals marine park credibly affected by the pipeline.

Scientific name	Common name	Threatened status	Listed as migratory	Comments
Balaenoptera edeni	Bryde's whale		x	Seasonally present in Timor Sea. Detected during acoustic monitoring program between January and October. May be present, although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Orcinus orca	Killer whale		x	May be present, although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Physeter macrocephalus	Sperm whale		x	May be present, although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Tursiops aduncus	Spotted bottlenose dolphin (Arafura/Timor Sea populations)		x	May be present, although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Sousa chinensis	Indo-Pacific humpback dolphin		x	May be present, although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Dugong dugon	Dugong		x	Unlikely to be present in the Oceanic Shoals marine park due to lack of seagrass habitat.
Marine reptiles				
Caretta	Loggerhead turtle	Endangered	x	May be present (particularly foraging around shallow banks and shoals), although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Chelonia mydas	Green turtle	Vulnerable	x	May be present (particularly foraging around shallow banks and shoals), although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Crocodylus porosus	Salt-water crocodile, estuarine crocodile		x	Unlikely to be present in the Oceanic Shoals marine park due to considerable distance from preferred habitats (estuaries, tidal creeks and inland waterways).
Dermochelys coriacea	Leatherback turtle	Endangered	x	May be present (particularly foraging around shallow banks and shoals), although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Eretmochelys imbricata	Hawksbill turtle	Vulnerable	x	May be present (particularly foraging around shallow banks and shoals), although the Oceanic Shoals marine park is not known to be significant habitat for this species.

Scientific name	Common name	Threatened status	Listed as migratory	Comments
Lepidochelys olivacea	Olive ridley turtle	Endangered	x	Likely be present (particularly foraging around shallow banks and shoals). Critical nesting and inter-nesting habitats occurs around Bathurst Island (beyond the boundary of the Oceanic Shoals marine park).
Natator depressus	Flatback turtle	Vulnerable	x	Likely be present (particularly foraging around shallow banks and shoals). Critical nesting and inter-nesting habitats occurs around Bathurst Island (beyond the boundary of the Oceanic Shoals marine park).
Sharks and rays				
Carcharodon carcharias	Great white shark	Vulnerable	x	Unlikely to be present due to distance from preferred habitat (temperate and sub-tropical waters) and preferred prey items of adult white sharks (e.g. pinnipeds).
Pristis clavata	Dwarf sawfish, Queensland sawfish	Vulnerable	x	May be present within the Oceanic Shoals marine park, but unlikely to occur in large numbers due to distance from preferred habitats (e.g. shallow coastal waters, estuaries and tidal creeks).
Pristis zijsron	Green sawfish	Vulnerable	x	May be present within the Oceanic Shoals marine park, but unlikely to occur in large numbers due to distance from preferred habitats (e.g. shallow coastal waters, estuaries and tidal creeks).
Pristis pristis	Largetooth sawfish	Vulnerable	x	May be present within the Oceanic Shoals marine park, but unlikely to occur in large numbers due to distance from preferred habitats (e.g. shallow coastal waters, estuaries and tidal creeks).
Glyphis glyphis	Speartooth shark	Critically Endangered		May be present within the Oceanic Shoals marine park, but unlikely to occur in large numbers due to distance from preferred habitats (e.g. shallow coastal waters, estuaries and tidal creeks).
Anoxypristis cuspidata	Narrow sawfish		x	May be present within the Oceanic Shoals marine park, but unlikely to occur in large numbers due to distance from preferred habitats (e.g. shallow coastal waters, estuaries and tidal creeks).
Glyphis garricki	Northern river shark	Endangered		May be present within the Oceanic Shoals marine park, but unlikely to occur in large numbers due to distance from preferred habitats (e.g. shallow coastal waters, estuaries and tidal creeks).
Isurus oxyrinchus	Shortfin mako, mako shark		x	May occur due to widespread suitable habitat (pelagic waters), although the Oceanic Shoals marine park is not known to be significant habitat for this species.

Scientific name	Common name	Threatened status	Listed as migratory	Comments
Isurus paucus	Longfin mako		x	May occur due to widespread suitable habitat (pelagic waters), although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Manta alfredi	Reef manta ray		x	May occur due to widespread suitable habitat (pelagic waters), although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Manta birostris	Giant manta ray		x	May occur due to widespread suitable habitat (pelagic waters), although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Fish				
Rhincodon typus	Whale shark	Vulnerable	x	May occur due to widespread suitable habitat (pelagic waters), although the Oceanic Shoals marine park is not known to be significant habitat for this species.
Birds (seabirds and migratory shorebirds)				
Actitis hypoleucos	Common sandpiper		x	Unlikely to utilize habitats within the Oceanic Shoals marine park due to the lack of intertidal or shoreline habitat. The species is migratory and may fly over the Oceanic Shoals marine park during seasonal migrations.
Calonectris leucomelas	Streaked shearwater		x	May occur throughout the Oceanic Shoals marine park, due to widespread pelagic foraging habitat. Regularly recorded throughout northern Australia throughout October to March.
Calidris acuminata	Sharp-tailed sandpiper		x	Unlikely to utilize habitats within the Oceanic Shoals marine park due to the lack of intertidal or shoreline habitat. The species is migratory and may fly over the Oceanic Shoals marine park during seasonal migrations.
Anous stolidus	Common Noddy		x	May occur throughout the Oceanic Shoals marine park, due to widespread pelagic foraging habitat. Considered unlikely to occur in large numbers, as nearest known breeding colony is off Gove Peninsula, several hundred kilometres from the Oceanic Shoals marine park.
Calidris canutus	Red knot	Endangered	x	Unlikely to utilize habitats within the Oceanic Shoals marine park due to the lack of intertidal or shoreline habitat. The species is migratory and may fly over the Oceanic Shoals marine park during seasonal migrations.

Scientific name	Common name	Threatened status	Listed as migratory	Comments
Calidris ferruginea	Curlew Sandpiper	Critically Endangered	x	Unlikely to utilize habitats within the Oceanic Shoals marine park due to the lack of intertidal or shoreline habitat. The species is migratory and may fly over the Oceanic Shoals marine park during seasonal migrations.
Calidris melantos	Pectoral sandpiper		x	Unlikely to utilize habitats within the Oceanic Shoals marine park due to the lack of intertidal or shoreline habitat. The species is migratory and may fly over the Oceanic Shoals marine park during seasonal migrations.
Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew	Critically Endangered	x	Unlikely to utilize habitats within the Oceanic Shoals marine park due to the lack of intertidal or shoreline habitat. The species is migratory and may fly over the Oceanic Shoals marine park during seasonal migrations.
Fregata ariel	Lesser Frigatebird, Least Frigatebird		x	May occur throughout the Oceanic Shoals marine park, due to widespread pelagic foraging habitat. Considered unlikely to occur in large numbers, as nearest known significant breeding colonies are on Adele Island, Cartier Island and Ashmore Reef, several hundred kilometres from the Oceanic Shoals marine park.
Fregata minor	Great Frigatebird, Greater Frigatebird		x	May occur throughout the Oceanic Shoals marine park, due to widespread pelagic foraging habitat. Considered unlikely to occur in large numbers, as nearest known significant breeding colonies are on Adele Island, Cartier Reef and Ashmore Reef, several hundred kilometres from the Oceanic Shoals marine park.
Pandion haliaetus	Osprey		x	Unlikely to utilize habitats within the Oceanic Shoals marine park due to the distance from preferred foraging habitat (nearshore coastal waters, tidal creeks and rivers).

4.4 Cultural Values

Schedule 2 of the North Marine Parks Network Management Plan (Director of National Parks, 2018) identified sea country as being valued for Indigenous cultural identity, health and wellbeing, noting that three is limited information regarding the cultural significance of the Oceanic Shoals marine park.

The Indigenous communities on the Tiwi Islands are known to engage in traditional fishing practices, with greatest effort near the larger aboriginal communities of Wurrumiyanga on Bathurst Island, and Pirlangimpi and Milikapiti on Melville Island (DPIF 2014). The Tiwi Islanders continue to undertake the customary harvesting of sea turtles and dugongs (Department of Environment and Water Resources 2006). Green turtles appear to be the main species harvested in the water while eggs of all turtle species are taken periodically. Dugongs are also taken occasionally. Traditional fishing activities are unlikely to encountered within the marine along the pipeline route given its distance offshore from the Tiwi islands.

ConocoPhillips has engaged with the Tiwi Land Council, as part of an ongoing process of stakeholder consultation (described further in **Section 5**), to further the understanding of indigenous knowledge of the sea country of the Tiwi Islands, as it relates to the pipeline.

4.5 Heritage Values

No international, Commonwealth or national heritage listings apply to the marine park, and ConocoPhillips is not aware of any listed heritage sites within the vicinity of the proposed pipeline route within the marine park.

4.6 Social and Economic Values

Schedule 2 of the North Marine Parks Network Management Plan (Director of National Parks, 2018) identifies commercial fishing and mining as important activities occurring within the Oceanic Shoals marine park.

4.6.1 Commercial fishing

The jurisdictions for two active fisheries overlap the MUZ and HPZ of the marine park, the Northern Prawn Fishery (NPF) and the Timor Reef Fishery (TRF). The NPF is a demersal trawl fishery, with trawling designated as an activity not allowed under the management plan for the Oceanic Shoals marine park except for within the Special Purpose Zone (trawl) distant from the proposed pipeline route. Therefore, impacts to the NPF are unlikely. No concerns have been raised during the consultation undertaken with the NPF as part of the Barossa OPP development and assessment process.

The TRF is recognised as primarily a dropline fishery, a fishing method that is an allowable activity with authorisation, within the MUZ and HPZ of the marine park. However, stakeholder consultation undertaken by ConocoPhillips with the Northern Territory (NT) Department of Primary Industry and Fisheries (DPIF) and the NT Seafood Council (NTSC), confirmed there are only two active fishers currently operating in the fishery. One fisher is using traps to target goldband snapper in water depths between 80 m–150 m (maximum of 250 m) along reef fronts and on sand flats located near pinnacles (distant from the proposed pipeline route through the multiple use zone of the marine park). Trap fishing is an allowable activity, with authorisation, only within the multiple use zone of the marine park. The other active licence holder also uses traps but is currently trialling the use of trawl gear as part of a gear trial.

4.6.2 *Mining / Offshore Petroleum Exploration and Operations*

The ConocoPhillips operated Bayu-Undan to Darwin pipeline traverses the southern portion of the Oceanic Shoals marine park (**Figure 1**), distant from the proposed pipeline route section within the marine park. The gas export pipeline transporting gas between the Ichthys field and the processing facilities at Bladin Point, Darwin, also passes to the south; this pipeline is operated by INPEX. It is possible that future oil and gas exploration activities may be conducted within the marine park, however these are unlikely to be affected by the presence of the proposed pipeline or pipeline activities and will be subject to assessment in their own right.

5 CONSULTATION

ConocoPhillips has undertaken, and continue to undertake, extensive consultation in support of the Barossa Project. Consultation to date includes:

- Initial consultation undertaken whilst preparing the Barossa OPP for submission (refer to Section 8 and Appendix R of the Barossa OPP);
- Consultation when the Barossa OPP was published for an eight week public comment period;
- Responding to comments made during the public comment period on the Barossa OPP; and
- Consultation with Parks Australia during the development of the licence application.

The consultation as part of the Barossa OPP has included engagement with the Tiwi Island Land Council to understand its views on the proposed development and to determine if it had any concerns with the project activities given the proximity of the pipeline corridor, and with the Northern Land Council to make them aware of the Project and the opportunity to comment during the public comment period. Neither group raised any concerns with the Project, nor provided any comment during the public comment period (or since).

In addition, ConocoPhillips has been actively engaged with the fishing industry, regulators and research sectors in the Northern Territory through its coordinating the Bonaparte Fish Group since October 2013. Conceived as part of the baseline studies and stakeholder engagement activities, the Bonaparte Fish Group aims to:

- identify opportunities for collaborative research
- increase baseline knowledge in the area to inform environmental approvals
- collect data and information to inform fishery management strategies
- further develop stakeholder engagement.

ConocoPhillips' interest in contributing to the Bonaparte Fish Group includes its desire to:

- collaboratively collect data and information that can be used to inform management strategies that will ensure the long-term sustainability of the fisheries
- support access to the latest information and data relating to fish distributions and stock structure for baseline data to inform environmental approvals documents and contribute to adaptive management should any issues associated with project operations be identified
- continue to work collaboratively with other marine users in the Bonaparte region and maintain strong relationships across the industries.

Future consultation includes:

- Activity-specific consultation required under the OPGGS (E) Regulations for pipeline installation, operation and decommissioning.

As part of the EP development, ConocoPhillips will undertake consultation with all relevant stakeholders to provide details of the project, its potential environmental impacts and risks and the mitigations and controls that will be implemented to reduce those risks to as low as reasonably practicable and acceptable levels.

5.1 Consultation Outcomes in Relation to Pipeline Route Selection

One stakeholder, Parks Australia, made a comment during the public comment period in relation to the Oceanic Shoals marine park. Parks Australia raised the following points:

- Further studies are important to provide a greater level of confidence as to whether construction of the pipeline poses an acceptable level of impact on marine park values to achieve a management outcome that demonstrably minimises any impact to marine park values.

- An environmental performance outcome (EPO) should be included in the OPP that requires further studies to examine the representativeness of species and species assemblages found within the section of the pipeline corridor that intersects the marine park, with other areas of the marine park.

- The Director of National Parks is to be considered as a relevant person for the purposes of consultation under the Environment Regulations and is to be consulted by titleholders in the preparation of environment plans where a proposed activity is within or could impact a marine park.

ConocoPhillips acknowledged and responded to each of the points raised by Parks Australia, and amended the Barossa OPP (which was subsequently accepted by NOPSEMA) to include the following:

- Further description of the benthic habitats within the pipeline corridor overlapping the Oceanic Shoals marine park;

- An EPO intended to reduce potential impacts to representative biological values of the Oceanic Shoals marine park by undertaking further studies (these studies were undertaken in collaboration with AIMS and have now been completed and have informed this application); and

- A commitment to consult with the Director of National Parks during preparation and implementation of EPs for petroleum activities within the scope of the Barossa OPP that may credibly impact upon the values of the Oceanic Shoals marine park.

Refer to Appendix R of the Barossa OPP for details of ConocoPhillips' response to Parks Australia.

5.2 Future Consultation Commitments

ConocoPhillips continues to provide opportunities for stakeholders to provide comment on the Barossa OPP through the ConocoPhillips Australia website and community hotline. ConocoPhillips is also committed to undertaking consultation in relation to all petroleum activities undertaken within the scope of the Barossa OPP, including installation, operation and decommissioning of the pipeline. The OPGGS (E) Regulations outline the requirements to consult with relevant persons regarding how their functions, interests and activities may be affected by petroleum activities. ConocoPhillips acknowledges that the Director of National Parks is a relevant person for the installation, operation and decommissioning of the pipeline within the Oceanic Shoals marine park. ConocoPhillips will consult with the Director of National Parks, and all other relevant persons, during the development of EPs for activities that may affect the values of the Oceanic Shoals marine park.

6 PIPELINE ROUTE ASSESSMENT

6.1 Preliminary Pipeline Route Identification

Prior to undertaking the feasibility assessment for this licence application, ConocoPhillips identified several preliminary pipeline routes following a preliminary review of available information on the bathymetry, seabed topography and underlying geology relevant to each route. This was done during the early design phases of the Barossa Project and included a range of contingencies to account for uncertainty around the requirements of the Project. Further engineering studies were undertaken to investigate technical feasibility and a preliminary pipeline route, which included passing through the then zoned multiple use zone (now the HPZ) of the Oceanic Shoals marine park to remain in deeper water, was identified and surveyed in November 2015.

In September 2016, the reports prepared as part of the independent Commonwealth Marine Reserves Review were released and recommended that part of the Oceanic Shoals marine park be re-zoned as a habitat protection zone. In response, ConocoPhillips defined and presented a broad pipeline corridor in the Barossa OPP that allowed public comment on and assessment of the acceptability of installing and operating the pipeline within this corridor. The pipeline corridor in the Barossa OPP that was published for public comment allowed for a number of the preliminary pipeline route alignments, both within and outside the Oceanic Shoals marine park which were all subject to further survey and engineering studies to determine their technical feasibility (**Figure 7**).

- Within the Oceanic Shoals marine park:
    - A western route alignment that intersected the MUZ and HPZ of the Oceanic Shoals marine park, tying into the existing Bayu-Undan to Darwin pipeline at an alternate western tie-in point.
    - Three central route alignments (including the original preliminary pipeline route) within the Oceanic Shoals marine park that intersect the MUZ and HPZ of the Oceanic Shoals marine park, tying into the existing Bayu-Undan to Darwin pipeline at the preferred eastern tie-in location.
- Outside of the Oceanic Shoals marine park HPZ:
    - An eastern route alignment, i.e. crossing the shallow water area located between the marine park and the Tiwi Islands.

Note: all alternative pipeline route alignments would still traverse the multiple use zone in the north-east of the marine park.

In order to progress pipeline route selection and to meet commitments made in the Barossa OPP, additional bathymetric, geophysical and environmental surveys were undertaken on the alternative route alignments (August 2017). Using the data collected, further engineering and design work was progressed and used to inform the revised pipeline corridor that was assessed and accepted in the Barossa OPP. AS a result of this, the original preliminary pipeline route (most westerly route within the marine park HPZ, represented by the blue dashed line in **Figure 7**) was discounted as the two other central route alignments were considered just as feasible and would reduce the ingress of the pipeline route within the marine park HPZ. The accepted pipeline corridor only allows for further consideration of two central route alignments within the marine park HPZ (subject to authorisation from the Director of National Parks), or an eastern route alignment outside the marine park HPZ through the shallow water area (if a licence from the Director of National Parks is not granted) (**Figure 8**).

Based on the additional work, the previously considered routes to the alternative western tie-in point on the Bayu - Undan pipeline (the western route alignment within the marine park, **Figure 7**) have been ruled out as not being technically feasible due to the presence of significant seabed features and highly irregular seabed topography along the southern section of that alignment that could not be avoided. Dropping this western route alignment also had the advantage of minimising the length of pipeline route that overlaps the Oceanic Shoals marine park and allowed for a much narrower pipeline corridor to be defined in the Barossa OPP.

Consequently, the following candidate pipeline routes are the subject of the feasibility and practicability assessment in this licence application (**Figure 8**):

- Within the Oceanic Shoals marine park:
    - Two central route alignments (excluding the original preliminary pipeline route) within the Oceanic Shoals marine park that intersect the MUZ and HPZ of the Oceanic Shoals marine park, tying into the existing Bayu-Undan to Darwin pipeline at the preferred eastern tie-in location.
- Outside of the Oceanic Shoals marine park HPZ:
    - An eastern route alignment, i.e. crossing the shallow water area located between the marine park and the Tiwi Islands.

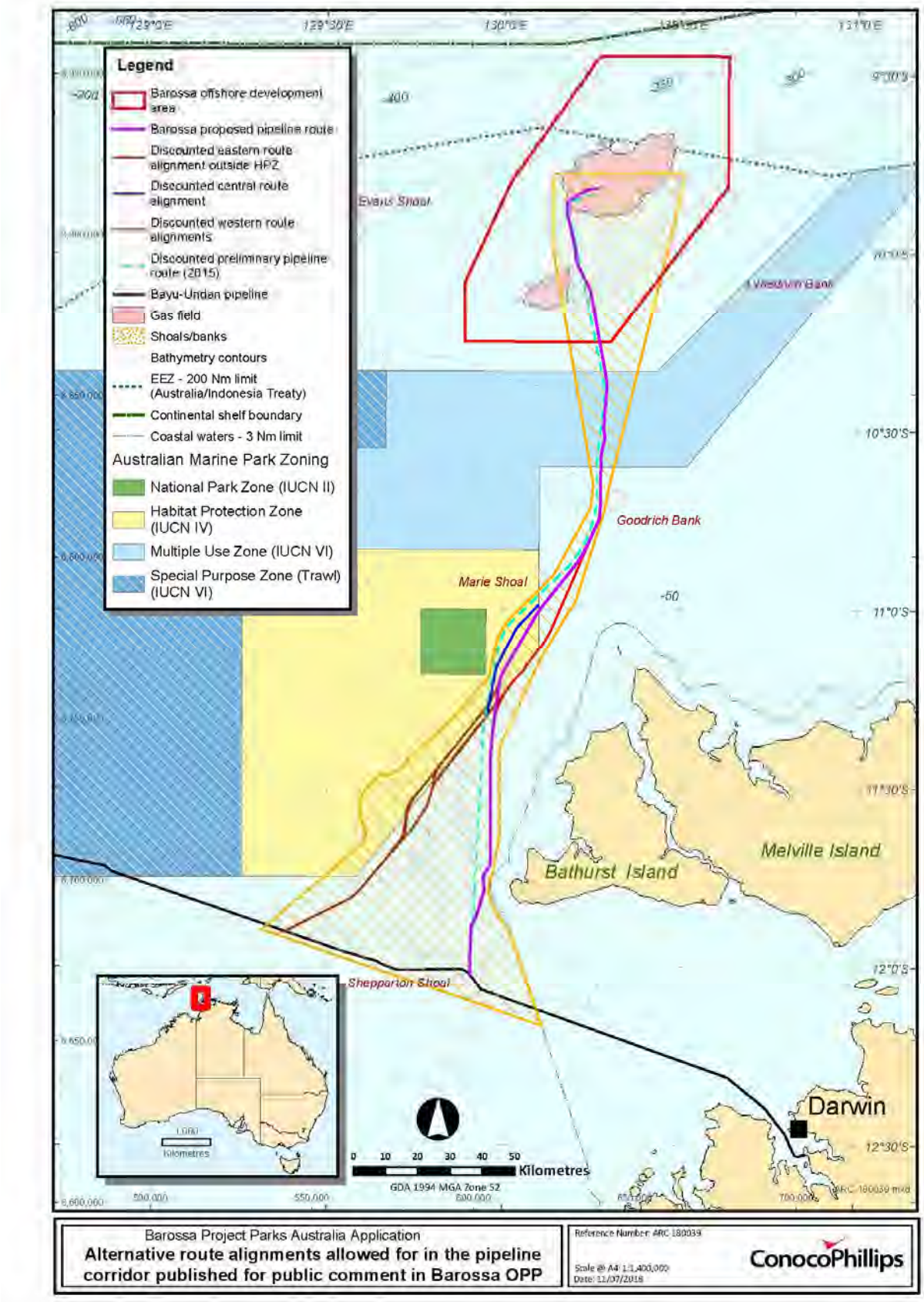


Figure 7: The alternative pipeline route alignments allowed for in the pipeline corridor presented in the Barossa OPP that was published for public comment (routes were subsequently surveyed in August 2017 and evaluated)

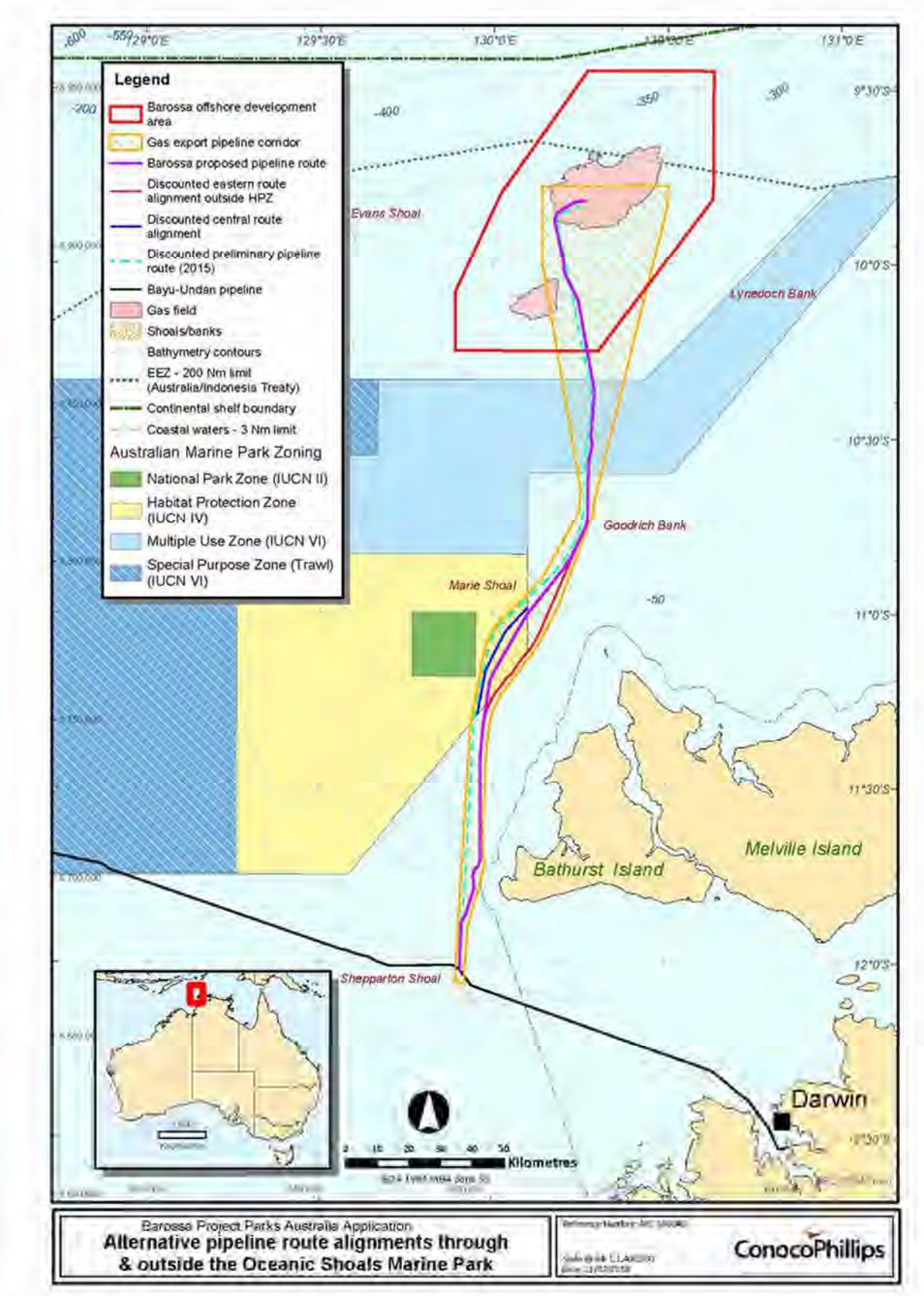


Figure 8: The alternative pipeline route alignments allowed for based on the pipeline corridor presented in the accepted Barossa OPP

6.2 Feasibility and Practicability Assessment Overview

For the purposes of this licence application, each of the candidate routes identified in **Section 6.1** have been assessed through a feasibility and practicability framework described below, to determine the proposed pipeline route that is the subject of this application:

- Feasibility: candidate pipeline routes within and outside the HPZ were identified based on available information. Each of the candidate routes was assessed further to determine if they were feasible (i.e. able to be constructed using available technologies and constraints of the Barossa Project), with some candidate routes eliminated from further consideration during this process. The candidate routes that were considered feasible were then assessed further to determine practicability. Refer to the discussion on feasibility (**Section 6.3**) below for further information.

- Practicability: the candidate pipeline routes that were considered feasible were each subject to a multi-criteria assessment. This assessment considered a range of attributes of each pipeline route, which were then weighted and combined to facilitate comparisons between the candidate routes. The results of the multi-criteria practicability assessment were used to select the proposed pipeline route. Refer to the discussion on practicability (**Section 6.4**) below for further information.

- Proposed: once a proposed route has been determined, the route is then referred to as the proposed route and is the route that is the subject to this licence application. The process has been continuous, as shown in **Figure 9**.

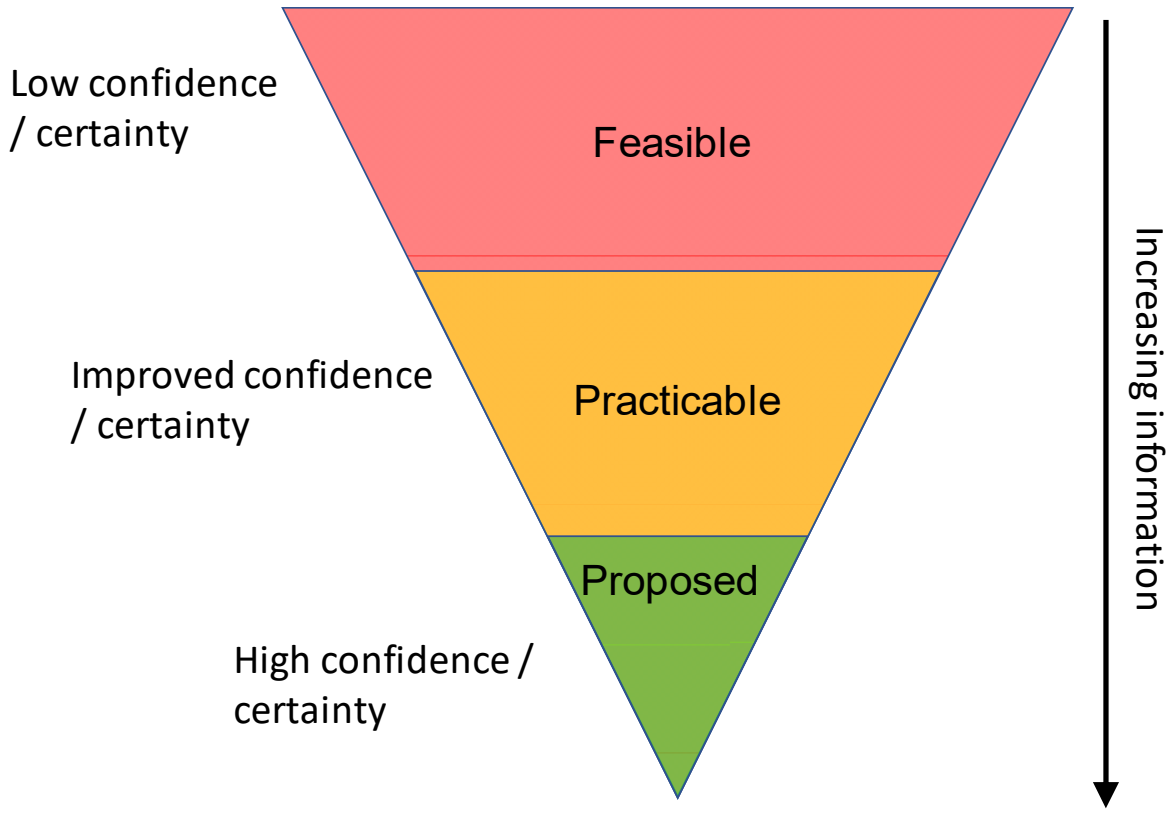


Figure 9: Conceptual diagram outlining the pipeline route selection process

Note that all feasible routes identified must pass through the MUZ and essentially follow the same path, hence there is no comparison between routes for this part of the Oceanic Shoals marine park (i.e. there is only one feasible route in the MUZ, hence no comparisons between routes is possible). As such, the assessment presented is largely based on a comparison between within the eastern margin of the HPZ and adjacent to the eastern margin of the HPZ.

6.3 Feasibility Assessment

The outcome of the feasibility assessment (detailed below) determined that the technically feasible candidate routes were the central route alignment that represents the minimal ingress into the HPZ and the eastern route alignment outside of the HPZ.

The feasibility assessment of candidate pipeline routes was based on asking this question:

"Can this pipeline route be constructed, operated and decommissioned within the limitations of available technologies and the requirements of the Barossa Project?"

The feasibility assessment of pipeline routes did not consider the availability of resources (financial, schedule, materials, equipment, labour etc.) required to design and construct the pipeline along a given route. The feasibility assessment is intended to eliminate infeasible routes from further, detailed consideration (i.e. the practicability assessment in **Section 6.4**).

6.3.1 Eastern route alignment through the shallow water area outside of the marine park HPZ

Although the eastern route alignment through the shallow water area to the east of the marine park HPZ was allowed for in the Barossa OPP (through the assessment of the pipeline corridor), it has always been considered a technically challenged alignment. Possible routing alignments outside the HPZ are constrained by two critical aspects that cannot be overcome:

- the presence of an internesting BIA for olive ridley turtles, which ConocoPhillips has committed to avoiding for the duration of the project, including pipelay installation and operations activities (See Section 6 of the Barossa OPP)
- water depths in the shallow water area to the east of the marine park HPZ areas, are as shallow as 5 m restricting vessel movements, making pipeline installation impractical.

Consequently, based on all available information, given the location of the Barossa offshore development area in relation to both the size and shape of the Oceanic Shoals marine park and the fact that the Barossa Area Development is only commercially viable if the gas is transported to and processed at the existing DLNG facility, the only route alignment outside of the HPZ that is considered feasible, is located approximately 20 to 30 m east of the HPZ for the majority of this alignment.

6.3.2 Central route alignments within the Oceanic Shoals marine park

Engineering and design activities have focussed on the two central route alignments within the Oceanic Shoals marine park HPZ (the proposed route and the discounted central route alignment, **Figure 8**). Seabed conditions and expected span rectifications were considered to be similar for both of the routes, with the proposed route being selected as it achieves the following benefits:

- minimises the area that the pipeline route needs to overlap the Oceanic Shoals marine park HPZ
- minimises the amount of seabed installation required and eliminates secondary stabilisation requirements for pipeline installation (which would be required to install the pipeline along the eastern route alignment located in the shallow water area outside the marine park HPZ)

- minimises, as much as practicable, the installation of the pipeline over areas of seabed that are associated with the seafloor features/values of the shelf break and slope of the Arafura Shelf and carbonate bank and terrace system of the Van Diemen Rise KEFs
- the proposed pipeline route will reduce inspection, maintenance and repair (IMR) requirements during operations, compared to all other alternative route alignments considered, due to the reduced route length and smoother seabed profile (less spans) as it represents the shortest length of pipeline required and minimises the amount of seabed installation and stabilisation required, it thus requires the shortest installation campaign, thereby minimising the time installation activities will overlap with internesting habitat critical to the survival for marine turtles.

6.3.3 Conclusion

These additional studies have confirmed that the proposed route alignment within the HPZ and the eastern route alignment outside of the HPZ are the only technically feasible candidate pipeline routes.

6.4 Practicability Assessment

The candidate routes identified as being feasible were considered further during the practicability assessment. Unlike the feasibility assessment, the practicability assessment considers the resources (financial, schedule, materials, equipment, labour etc.) required to construct, operate and decommission the two feasible candidate pipeline routes.

ConocoPhillips has based the practicability assessment process on the existing Best Practicable Environmental Option (BPEO) framework. The BPEO framework is intended to assist in decision-making in projects potentially affecting the environment. The process was an outcome of a royal commission into environmental pollution in the United Kingdom and has been used in a regulatory context in this jurisdiction. On review of relevant and comparable frameworks in other jurisdictions, the BPEO framework provides a well-established, robust and objective approach to rationalising a practicability assessment of options to achieve an acceptable environmental outcome. The key steps in a BPEO assessment comprise:

- Define the objectives (**Section 6.4.1**);
- Generate options (**Section 6.4.2**);
- Evaluate options (**Section 6.4.3**);
- Summarise and present evaluation (**Section 6.4.3**);
- Select and review the BPEO (**Section 6.4.3**); and
- Conclusion (**Section 6.5**).

The relevant information and decision-making processes for each of these steps is documented in the following sections.

6.4.1 Objectives

The objective of the practicability assessment is to minimise the impacts and risks to the environmental values that the HPZ of the Oceanic Shoals marine park is intended to protect, while also considering potential impacts to the marine environment outside of the marine park.

No objective in relation to the candidate pipeline routes within the MUZ of the Oceanic Shoals marine park has been set. As all candidate pipelines use the same route and construction methodology, there is only one candidate route through this part of the park. No assessment of options within the MUZ is possible.

6.4.2 Options Generation

The options for the practicability assessment are the feasible candidate routes determined during the feasibility assessment. The options comprise the proposed and eastern routes shown in **Figure 8**. Refer to the feasibility assessment discussion above (**Section 6.3**) for further information.

6.4.3 Options Evaluation and Selection

ConocoPhillips identified a series of five criteria by which each of the feasible candidate pipeline routes was assessed. These were derived from the Comparative Assessment (CA) developed by the oil and gas industry in the North Sea. The process is typically used to compare decommissioning options; however, it can be applied in other situations where the relative merits of mutually exclusive options are being assessed. The criteria are:

- Environmental
- Societal
- Safety
- Technical
- Economic

The comparative assessments for the proposed alignment and eastern alignment routes are presented below in **Sections 6.4.3.1** to **6.4.3.5**.

Environmental is the most important of these criteria for the licence application. To reflect this importance, ConocoPhillips has applied a weighting to each of the criteria based on their relative ranking. The weighting was based on the rank order of the criteria, using the rank order centroid method[4]. This method has been shown to perform better than equal weighting, or other rank order-based weighting methods (Sureeyatanapas 2016). The outcomes of the assessment are summarised in **Table 5**.

Table 5: Comparative assessment outcomes and Rank Order Centroid (ROC) weighted averages for proposed alignment and eastern alignment routes. Relative rankings for each criterion are provided in brackets; note safety and technical are ranked equally.

Candidate Route	Criteria					
	Environmental (1)	Societal (2)	Safety (3)	Technical (3)	Economic (4)	ROC Weighted average
Proposed alignment route	4 (2.1)	3 (0.8)	3.5 (0.5)	5 (0.7)	5 (0.3)	4.1 (4.4)
Eastern alignment route	3 (1.6)	4 (1.1)	3 (0.4)	3 (0.4)	3 (0.2)	3.2 (3.7)

[4] The ROC weightings (W_n) was determined using the equation:

$$W_n = \frac{1}{N} \times \sum_{k=n}^{N} \frac{1}{r_k}$$

where the set of ranks is n = 1, 2, …, N. Ranking weightings derived for this assessment are 1st: 0.52, 2nd: 0.27, 3rd: 0.15, 4th: 0.06.

6.4.3.1 Environmental

Benthic Habitat

Both the proposed and eastern pipeline routes will modify benthic habitats below the pipeline. Once installed, the pipeline will form hard substrate. Over time, sessile benthic organisms that require hard substrate for attachment, such as sponges and hard corals, will settle and grow on the pipeline where it is exposed, creating an artificial reef.

Based on benthic habitat modelling undertaken by the Australian Institute of Marine Science (AIMS) in support of the Barossa OPP, benthic habitats below the proposed and eastern pipeline routes are shown in

Figure 10. These data indicate that benthic habitats beneath the eastern route are likely to contain significantly greater filter feeder, burrower / crinoid and macroalgal habitat than the proposed route. The habitat modelling by AIMS (Heyward et al. 2017) indicates the proposed route is predominantly (88%) bare sediment. This benthic habitat is not particularly sensitive and is very broadly represented in the region.

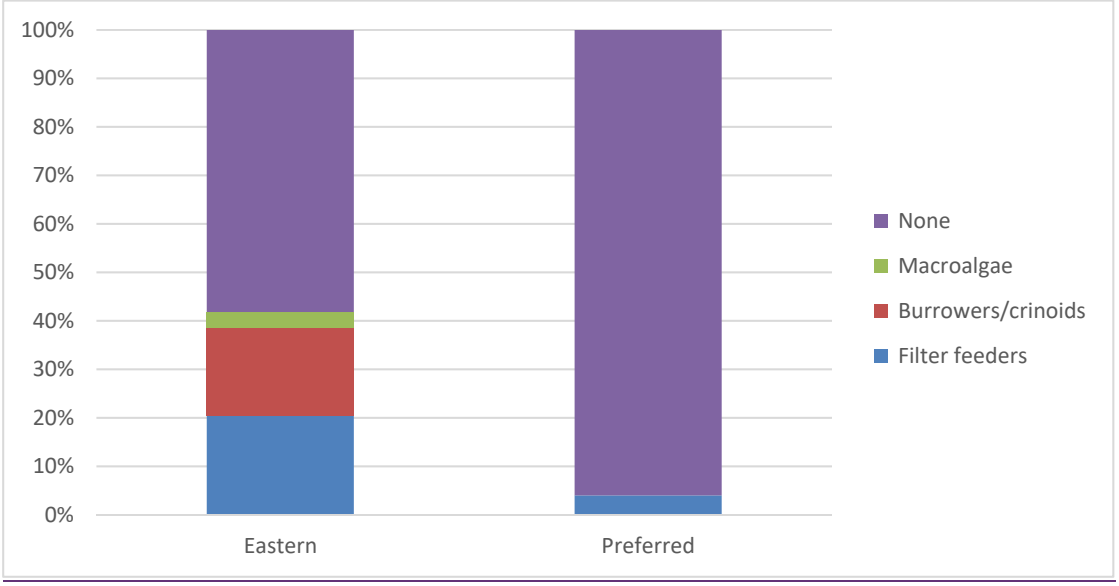


Figure 10: Cumulative percentages of modelled benthic habitat classes for the proposed and eastern pipeline routes (based on benthic habitat modelling by Heyward et al. 2017)

In response to comments received from Parks Australia during the Barossa OPP public comment period, ConocoPhillips included an environmental performance outcome (EPO) in the OPP that stated:

"To minimise impact to representative species, assemblages and associated values of the Oceanic Shoals marine park, further studies will be used to inform final pipeline routing so the pipeline will not be installed on those representative species, assemblages and associated values if they have not been found in the marine park outside the pipeline corridor."

The collaboration with AIMS (described in **Section 4.1**) to undertake additional survey work to provide targeted benthic habitat and fish biodiversity information for six key areas associated with the pipeline corridor (potential pipeline routes) inside and outside the Oceanic Shoals marine park and HPZ was undertaken to address this commitment. Using the data collected during this survey in conjunction with previous survey data, the habitats along the proposed pipeline route and broader pipeline corridor were compared and analysed against the habitats in the Oceanic Shoals marine park.

Statistical analysis undertaken by AIMS on modelled habitats (**Figure 11**) revealed no significant difference between the proportion of habitats along the pipeline route (plus a 250 m buffer either side of the route) inside and outside the park. Generally, the habitats on the pipeline route and in the pipeline corridor were a proportional subset of the habitats found in the marine park. Therefore, based on the targeted survey work and analyses undertaken by AIMS, the habitats present under the proposed pipeline route are well represented in both the HPZ and the wider marine park.

Given that only two habitat types were found along the proposed pipeline route (filter feeders and none), and as the pipeline route (plus 250 m buffer) is very narrow (i.e. limited data for analyses) further analyses were undertaken using the pipeline corridor data using a 10 sq km moving window Kernel (hotspot analysis). This analysis is considered conservative as the pipeline corridor includes a much larger area and has a greater habitat diversity compared to that of the proposed pipeline route making it more similar to the wider marine park. Despite this, the analysis showed that the marine park had a higher diversity of habitats than the pipeline corridor (suspected to largely be driven by topography and depth characteristics). While univariate statistical analysis suggested the difference in habitat diversity was not significant, Monte Carlo simulation (based on a random subset of data) suggests a 93% probability of significant difference between the habitat diversity in the marine park (higher diversity) and the pipeline corridor (lower diversity) (**Figure 12**). According to AIMS, Monte Carlo random subset data are likely to be more representative of the try nature of diversity because is less bias to the distribution of habitat types within each area and bias due to the two areas being quite different in size.

It is worth noting that those areas within the pipeline corridor that have higher habitat diversity are located outside the marine park, e.g. at Goodrich Bank and Cape Helvetius (both of which AIMS has previously surveyed and reported on in Heyward et. al. 2017). Consequently, it is highly unlikely that the physical presence of the pipeline, installation activities and operations will result in a significant impact to the ecological values associated with the marine park.

The proposed route has been selected to reduce the requirement for seabed intervention for secondary stabilisation (i.e. the concrete-weighted pipeline is laid directly on the seabed). This reduces the modification of benthic habitats due to the relatively small footprint of the proposed route. The need for secondary stabilisation, such as rock dumping or trenching/dredging/ploughing, is eliminated, resulting in a significantly smaller disturbance footprint on the seabed compared to the eastern alignment. It also significantly reduces the potential for indirect effects such as sediment resuspension and increased frequency of IMR activities.

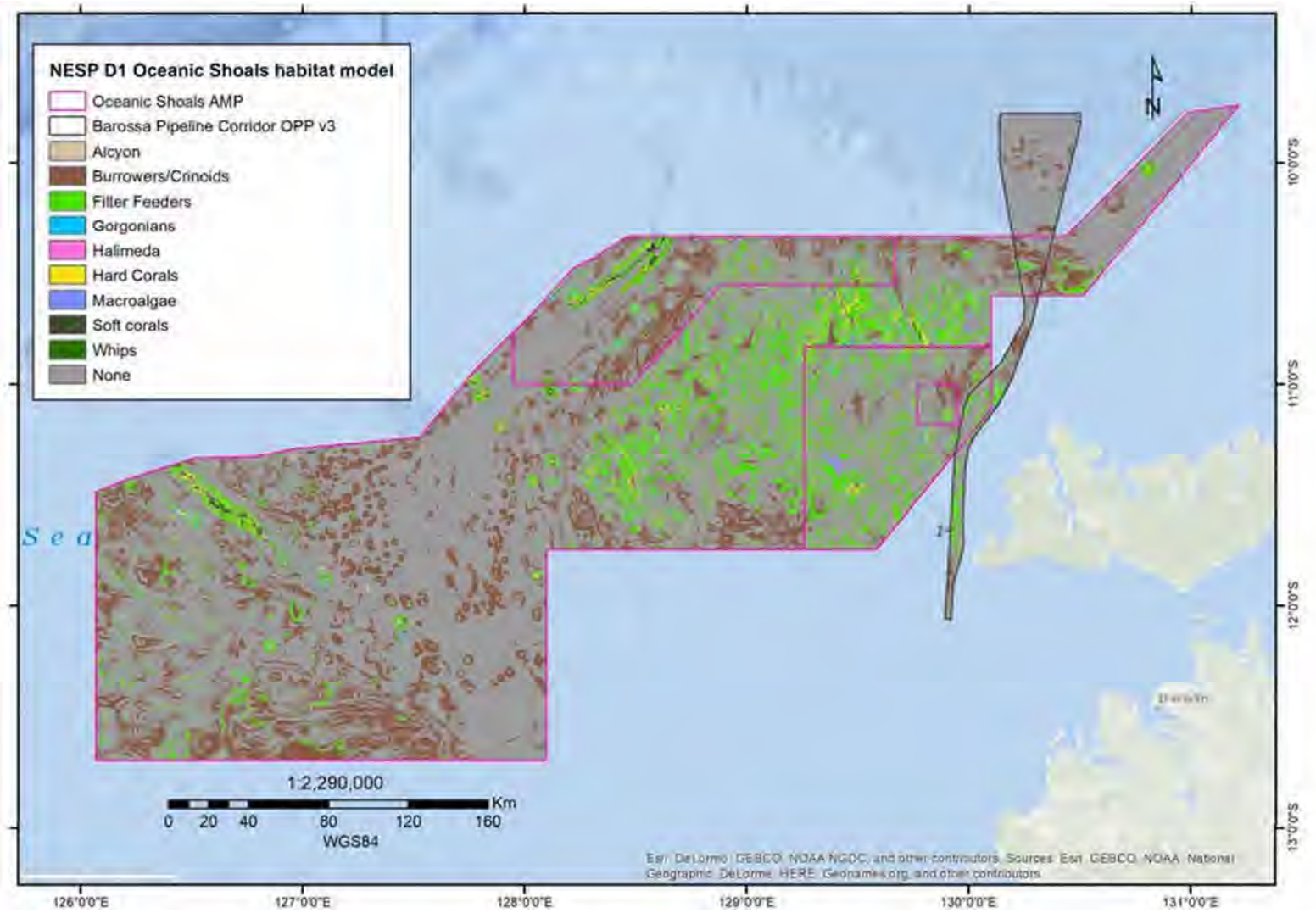


Figure 11: Map showing the habitat types found in the Oceanic Shoals marine park and the Barossa pipeline corridor (data adapted from that used to produce Figure 5-9 of the Barossa OPP)

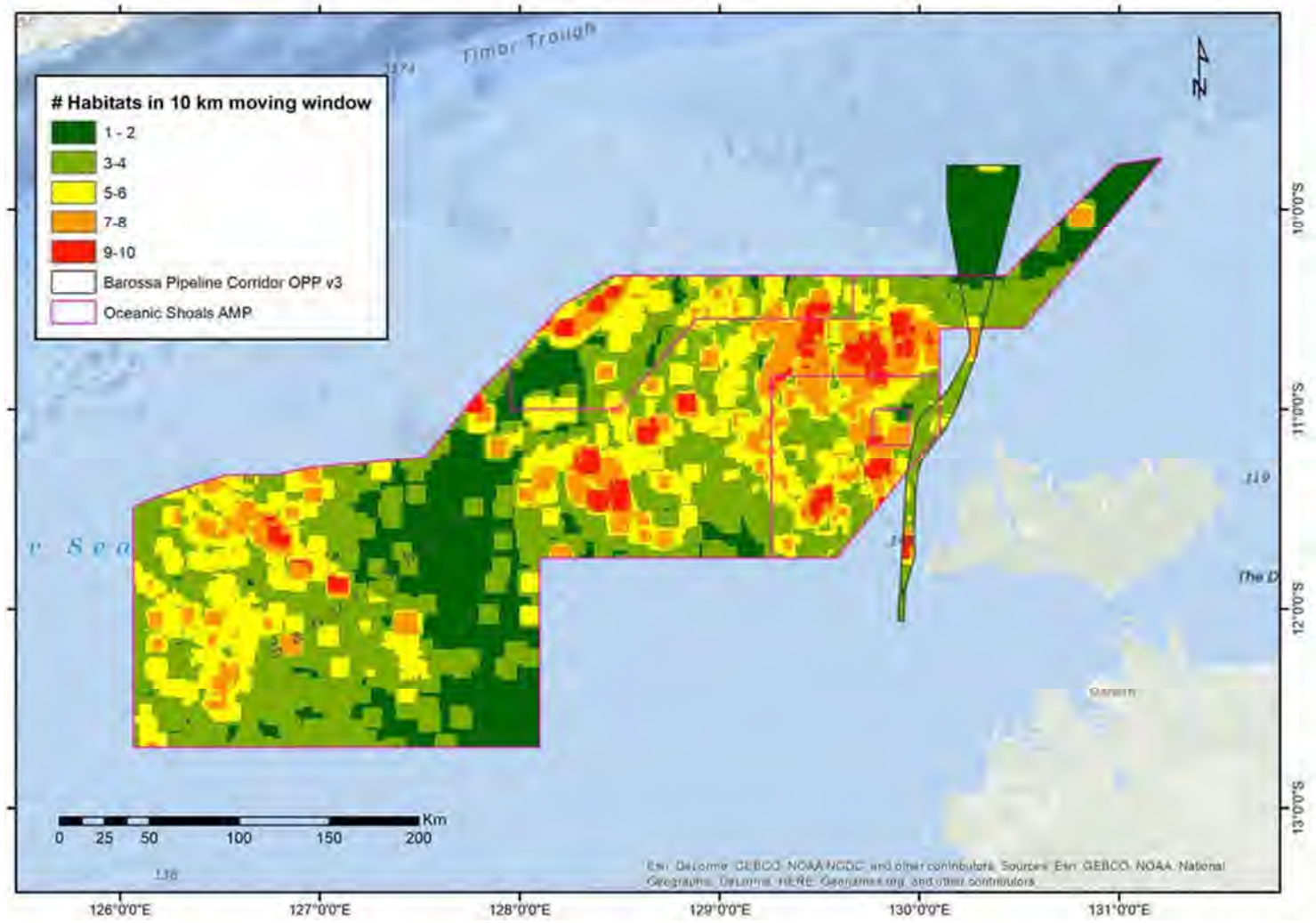


Figure 12: Map showing number of habitats found in a 10 sq km moving window comparing the Oceanic Shoals marine park with the Barossa pipeline corridor (data adapted from that used to produce Figure 5-9 of the Barossa OPP and analysis based on a random sample of 30,000 pixels extracted with replacement from each area).

The eastern alignment route is considerably shallower and more rugose than the proposed route (**Figure 13**). This imposes several constraints on the methods used for installation and stabilisation of the pipeline, compared to the proposed route. These are considered below as part of the Technical criterion (**Section 6.4.3.4**), with the environmental consequences of these considered here.

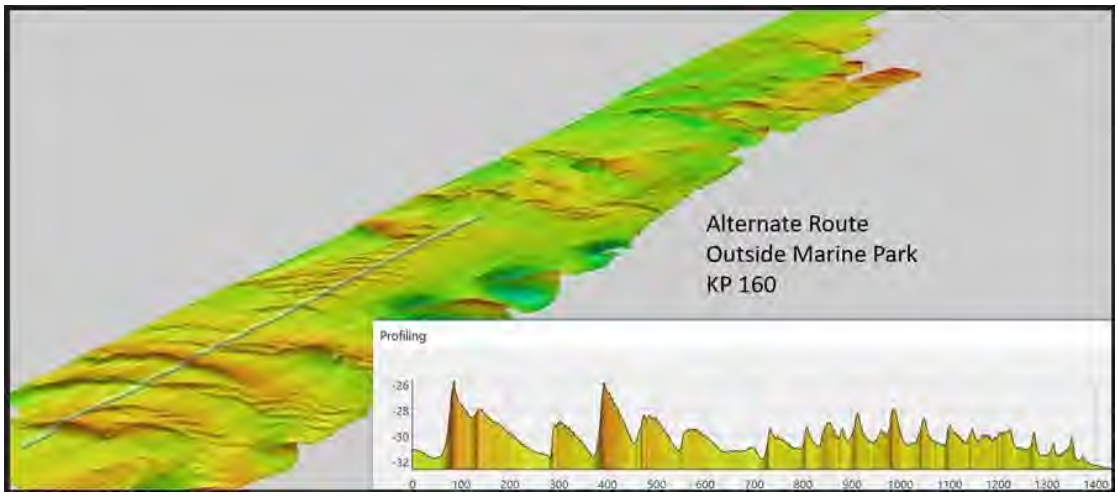


Figure 13: Seabed profile along the eastern route alignment showing the irregular seabed topography and shallow water depths.

The eastern alignment route will require secondary stabilisation of the pipeline due to the relatively shallow and rugose seabed compared to the proposed route. Secondary stabilisation methods may include:

- Rock dumping: rocks sources from onshore are placed over the pipeline on the seabed to prevent movement of the pipeline. Rock dumping is the preferred secondary stabilisation method due to its relatively localised environmental footprint, low cost and low maintenance requirements. Preliminary estimates indicate the seabed buried beneath rock would be between 55,000 and 418,000 m^2. A volume of between 36,500 and 277,400 m^3 of rock would be required. Note that rock dumping may not be feasible in some parts of the eastern alignment as rock dumping may create a navigation hazard due to the shallow water depth. Such areas may require alternative methods such as pre-lay trenching, post-lay trenching or post-lay ploughing; these methods may require backfill with rock dumping or sand.

- Pre-lay trenching: pre-lay trenching requires a trench cut into the seabed using a dredge, within which the pipeline is installed, and potentially backfilled with sand or rock (via rock dumping). This would only be required in areas too shallow for rock dumping (e.g. where rock may pose a navigation hazard). Trenching would be done using either a trailing suction hopper dredge or a cutter suction dredge, depending on the nature of the seabed. Indicative volumes and areas for pre-lay trenching and backfill are:

    - 16,000 m^2 footprint per kilometre of pipelay;
    - Up to 48,000 m^3 of seabed removed per kilometre of pipelay;
    - Up to 48,000 m^3 of coarse sand backfill per kilometre of pipelay; and
    - Up to 5,000 m^3 of rock backfill per kilometre.

- Post-lay trenching: post-lay trenching requires the pipeline be installed and then buried by water jetting or a trenching machine. This would only be required in areas too shallow for rock dumping (e.g. where rock may pose a navigation hazard). Indicative volumes and areas for post-lay trenching and backfill are:
    - 6,000 m^2 footprint per kilometre of pipelay;
    - Up to 9,000 m^3 of seabed removed per kilometre of pipelay (the spoil would be disposed to the side of the pipeline route, as it cannot be recovered to the surface).
    - Up to 9,000 m^3 of coarse sand backfill per kilometre of pipelay; and
    - Up to 2,500 m^3 of rock backfill per kilometre.
- Post-lay ploughing: post-lay ploughing may be used to bury the pipeline once it has been laid. A ploughing tool / machine works along the section of the pipeline that needs to be stabilised by burial. This would only be required in areas too shallow for rock dumping (e.g. where rock may pose a navigation hazard). Backfilling with sand or rock may be required after ploughing. Indicative volumes and areas for post-lay ploughing are:
    - 4,000 m^2 footprint impact per kilometre of trench;
    - Up to 4,000 m^3 of seabed removed per kilometre of ploughed trench (the spoil would be dumped off to the side of the pipeline route – cannot be recovered to surface);
    - Sand backfill may require up to 4,000 m^3 of coarse sand per kilometre in the trench after pipelay;
    - Rock backfill may require up to 2,000 m^3 of rock per kilometre.

Benthic habitats within the footprint of the secondary stabilisation will be significantly modified, with existing organisms within the footprint eliminated. Over time, new benthic communities will become established in the areas where secondary stabilisation has been applied. Where rock dumping has been used, the hard substrate provided by the rocks will allow establishment of sessile benthic organisms such as corals, macroalgae and sponges.

All secondary stabilisation methods outlined above, at least one of which will be required for the eastern alignment, will result in sediment resuspension. Resuspended sediments may result in impacts to several receptors through reduced water quality (e.g. due to increased total suspended solids (TSS)) and smothering by deposited sediments.

The extent of area requiring pre-lay trenching has not been quantified, as this would require detailed design. ConocoPhillips considers this design inefficient, as the eastern alignment has been determined not to be practicable (refer to **Section 6.4.3** above).

To inform the impact assessment for the OPP, ConocoPhillips completed a review of similar secondary stabilisation techniques and their impacts for pipeline activities in nearshore waters (Section 6.4.3 of the OPP). The review summarised that potential impacts from secondary stabilisation techniques may extend for between a few hundred metres to a few kilometres and persist for days to months. Given the proximity of the eastern route alignment to the HPZ (approximately 20 to 30 m away for the majority of the alternate route alignment), the secondary stabilisation required for this alignment will impact the HPZ and have greater potential impacts to the values of the HPZ than compared to the installation of the proposed route. Potential impacts include both direct and indirect to benthic habitats and marine fauna, including EPBC listed species, within the HPZ. A description of the potential direct and indirect impacts of secondary stabilisation techniques is provided in Section 6.4.3 of the OPP.

The eastern route may be too shallow to allow a pipeline vessel to use dynamic positioning (DP) to hold station. In areas too shallow for use of DP, the pipelay vessel will require the use of an anchor spread to hold station for operability and safety requirements. Anchors will be required to be set beyond the pipeline footprint, resulting in additional benthic habitat disturbance. Anchors and associated chains will result in direct disturbance to the seabed. If anchoring is required, it is expected that the anchors will need to be set several times as the pipeline is installed along the route.

If an anchored pipelay vessel/barge is required, the anchoring arrangement is likely to be restricted to the east due to the requirement to avoid encroachment within the internesting BIA for olive ridley turtles, and anchoring would likely be required within the HPZ to ensure vessel stability and maintain heading and pipeline route alignment. As a result, ConocoPhillips would have to seek a determination from the Director of National Parks under r.12.56 of the EPBC Regulations to allow an anchored pipelay vessel/barge to operate (i.e. repeatedly lay and pick up anchors) within the HPZ for the purpose of installing the pipeline outside the HPZ.

The proposed route has been confirmed to be deep enough for the pipelay vessel to use DP for the entire proposed pipeline route within the Oceanic Shoals marine park.

Water Quality

Installation of the proposed pipeline route will result in a decrease in water quality due to sediment resuspension. Resuspension may occur during installation (e.g. placement of the pipeline on the seabed disturbing sediments), operations (e.g. IMR activities such as water jetting to remove marine growth) and potentially decommissioning. The amount of suspended sediments that may credibly be resuspended by these activities is very low. Given the primarily sandy nature of sediments, resuspended sediments are expected to be deposited locally, with little potential for suspended sediment plumes to be advected beyond the vicinity of the pipeline.

The installation of the eastern alignment route has significantly greater potential to resuspend sediments than the proposed route due to the requirement for secondary stabilisation. Pre-lay and post-lay trenching (particularly dredging) has the potential to resuspend considerable quantities of sediment. Dredging through hard substrates such as limestone can generate fine sediment particles (e.g. clay-sized particles), which have much lower settling velocities than larger particles of the same material. This can result in persistent sediment plumes that may be advected away from the pipeline route and potentially impact receptors beyond the pipeline route, including the values of the HPZ. Benthic primary producers, such as seagrasses and zooxanthellate corals, are vulnerable to impacts from sediment plumes due to a reduction in photosynthetically active radiation reaching the seabed. Benthic primary producers are typically concentrated in shallow coastal waters, such as those around Bathurst Island (east of the eastern alignment route).

Marine Fauna

Both the proposed and eastern routes have the potential to impact upon marine fauna. Impacts to fauna such as marine turtles, cetaceans and fishes are expected to primarily be displacement from the immediate vicinity of the pipeline during installation, IMR and potentially decommissioning activities. Given the eastern route required secondary stabilisation and will take longer to install, the proposed route is expected to have lower potential to impact upon marine fauna.

Stakeholders raised concerns about the potential impacts of the pipeline during consultation for the Barossa OPP. In particular, the proximity of the pipeline to turtle nesting habitat around Bathurst Island was of concern to several stakeholders (**Section 5**). The coastline of north-western Bathurst Island (the area closest to the eastern route) consists almost entirely of sandy beaches, with widespread turtle nesting activity recorded along these beaches (Chatto and Baker 2008). The eastern route lies closer to potential turtle nesting beaches; the minimum distance of the eastern route from the mainland is approximately 21 km. The proposed route lies further offshore, with a minimum distance from the mainland of 25 km.

As such, the eastern route is closer to known turtle nesting and inter-nesting habitat than the proposed route. On this basis, the proposed route is considered to present less risk to turtles and is better aligned to stakeholder expectations.

6.4.3.2 Societal

ConocoPhillips has determined the societal values of the HPZ within the Oceanic Shoals marine park based on the following:

- The cultural, heritage, social and economic values of the Oceanic Shoals marine park described in the North Marine Parks Network Management Plan 2018
- Consultation with stakeholders (**Section 5**), including:
    - Consultation undertaken during preparation of the Barossa OPP;
    - Public comments on the Barossa OPP; and
    - Engagement with Parks Australia.

North Marine Parks Network Management Plan 2018

The *North Marine Parks Network Management Plan 2018* stated there is limited information about the cultural values of the Oceanic Shoals marine park. As such, ConocoPhillips has undertaken consultation with stakeholders in the region, such as indigenous groups, to identify cultural values within the Oceanic Shoals marine park that may be affected by the pipeline. Consultation to date (summarised in **Section 5**) has not identified any values within the HPZ. ConocoPhillips is aware of Indigenous cultural values beyond the park that may be affected, namely the traditional hunting of turtles and turtle nests along the coastline of Bathurst Island. Based on the current knowledge of cultural values in relation to the pipeline routes, the proposed route is not considered to result in any impacts to the cultural values within the HPZ. Neither route is considered likely to significantly impact on cultural values beyond the HPZ, although the eastern alignment is may pose an increased risk to marine turtles due to its proximity to inter-nesting habitat critical to the survival of olive ridley turtles identified in the *Recovery plan for marine turtles in Australia 2017-2027* (Commonwealth of Australia 2017).

There are no World, National of Commonwealth heritage values that will credibly be impacted by either the proposed route or the eastern route alignments. A review of the Australian National Shipwreck Database indicated an historic shipwreck, the *Florence D*, lies to the south-east of the HPZ, approximately 6 km and 10 km from the eastern and proposed alignments respectively. Impacts to this historic shipwreck will not credibly occur as a result of either route.

The *North Marine Parks Network Management Plan 2018* identifies commercial fishing and mining as important activities within the park. Both are considered allowable activities (i.e. subject to a licensing process) within the HPZ, with prohibition of some types of fishing and petroleum activities that may be undertaken (refer to **Section 4.6.1**). Construction, operation and decommissioning of either alignment may result in temporary displacement of commercial fishers due to vessel-based activities (e.g. IMR); this would be highly localised and temporary in nature. Consultation in support of the Barossa OPP indicated commercial fishing effort overlapping the proposed and eastern alignments is very low. As such, neither route is considered to result in significant effects to commercial fishers.

The construction of either pipeline alignment will create artificial reef habitat, which is expected to result in increased abundance and diversity of demersal fish. This may result in increased fishing effort along the constructed pipeline route, however given the low levels of fishing along the existing Bayu-Undan pipeline, any changes to fishing behaviour are likely to be very small.

Stakeholder Consultation

As outlined in **Section 5**, ConocoPhillips has undertaken, and continues to undertake, consultation in relation to the Barossa Project. Note this consultation has included traditional owners, including those of the Tiwi Islands. ConocoPhillips considers Tiwi Islanders to be of particular relevance due to the proximity of Bathurst Island to the proposed pipeline route.

Consultation during the public comment period of the Barossa OPP assessment identified several stakeholders with concerns about the potential impacts of the pipeline on marine turtles. Maximising the separation between the pipeline and known turtle habitat may be considered favourably by these stakeholders. Given the eastern alignment is in closer proximity to nesting beaches along Bathurst Island (as discussed in **Section 6.4.3.1**), the proposed route is more consistent with stakeholder expectations.

6.4.3.3 Safety

Safety risks for the proposed and eastern alignments are comparable in nature due to the use of the same construction techniques, however the eastern alignment will require increased seabed intervention. This will result in increased construction time, and IMR activities for the during operations, for the eastern alignment and consequently increased exposure to HSE risks.

Full removal decommissioning of the eastern alignment will require considerably more field operations due to the increased seabed intervention requirements. If the pipeline is decommissioned and retained in situ, then the difference in safety risks between the eastern alignment and the proposed route would be negligible.

6.4.3.4 Technical

The eastern alignment presents greater technical challenges to construct, operate and potentially decommission than the proposed route. This is due to the increased requirement for seabed intervention to achieve secondary stabilisation and to prevent excessive free spans.

Limited Ability to Weight the Pipeline Sufficiently to Reduce Lateral Movement

To minimise pipeline movement on the seabed along the eastern alignment, a thicker concrete weight coating (CWC) would need to be applied to this section of the pipeline. However, even with the thickest practical CWC, the pipeline is still predicted to move up to 20 m laterally on the seabed, potentially scouring the seabed with possible encroachment into the HPZ if no secondary stabilisation was applied. Additionally, the requirement for thick CWC will significantly restrict the number of pipelay vessels that could install the pipeline and could result in significantly longer installation times if temporary buoyancy is required to reduce tension during installation.

Need for Span Rectification

The seabed topography on the eastern route alignment (**Figure 13**) is considerably more irregular than the proposed pipeline route, increasing the amount of span rectification that would be required during installation and increasing the potential for operational span correction.

Need for Significant Secondary Stabilisation

Water depths along the eastern route alignment are as shallow as 23 m (**Figure 13**), meaning that even with the thickest practical CWC, engineering studies have determined that between 5 to 38 km of secondary stabilisation, e.g. trenching/dredging or rock dumping, will be required along this alignment to stabilise the pipeline. Potential secondary stabilisation techniques are detailed in **Section 6.4.3.1**. Given the proximity of the route to the HPZ, direct and indirect impacts from secondary stabilisation activities would be expected to impact the HPZ (refer to **Section 6.4.3.1**), and the overall environmental impact associated with installing the pipeline along this alternative route alignment is much greater than the impact predicted if the pipeline was installed along the proposed pipeline route.

Need for an Anchored Pipelay Vessel

The shallow water depths may dictate that the pipeline would have to be installed using an anchored pipelay vessel versus a Dynamically Positioned (DP) vessel. If an anchored pipelay vessel is required, the anchoring arrangement is likely to be restricted to the east due to the requirement to avoid encroachment within the internesting BIA for olive ridley turtles, and anchoring would likely be required within the HPZ to ensure vessel stability and maintain heading and pipeline route alignment. As a result, ConocoPhillips would have to seek a determination from the Director of National Parks under r.12.56 of the EPBC Regulations to allow an anchored pipelay vessel to operate (i.e. repeatedly lay and pick up anchors) within the HPZ for the purpose of installing the pipeline outside the HPZ. Refer to **Section 6.4.3.1** for a description of environmental impacts to the HPZ and the wider marine environment.

6.4.3.5 Economic

While considered the least important criterion, the difference in installation costs between the proposed route and the eastern alignment are a factor. The proposed route will require less time to install than the eastern alignment. This reduces vessel-related costs (e.g. number of vessel days in the field, fuel usage etc.). The proposed route also requires less seabed intervention, which reduces the need for stabilisation materials (e.g. rock sources from onshore quarry for secondary stabilisation) and hence reduces cost.

Partial or full removal of the eastern alignment pipeline will cost significantly more compared to the proposed alignment due to the need to remove secondary stabilisation material. Removal of secondary stabilisation material will require mobilisation of additional vessels and require additional time. Note if the pipeline is decommissioned in situ, then decommissioning costs for the proposed pipeline route and the eastern alignment will be reasonably expected to be similar.

6.5 Conclusion

Based on all available data, information and evaluation from the surveys, engineering studies and environmental impact assessments undertaken to date, it has been concluded that the only practicable route alignment is the proposed route alignment within the HPZ. Although the eastern route alignment outside of the marine park HPZ is considered to be technically feasible, it results in greater environmental impact both to habitats and species within and outside the HPZ, and therefore is not considered a practicable route.

7 ALIGNMENT WITH OCEANIC SHOALS MARINE PARK MANAGEMENT OBJECTIVES

The proposed pipeline route and pipeline activities are considered consistent with the IUCN principles for the multiple use zone and HPZ (**Section 7.1**), and is consistent with the objectives of the management zones of the marine park (**Section 7.2**), as defined in the North Marine Parks Network Management Plan (Director of National Parks, 2018).

7.1 IUCN Categories

7.1.1 Multiple Use Zone (IUCN Category VI)

The reserve or zone should be managed mainly for the sustainable use of natural ecosystems based on the following principles:

IUCN Principle: The biological diversity and other natural values of the reserve or zone should be protected and maintained in the long term.

Demonstration of alignment: The biological diversity and other natural values, of the Oceanic Shoals marine park will not be affected by installation of the linear gas export pipeline due to:

- the benthic habitats that exist within the footprint of the proposed pipeline route (including a 250 m buffer either side of the pipeline), both within the HPZ and the MUZ of the marine park consist of burrowers/crinoids (approximately 18%) and filter feeders (approximately 4%), with the remaining area supporting no benthic habitat (approximately 78%). These habitats are well represented in both the MUZ and the wider marine park as well as within the broader region (Heyward et al. 2017).

IUCN Principle: Management practices should be applied to ensure ecologically sustainable use of the reserve or zone.

Demonstration of alignment: Installation of the linear gas export pipeline is consistent with the principle of ecological sustainable use of the Oceanic Shoals marine park. The natural processes and life-support systems of the MUZ of the Oceanic Shoals marine park will be sustained, and the potential for the marine park to meet the needs and aspirations for future generations will be maintained, due to the following:

- It is highly unlikely that the physical presence of the pipeline, installation activities and operations will result in a significant impact to the ecological values associated with the marine park. Overall, the seabed disturbance resulting from the installation and operation of the proposed pipeline within the marine park is expected to cause very localised disturbance of benthic habitats and short- term changes to invertebrate communities in the immediate vicinity (within tens of metres). The representativeness of habitats and habitat diversity of the marine park will be maintained.
- There are no significant feeding, breeding or aggregation habitats for marine fauna within the vicinity of the pipeline route within the marine park, with the exception of internesting habitat critical to the survival of flatback turtles. However, internesting female turtles will be able to continue to use the habitats within the area identified as habitat critical to the survival of flatback turtles.

IUCN Principle: Management of the reserve or zone should contribute to regional and national development to the extent that this is consistent with these principles.

Demonstration of alignment: Installation of the gas export pipeline is a central element of the Barossa project that is expected to contribute to local, regional and national development, and seabed disturbance from these activities is not anticipated to impact on the biological diversity and other natural values of the Oceanic Shoals marine park.

7.1.2 Habitat Protection Zone (IUCN Category IV)

The reserve or zone should be managed primarily, including (if necessary) through active intervention, to ensure the maintenance of habitats or to meet the requirements of collection or specific species based on the following principles:

IUCN Principle: Habitat conditions necessary to protect significant species, group or collections of species, biotic communities or physical features of the environment should be secured and maintained, if necessary through specific human manipulation.

Demonstration of alignment: The pipeline route only overlaps approximately 0.0002% of the HPZ of the Oceanic Shoals marine park. The benthic habitats that exist within the footprint of the proposed pipeline route (including a 250 m buffer either side of the pipeline), both within the HPZ and the MUZ of the marine park consist of burrowers/crinoids (approximately 18%) and filter feeders (approximately 4%), with the remaining area supporting no benthic habitat (approximately 78%).

The proposed pipeline route does not overlap any burrowers/crinoids habitat within the HPZ. The physical footprint of the pipeline and indirect impacts from pipeline installation (allowing a 250 m buffer either side) within the HPZ are expected to result in the loss of approximately 0.05% of the filter feeder habitat present in HPZ% or 0.009% of the total filter feeder habitat available within the marine park.

It is highly unlikely that the physical presence of the pipeline, installation activities and operations will result in a significant impact to the ecological values associated with the marine park. Overall, the seabed disturbance resulting from the installation and operation of the proposed pipeline within the marine park is expected to cause very localised disturbance of benthic habitats and short- term changes to invertebrate communities in the immediate vicinity (within tens of metres). The impacts to benthic habitats, including those associated with the KEFs and Oceanic Shoals marine park are considered acceptable.

There are no significant feeding, breeding or aggregation habitats for marine fauna within the vicinity of the pipeline route within the HPZ, with the exception of habitat critical to the survival of flatback turtles. The physical presence of the gas export pipeline is considered highly unlikely to impact the species use of the area, considering the area affected represents a very small portion of the internesting habitat critical to the survival of flatback turtles (0.0001%, note this for the length of the entire pipeline, not just the pipeline route within the HPZ). Flatback turtles within or in the vicinity of the pipeline route in waters > 30 m deep are typically freely moving through these areas within the water column rather than requiring benthic habitat for internesting activities. Given the majority of internesting turtles resting in the days prior to re-nesting are in waters <30 m, by restricting the pipeline route within the HPZ to waters deeper than 30 m, impacts from the pipeline are not expected. Internesting female turtles will be able to continue to use the habitats within the area identified as habitat critical to the survival of flatback turtles. Therefore, any impacts to marine turtles as a result of pipeline activities are considered acceptable.

IUCN Principle: Scientific research and environmental monitoring that contribute to reserve management should be facilitated as primary activities associated with sustainable resource management.

Demonstration of alignment: The data collected and analysed during the collaborative studies that ConocoPhillips and AIMS have undertaken to date has not only been used to support this application, but it is also being used by AIMS to update its model/knowledge of the Oceanic Shoals marine park habitats and it is also being shared with Parks Australia to support the implementation of the new management plans (AIMS pers. comm). In this way, the data and information that Parks Australia and ConocoPhillips are using to assess potential impacts to the marine park is from a common source.

IUCN Principle: The reserve or zone may be developed for public education and appreciation of the characteristics of habitats, species or collections and for the work of wildlife management.

Demonstration of alignment: Through the agreement ConocoPhillips has with AIMS for the collaborative studies, AIMS are able to use the data and information derived for non-commercial purposes and AIMS is planning to publish the results of the studies.

IUCN Principle: Management should seek to ensure that exploitation or occupation inconsistent with these principles does not occur.

Demonstration of alignment: ConocoPhillips considers that the impacts and risks that the pipeline activities may pose to the HPZ of the Oceanic Shoals marine park are demonstrated to be acceptable based on the following:

- Habitats necessary to the survival of protected species will not be impacted
- Impacts to biotic species, including benthic habitats are expected to be minor and will not impact on the habitat representativeness or habitat diversity of the marine park
- Impacts to physical features considered values of the marine park, such as the identified KEFs, are not expected within the HPZ.

Therefore, pipeline activities are considered to be consistent with the management principles for the HPZ of the Oceanic Shoals marine park.

IUCN Principle: People with rights or interests in the reserve or zone should be entitled to benefits derived from activities in the reserve or zone that are consistent with these principles.

Demonstration of alignment: Pipeline installation and operations activities are not expected to result in any benefits to people with rights or interests in the Oceanic Shoals marine park.

IUCN Principle: If the reserve or zone is declared for the purpose of a botanic garden, it should also be managed for the increase in knowledge, appreciation and enjoyment of Australia's plant heritage by establishing, as an integrated resource, a collection of living and herbarium specimens of Australian and related plants for study, interpretation, conservation and display.

Demonstration of alignment: Not applicable to the Oceanic Shoals marine park.

7.2 Oceanic Shoals Marine Park Management Objectives

7.2.1 Multiple Use Zone (IUCN Category VI)

Management Objective: The objective of the multiple use zone is to provide for ecologically sustainable use and the conservation of ecosystems, habitats and native species.

Demonstration of alignment: Installation of the linear gas export pipeline is consistent with the principle of ecological sustainable use of the Oceanic Shoals marine park:

- It is highly unlikely that the physical presence of the pipeline, installation activities and operations will result in a significant impact to the ecological values associated with the marine park. Overall, the seabed disturbance resulting from the installation and operation of the proposed pipeline within the marine park is expected to cause very localised disturbance of benthic habitats and short- term changes to invertebrate communities in the immediate vicinity (within tens of metres). The representativeness of habitats and habitat diversity of the marine park will be maintained.
- There are no significant feeding, breeding or aggregation habitats for marine fauna within the vicinity of the pipeline route within the marine park, with the exception of inter-nesting habitat critical to the survival of flatback turtles. However, inter-nesting female turtles will be able to continue to use the habitats within the area identified as habitat critical to the survival of flatback turtles.
- Therefore, the natural processes and life-support systems of the multiple use zone of the Oceanic Shoals marine park will be sustained, and the potential for the marine park to meet the needs and aspirations for future generations will be maintained.
- Installation of the gas export pipeline is a central element of the Barossa project that is expected to contribute to local, regional and national development. The impacts and risks from these activities is not anticipated to impact on the biological diversity and other natural values of the Oceanic Shoals marine park.

7.2.2 Habitat Protection Zone (IUCN Category IV)

Management Objective: The objective of the habitat protection zone is to provide for the conservation of ecosystems, habitats and native species in as natural a state as possible while allowing activities that do not harm or cause destruction to seafloor habitats.

Demonstration of alignment: The pipeline activities are considered to be consistent with the management objective of the HPZ within the Oceanic Shoals marine park, given the following:

- Although the presence of the pipeline will result in a small direct loss of benthic habitat, there will be no impact on the habitat representativeness or habitat diversity of the marine park.
- Where the pipeline traverses the HPZ, it is distant from seafloor features associated with the KEFs considered values of the marine park. Therefore, no impacts to KEFs are expected from pipeline activities within the HPZ.
- Where the pipeline route traverses the HPZ, it is outside the water depths (i.e. >30 m) where the majority of flatback turtle inter-nesting activity is known to occur. Therefore, the pipeline activities are not likely to have adverse impacts to seafloor habitat considered as inter-nesting habitat critical to the survival of flatback turtles.
- There are no sensitive or important benthic habitats, or feeding, breeding or aggregation areas for marine fauna in the vicinity of the pipeline route that could be impacted by pipeline activities.
- Therefore, pipeline activities, including direct and indirect impacts from installation and operations, will not result in the destruction of seafloor habitats or impact the conservation of ecosystems within the HPZ of the Oceanic Shoals marine park.

8 SUMMARY OF ENVIRONMENTAL IMPACTS AND RISKS

8.1 Overview

The aspects of the activities (installation, operations and decommissioning) that may arise from the installation of the proposed pipeline route within the Oceanic Shoals marine park that could present potential impacts and risks to the values of the marine park are (**Table 6**):

- Physical presence of the pipeline and project vessels
- Seabed disturbance
- Underwater noise emissions
- Light emissions
- Atmospheric emissions
- Planned discharges
- Waste management
- Introduction of invasive marine species (IMS)
- Unplanned wet buckle event during installation activities
- Decommissioning.

Table 6 provides a summary of the identified values of the Oceanic Shoals marine park and the potential for pipeline activities to interact or impact these values. Identification of the relevant values and potential interaction/impacts from pipeline activities assisted in informing the focus of the environmental risk assessment process and were used as the basis for determining the level of detail that is appropriate to the nature and scale of each impact or risk.

Table 7provides a summary of the environmental risk assessment for each identified source of risk. Detailed risk assessments can be found in **Appendix C**.

Table 6: Values of the Oceanic Shoals marine park and potential interaction with pipeline activities

source of risk	Values of the Oceanic Shoals marine park (Source: Schedule 2 of the North Marine Parks Network Management Plan 2018)											
	KEF - Carbonate bank and terrace systems of the Van Diemen Rise	KEF – carbonate bank and terrace system of the Sahul Shelf	KEF – Pinnacles of the Bonaparte basin	KEF – Shelf break of the Arafura Shelf	Marine mammals	Marine reptiles (turtles and sea snakes)	Birds	Fish (pelagic and demersal)	Sharks and rays	Commercial fishing	Mining activities	Traditional owners (Tiwi Islands)
Physical presence of the pipeline and project vessels	✓*			✓*	✓	✓	✓	✓	✓	✓		
Physical presence – seabed disturbance	✓*			✓*		✓		✓	✓			
Underwater noise emissions	✓*			✓*	✓	✓		✓	✓	✓		
Light emissions					✓	✓	✓	✓	✓			
Atmospheric emissions					✓	✓	✓					
Planned discharges	✓*			✓*	✓	✓	✓	✓	✓	✓		
Waste management	✓*			✓*	✓	✓	✓	✓	✓	✓		
Introduction of IMS	✓*			✓*	✓	✓		✓	✓	✓		
Unplanned activity during installation	✓*			✓*	✓	✓		✓	✓	✓		
Decommissioning	✓*			✓*	✓	✓	✓	✓	✓	✓		

*	Pipeline activities interact with value only within the multiple use zone of the Oceanic Shoals marine park
✓	Pipeline activities are expected to interact with marine park value
	Pipeline activities are not expected to interact with marine park value

Table 7: Environmental risk assessment summary for the proposed route through the HPZ

Source of risk	Summary of impact assessment findings
Physical presence of the pipeline and project vessels – interaction with commercial fishing	Impacts from interactions from the physical presence of the proposed pipeline and vessel movements associated with installation and IMR activities within the multiple use zone where allowable commercial activities may occur are considered remote given the minor physical scale of the pipeline infrastructure in this zone and the expected short- term presence of installation and IMR vessels (days to weeks).
Physical presence of the pipeline and project vessels – interaction with marine fauna	The proposed pipeline route within the marine park crosses a portion of inter-nesting habitat critical to the survival of flatback turtles and overlaps a portion of the inter-nesting BIA for flatback turtles. Therefore, there may be an increase in number of individuals in this area that are at risk from a vessel strike (particularly during this species' peak nesting period, June to September). The pipelay vessel will be travelling at very low speeds as it expected to lay in the order of approximately 3 km–5 km of the pipeline per day. Therefore, the risk of coming into contact with turtles is low as it is expected turtles will dive or move away from the vessels. The installation of the pipeline within the marine park is also expected to take in the order of one month to complete, with IMR activities expected to occur for days to weeks (refer to **Table 2**). Consequently, the likelihood of a vessel strike and the possibility of injury/mortality to individual turtles during installation and operation of the pipeline is considered remote. Various species of cetacean may traverse the marine park during the proposed pipelay installation and IMR activities, including pygmy blue whales, Bryde's whale, Omura's whales, sei and fin whales, as well as various dolphin species. Given the short timeframe for installation and IMR activities and the wide distribution of whale species, vessel movements are not anticipated to cause any effects at a population or migration level.
Physical presence – seabed disturbance	Direct impacts: Overall, the seabed disturbance resulting from the installation and operation of the proposed pipeline within the marine park is expected to cause very localised disturbance of benthic habitats and short- term changes to invertebrate communities in the immediate vicinity (within tens of metres). The risk to benthic habitats, including those associated with the KEFs and Oceanic Shoals marine park is considered low. The physical presence of the proposed pipeline is not expected to adversely impact on biologically important behaviours or biologically important habitat for marine fauna, including habitat critical to the survival of marine turtles. The direct disturbance to the seabed by the proposed pipeline is not predicted to negatively affect the catchability of species targeted by commercial fishers, given the small nature of the disturbance in the context of the fishing areas available. Indirect impacts: Considering the expected short duration of increased sedimentation at any one area, and that benthic habitats in these areas are likely to have a natural resilience to higher sediment/turbid conditions, significant impacts are considered unlikely. Any indirect impacts within the inter-nesting habitat critical to the survival of flatback turtles are likely to be localised and temporary in nature (lasting a matter of days) and would not significantly reduce the amount of available habitat.

Underwater noise emissions	Considering the open water location of the project and the known movements of marine fauna in the area, underwater noise generated from the project is considered unlikely to significantly affect these key values and sensitivities, particularly at a population level. No significant impacts to the catchability of fish species targeted by commercial or Indigenous fishers are expected given the short duration and localised nature of any potential impacts (within hundreds of metres). Therefore, the area of the marine environment influenced by underwater noise associated with the installation of the proposed pipeline and IMR activities represents a very small proportion of the area available to be fished. Given the relatively localised source of noise from vessels and short duration of installation activities at any one location, significant impacts on any marine fauna transiting through the area are highly unlikely.
Light emissions	Impacts to turtles from light during pipeline installation and IMR activities at any time of year are expected to be minor and are not anticipated to result in impacts at a population level, with the risk to the marine turtle populations from the proposed activities considered to be low and undetectable against normal population fluctuations.
Atmospheric emissions	Given the short term duration of installation and decommissioning activities, and the frequency and short term duration of IMR activities, atmospheric emissions will be limited. The actual expected volumes will be dependent on the size of vessel, the duration of the activity and the probability of the vessel having/using a waste incinerator. Although atmospheric emissions from project vessels can result in the localised deterioration of air quality, the impact to the values of the marine park are considered negligible.
Planned discharges	Given the listed values and physical environmental characteristics of the marine park (i.e. open, relatively deep offshore environment with significant current and tidal action) any potential impacts from discharged of treated sewage, grey-water, putrescible waste, deck drainage, and bilge water are expected to be highly localised and temporary decreases in water quality, with a negligible increase in cumulative discharges from other vessels in the area and negligible impacts to any marine organisms. In summary, the potential impacts and risks to the marine park from routine discharges described above are considered low.
Waste management	Given the typical small volumes and temporary (i.e. instantaneous) duration of accidental discharge events, impacts to water quality would be temporary and highly localised. Subsequently, there would be limited potential for toxicity to marine fauna due to temporary exposure and low toxicity as a result of rapid dilution. Therefore, any potential impacts to marine fauna would be limited to any individuals that may be transiting within the immediate area of the discharge (within tens to several hundred metres).
Introduction of IMS	The portion of the proposed pipeline route that intersects the marine park is predominantly located in the mid-shelf region where water depths range between approximately 50 m and 120 m. The KEF of the carbonate bank and terrace system of the Van Diemen Rise and the majority of the open waters associated with the Oceanic Shoals marine park occur in areas where seabed depths range between 50 m and 120 m. IMS are generally unable to successfully establish in deep water ecosystems (Geiling 2014), most likely due to a lack of light or suitable habitat to sustain the growth and survival of IMS. Therefore, most IMS are found in tidal and subtidal zones with only a few species known to extend into deeper waters of the continental shelf (Bax et al. 2003). The likelihood of IMS being introduced as a result of the project are considered to be manageable following implementation of effective key management controls.

	Given the suite of management controls that will be implemented throughout the project, the risk of introducing IMS as a result of project activities is considered low and therefore socio-economic impacts on commercial fishing and other marine users in the vicinity of the Tiwi Islands are not expected.
Unplanned activity during installation – wet buckle	The risk of the plume contacting the sensitive benthic habitat values associated with the Oceanic Shoals marine park (i.e. the KEFs) is improbable. Any potential impacts to benthic communities from the dewatering discharge are expected to be minor and temporary, given the localised area affected and the short-term nature of the discharge.
Decommissioning	A detailed EP specific to decommissioning activities will be prepared for review and acceptance towards the end of the field life for the Barossa project. At that time, a detailed evaluation of environmental risk and impacts will be undertaken, with practicable options assessed for ALARP and acceptability. A commitment to meet this forward process is reflected in **Appendix D** (also see Section 7 of the Barossa OPP).

9 IMPACT AND RISK MANAGEMENT

Appendix D presents the Environmental Performance Outcomes (EPOs) that have been presented in the Barossa OPP to manage the environmental impacts and risks associated with pipeline installation and operation activities within the Oceanic Shoals marine park to an acceptable level. An EPO is defined as a "measurable level of performance required for the management of environmental aspects of the project to ensure that the environmental impacts and risks will be of an acceptable level" (NOPSEMA 2016).

The EPOs associated with the project are appropriately high-level at this early stage of project development and focus on providing overall environmental protection for the life of the project. The high-level nature of the EPOs also aligns with the intent of the accepted Barossa OPP and its specific role early in the regulatory approval cycle, that precedes development and acceptance of more detailed EPs. The EPOs are expected to be refined and/or further detail provided in subsequent activity-specific EPs to reflect improved definition of environmental impacts and risks and controls associated with execution-level activity detail. Activity specific EPs will also demonstrate that all impacts and risks associated with activities within the marine park have been reduced to ALARP.

The EPOs provided in **Appendix D** are relevant to the environmental impacts and risks (from both planned and unplanned events) associated with the project and consistent with the ConocoPhillips Health Safety and Environment (HSE) Policy, Sustainable Development (SD) Position, HSE Management System (HSEMS) and Capital Projects Management System (CPMS), principles of ESD and relevant legislative requirements, codes, standards and guidelines.

It is recognised that relevant requirements, codes, standards and guidelines change over time, and may change prior to the development of activity specific EPs. While specific reference is made to some of these current requirements in the table below, it is noted that future activity-specific EPs will take into account contemporary requirements at the time of the activity.

As a guide, the information presented in **Appendix D** includes:

- key management controls: to achieve an acceptable level of environmental protection
- EPOs: outcome statements of environmental performance to be achieved through implementation of key controls in the previous column.

10 ACRONYMS AND ABBREVIATIONS

Acronyms and abbreviations	Definitions
°	degrees
$	Australian dollars
%	percent
<	less than
>	greater than
ABU	Australian Business Unit
ABU-E	Australian Business Unit-East
ABU-W	Australian Business Unit-West
AFMA	Australian Fisheries Management Authority
AHO	Australian Hydrographic Office
AIMS	Australian Institute of Marine Science
ALARP	as low as reasonably practicable
AMSA	Australian Maritime Safety Authority
APLNG	Australia Pacific Liquified Natural Gas
AUV	autonomous underwater vehicle
Barossa offshore development area	Encompasses ConocoPhillips' interests in the Bonaparte Basin (petroleum retention lease NT/RL5 surrounding the Barossa Field, and NT/RL6 surrounding the Caldita Field), the FPSO facility, subsea production system, supporting in-field subsea infrastructure, and marine environment that may be affected by planned discharges (Figure 4-2). The area also accommodates the movement of project vessels in the vicinity of the FPSO facility and in-field subsea infrastructure.
Barossa Field	The field in ConocoPhillips petroleum retention lease NT/RL5
Barossa project	The Barossa Area Development, which includes proposed in-field infrastructure in the Barossa Field in petroleum retention lease NT/RL5, accommodating future staged development in the smaller Caldita Field to the south in NT/RL6, and a subsea gas export pipeline connecting the field to tie into the existing Bayu-Undan to Darwin pipeline.
BIA	biologically important area
BTEX	benzene, toluene, ethylbenzene and xylenes
BUs	business units
Caldita Field	The field in ConocoPhillips petroleum retention lease NT/RL6
CDU	Charles Darwin University
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
CHARM	Chemical Hazard and Risk Management
CMP	Crisis Management Plan
CO_2	carbon dioxide
COLREGS	International Regulations for Preventing Collisions at Sea 1972
ConocoPhillips	ConocoPhillips Australia Exploration Proprietary Limited
CP	cathodic protection
CPMS	Capital Project Management System
CSD	cutter suction dredge

CVI	close visual inspection
CWC	concrete weight coating
dB	decibels
DEH	Department of Environment and Heritage
DLNG	Darwin Liquefied Natural Gas
DoAWR	Department of Agriculture and Water Resources
DoE	Department of the Environment (formerly DSEWPaC)
DoEE	Department of the Environment and Energy (formerly DoE)
DP	dynamic positioning
DPaW	Department of Parks and Wildlife (Western Australia)
DPIF	Department of Primary Industry and Fisheries (Northern Territory)
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
EEZ	exclusive economic zone
EP	Environment Plan
EPBC	Environment Protection and Biodiversity Conservation
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
EPOs	environmental performance outcomes
ESD	ecologically sustainable development
FPSO	Floating Production, Storage and Offloading
gas export pipeline corridor	Encompasses the area in which the gas export pipeline will be installed (Figure 4-3). A corridor has been defined to allow flexibility and optimisation in design.
GHG	greenhouse gas
GVI	general visual inspection
HSE	health, safety and environment
HSEMS	Health, Safety and Environment Management System
HPZ	habitat protection zone
IAFS	International Anti-Fouling Systems
IALA	International Association of Marine Aids Navigation and Lighthouse Authorities
IAPP	International Air Pollution Prevention
ILI	in-line inspection
IMO	International Maritime Organisation
IMR	inspection, maintenance and repair
IMS	invasive marine species
ITF	Indonesian ThroughFlow
IUCN	International Union for Conservation of Nature
KEF	key ecological feature
km	kilometre
km2	square kilometres
L	litre
LC50	Median lethal dose required for mortality of 50% of a tested population after a specified test duration
LNG	Liquefied Natural Gas

Ltd.	Limited
m	metre
m2	square metres
m3	cubic metres
MARPOL 73/78	International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978
MEG	mono-ethylene glycol
mg/L	milligrams per litre
MGO	marine gas oil
MNES	Matters of National Environmental Significance
MODU	mobile offshore drilling unit
MSDS	material safety data sheet
nm	nautical miles
NMR	North Marine Region
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NPF	Northern Prawn Fishery
NSW	New South Wales
NT	Northern Territory
NT/RL	Northern Territory petroleum Retention Lease
NTSC	Northern Territory Seafood Council
NWMR	North-west Marine Region
OCNS	Offshore Chemical Notification Scheme
OPEP	Oil Pollution Emergency Plan
OPGGS Act	Offshore Petroleum and Greenhouse Gas Storage Act 2006
OPGGS (E) Regulations	Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009
OPP	Offshore Project Proposal
OSMP	Operational and Scientific Monitoring Program
pers. comm.	personal communication
PK	peak
PLET	pipeline end termination
ppm	parts per million
Pty	Proprietary
PW	produced water
PWSNT	Parks and Wildlife Service Northern Territory
RBI	risk based inspection
RO	reverse osmosis
ROV	remotely operated vehicle
SD	sustainable development
SEL	sound exposure level
SKM	Sinclair Knight Merz (now Jacobs)

SOLAS	International Convention for the Safety of Life at Sea 1974
SOPEP	Shipboard Oil Pollution Emergency Plan
SOx	sulphur oxide
SPL	sound pressure level
TEG	triethylene glycol
THPS	Tetrakis (hydroxymethyl) phosphonium sulfate
TRF	Timor Reef Fishery
TSHD	trailer suction hopper dredge
µg/L	micrograms per litre
µPa	micropascal
UTAs	umbilical termination assemblies
WA	Western Australia

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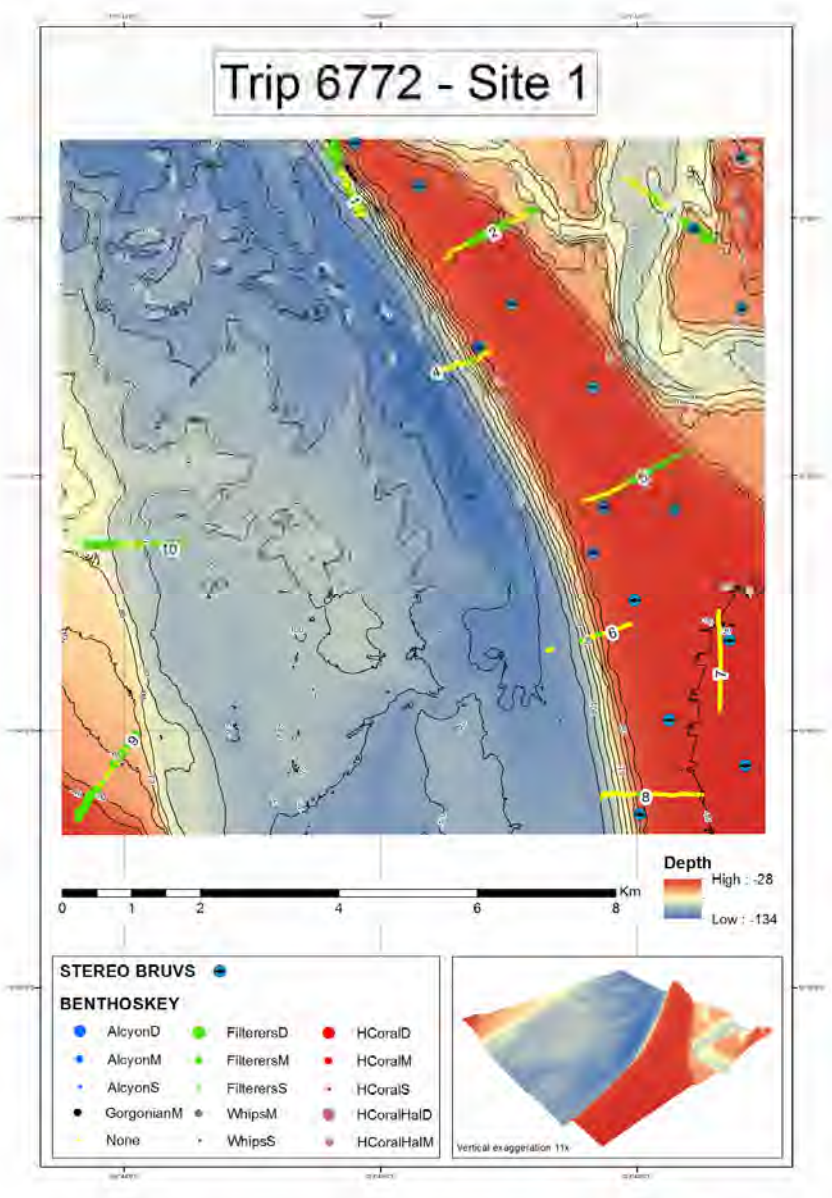
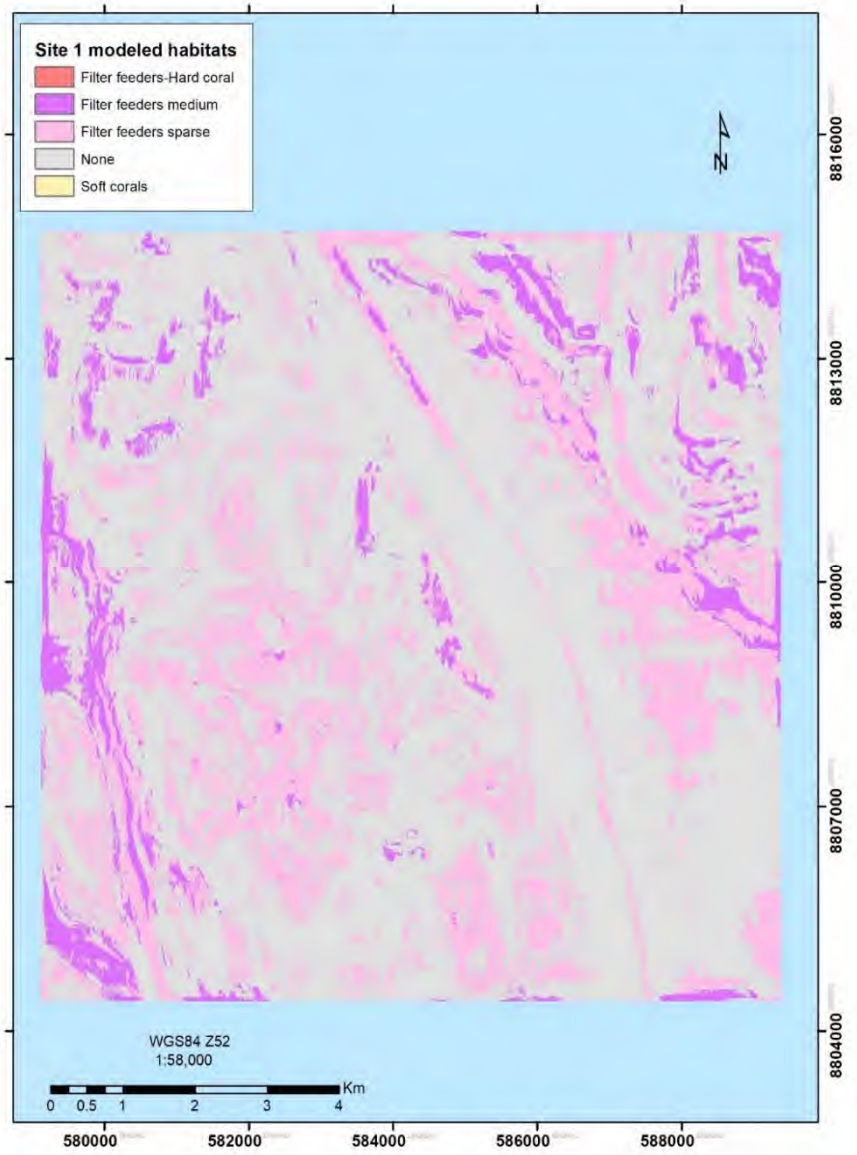
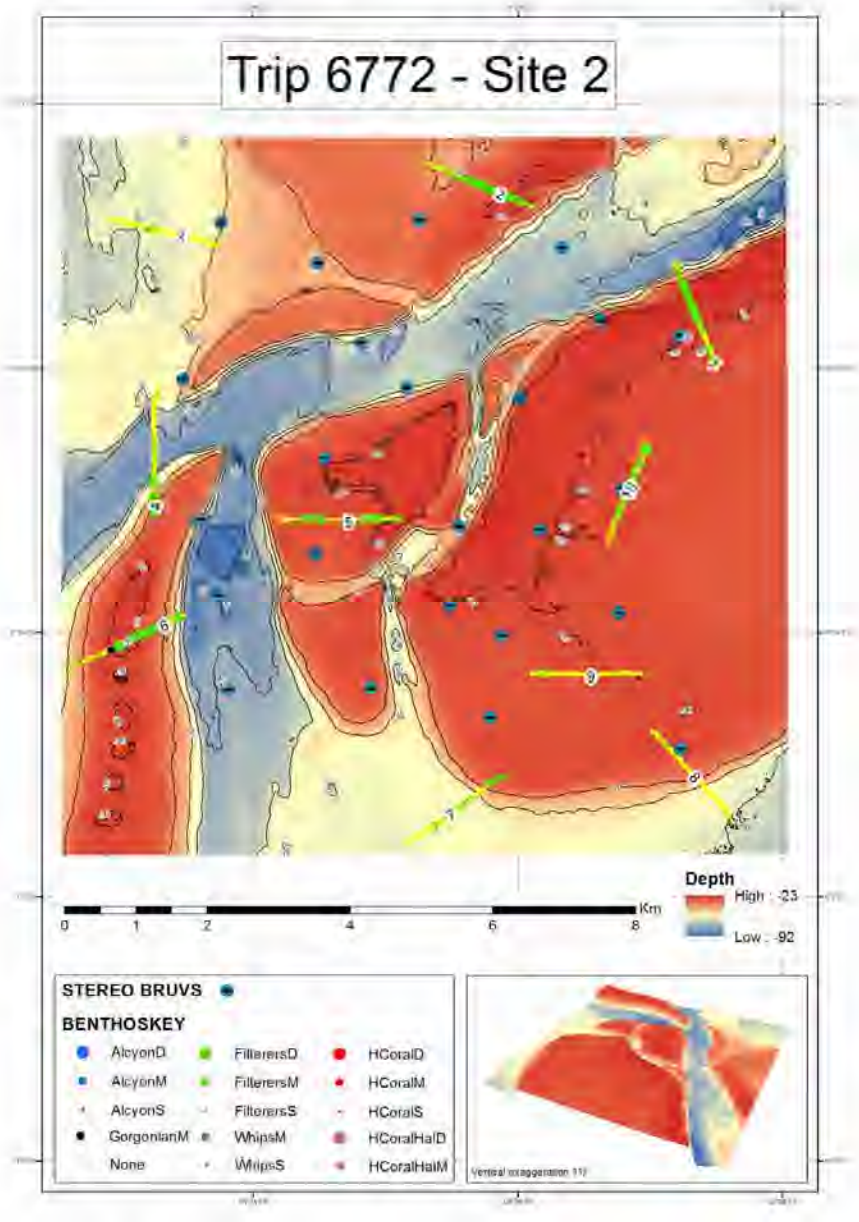
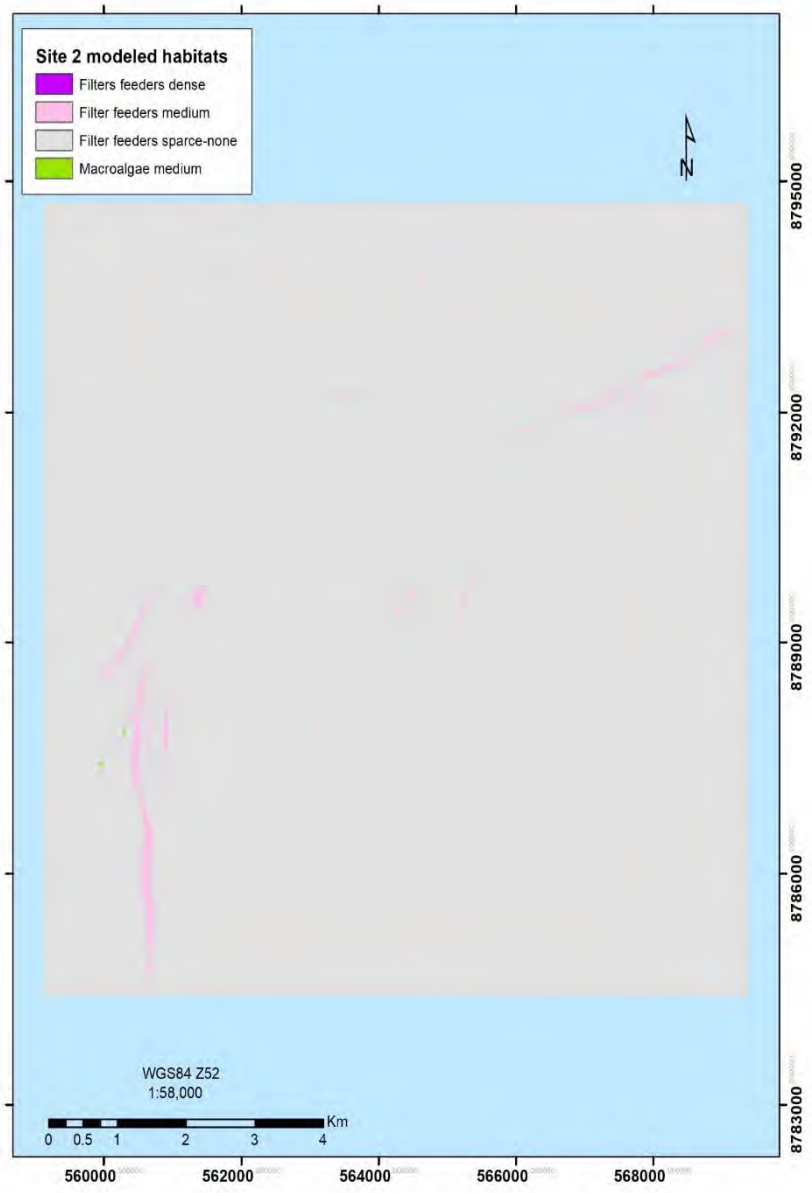
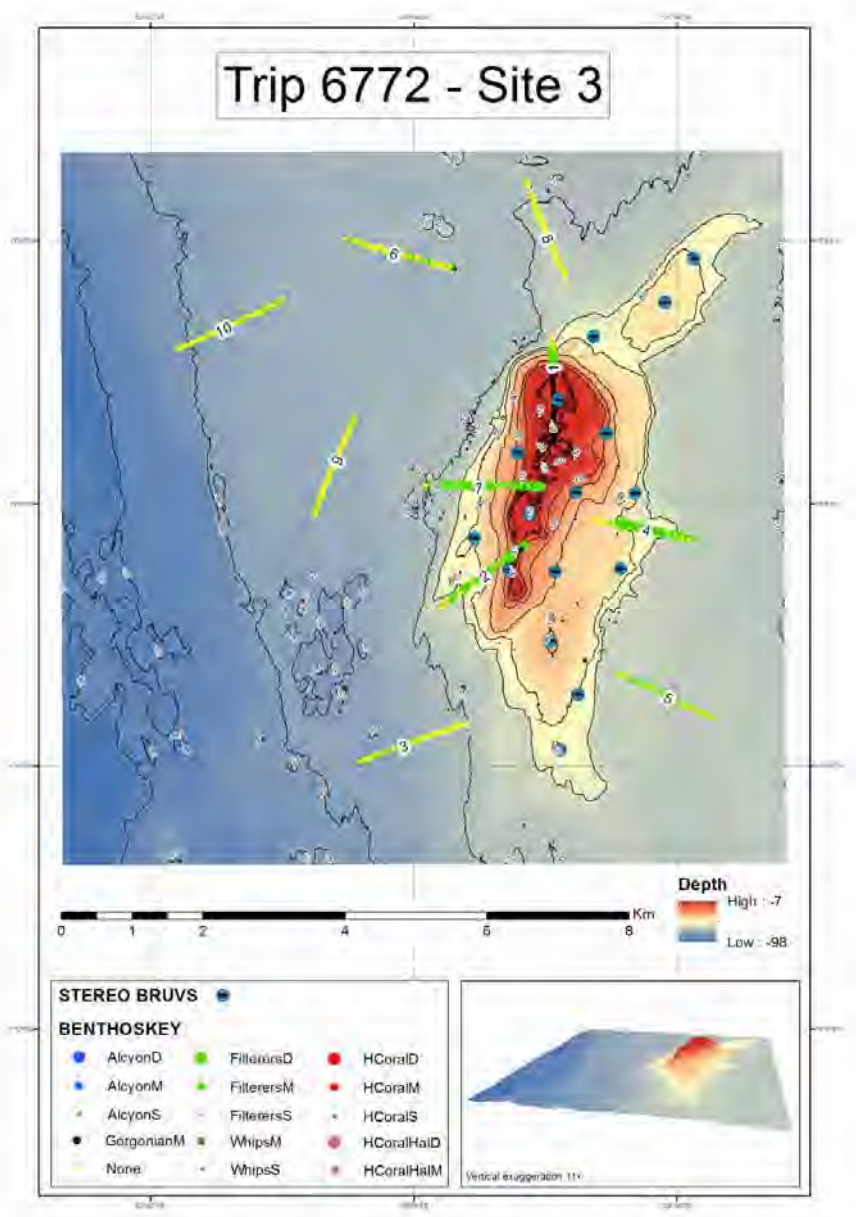
APPENDIX A: HABITAT MAPS FOR THE SIX SITES SAMPLED INSIDE AND OUTSIDE THE OCEANIC SHOALS MARINE PARK BY AIMS IN 2017

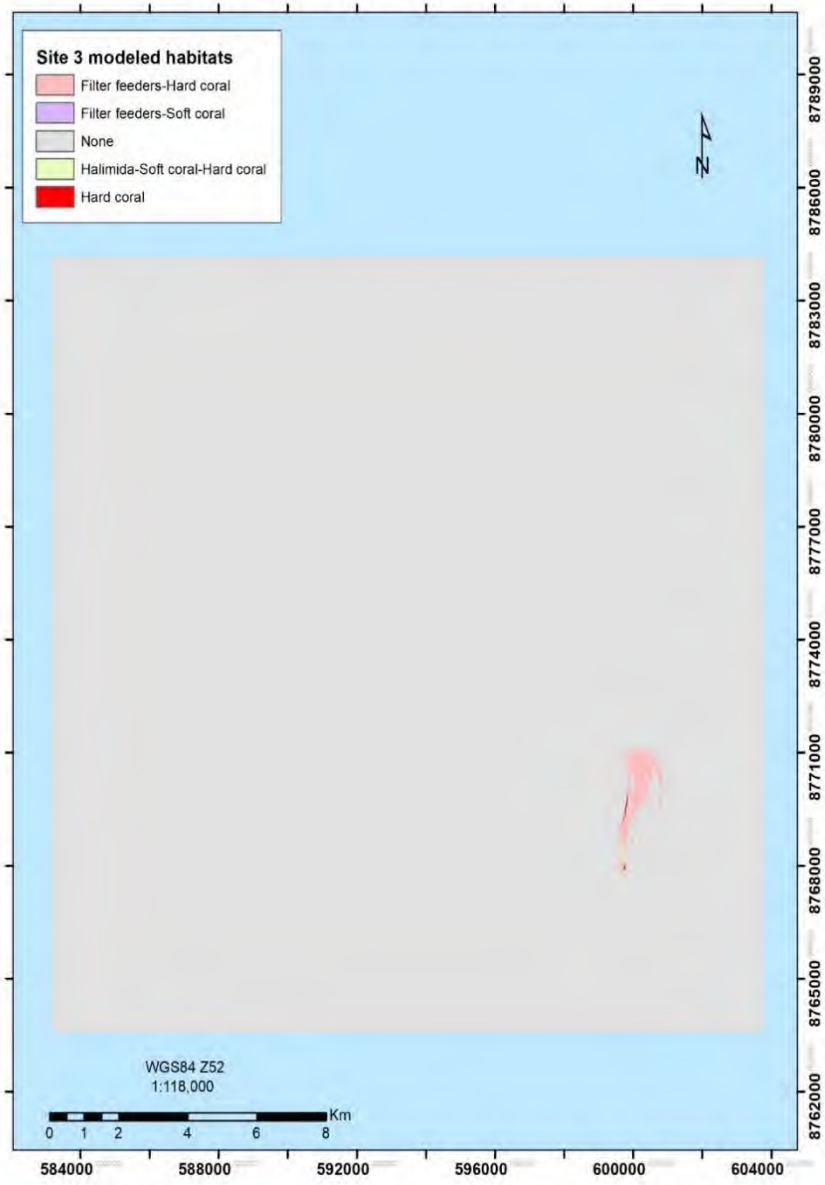


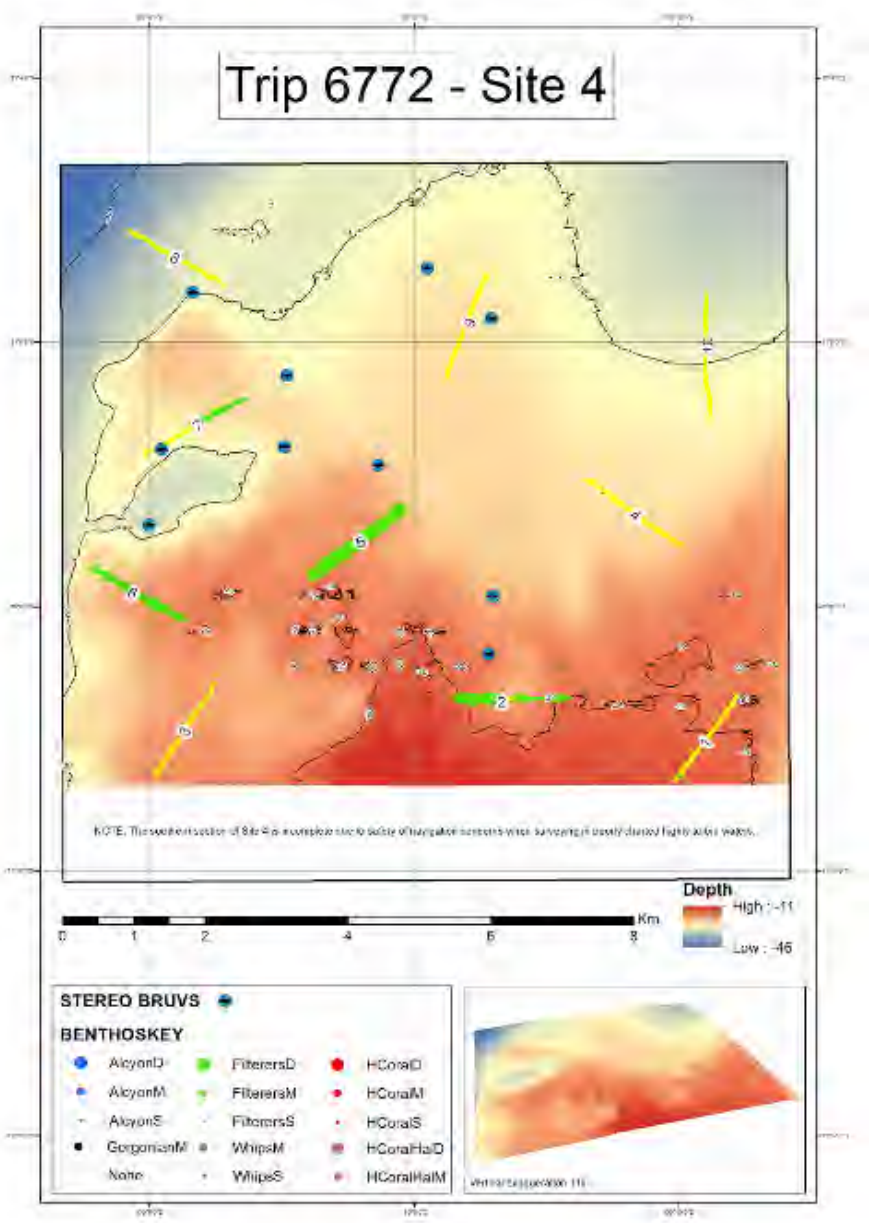


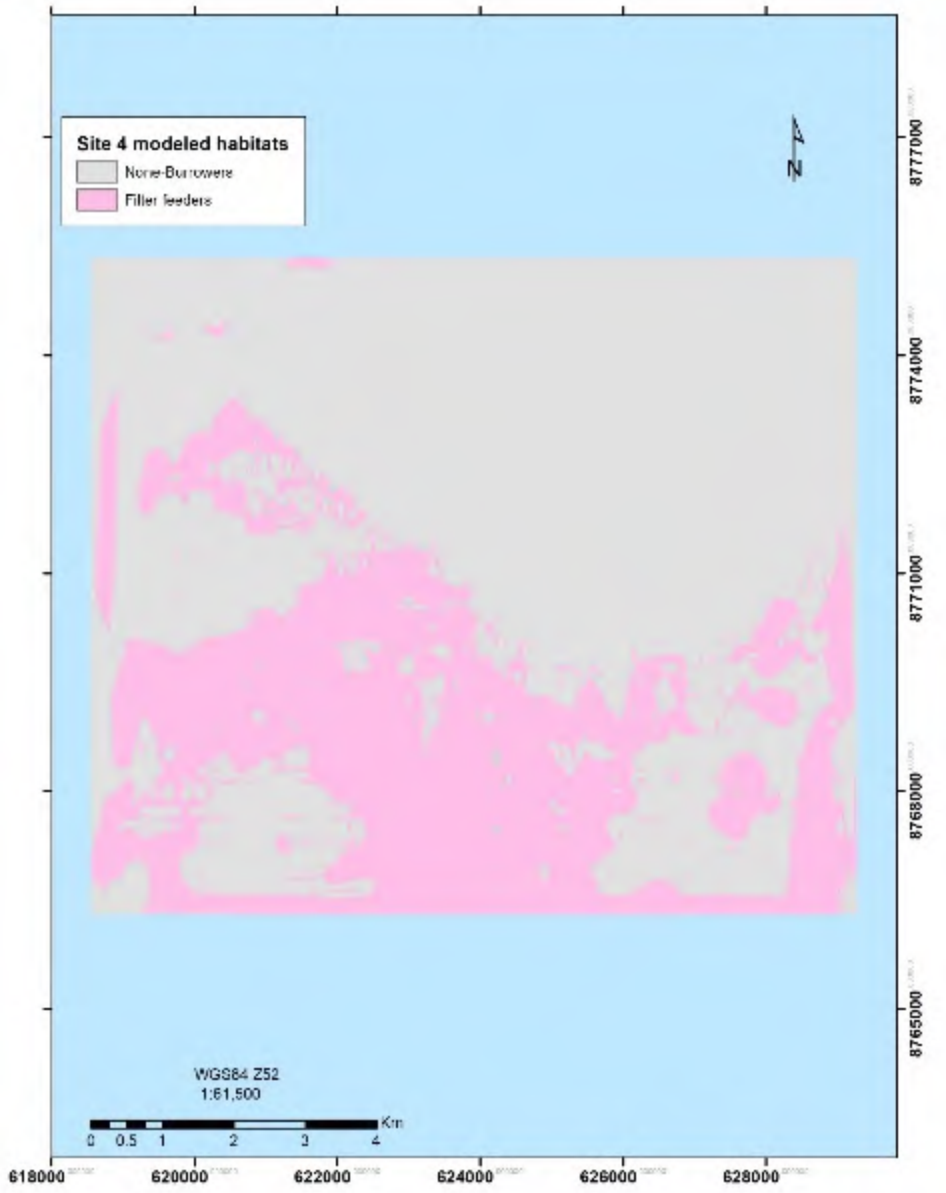


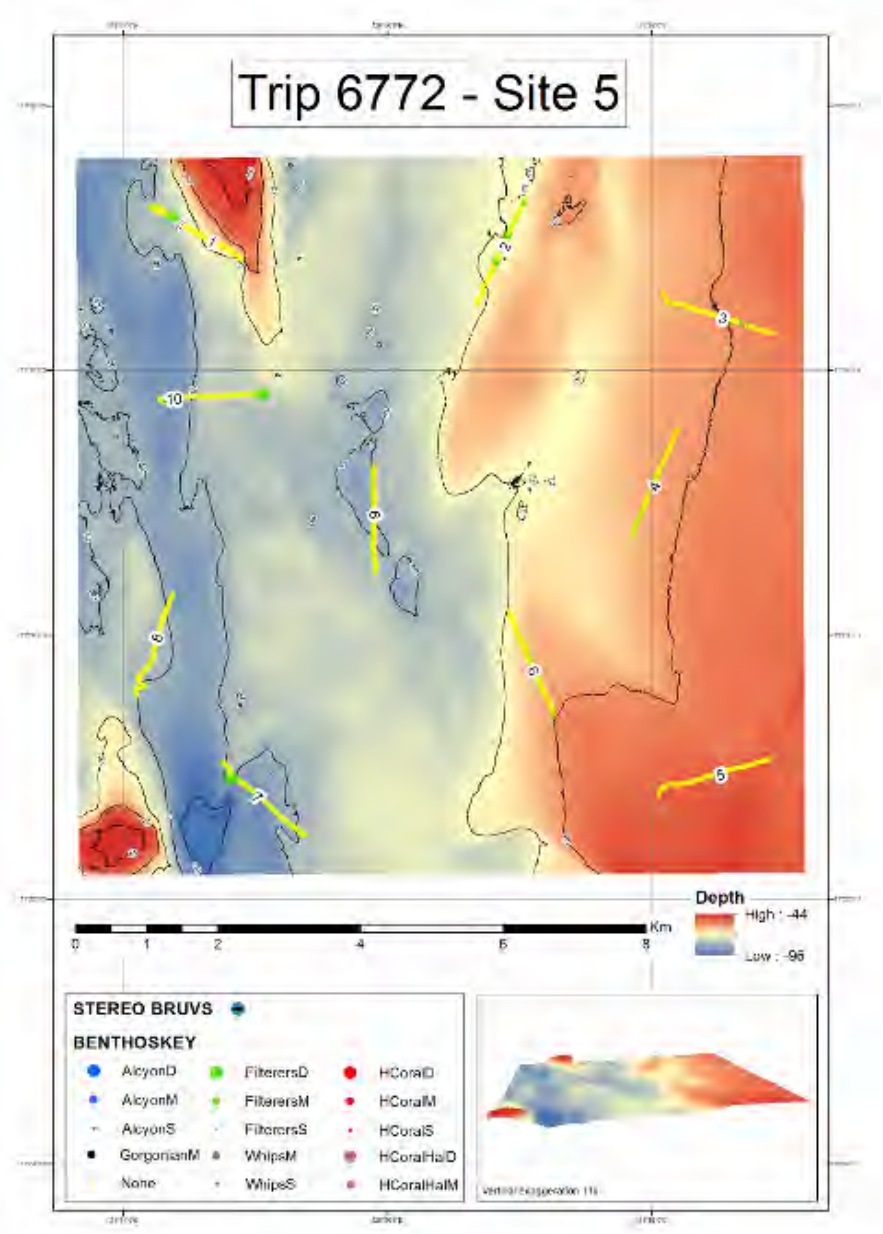


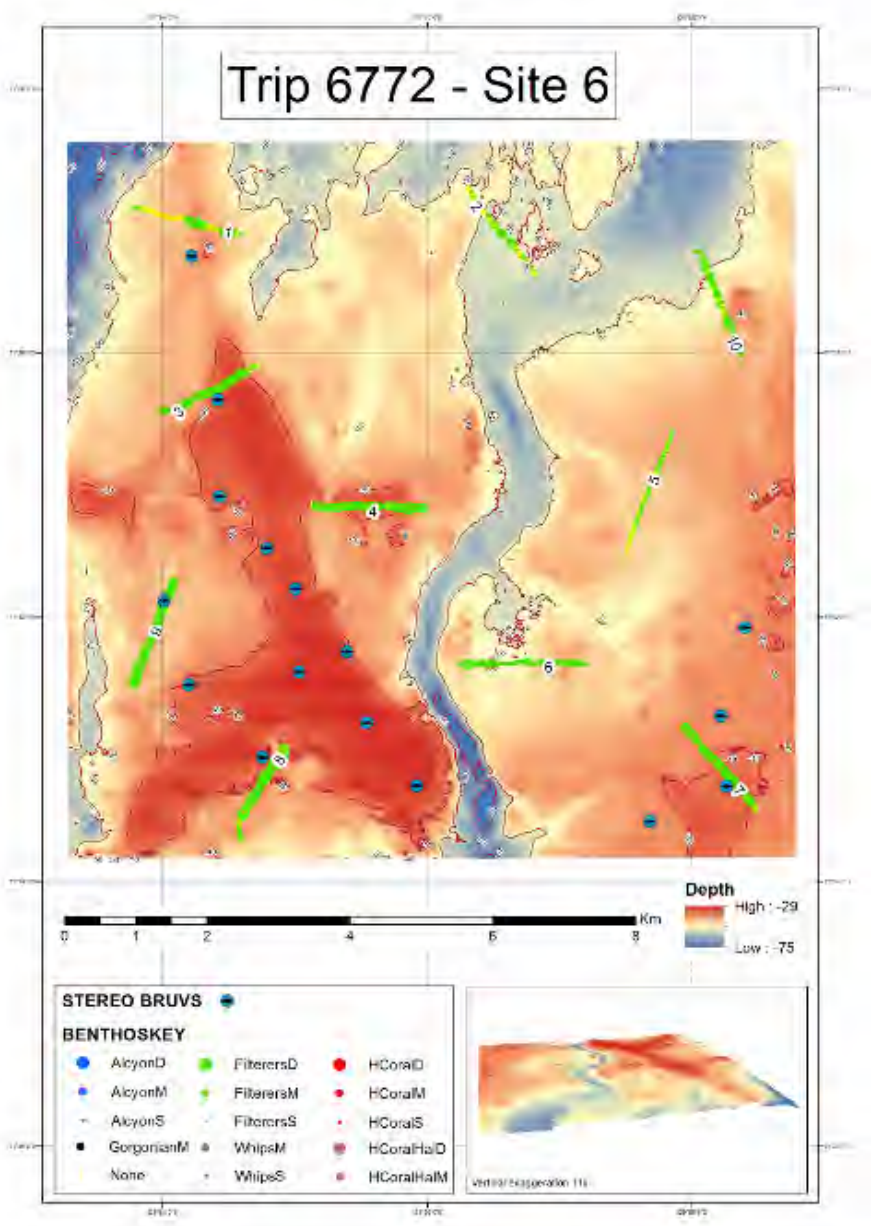


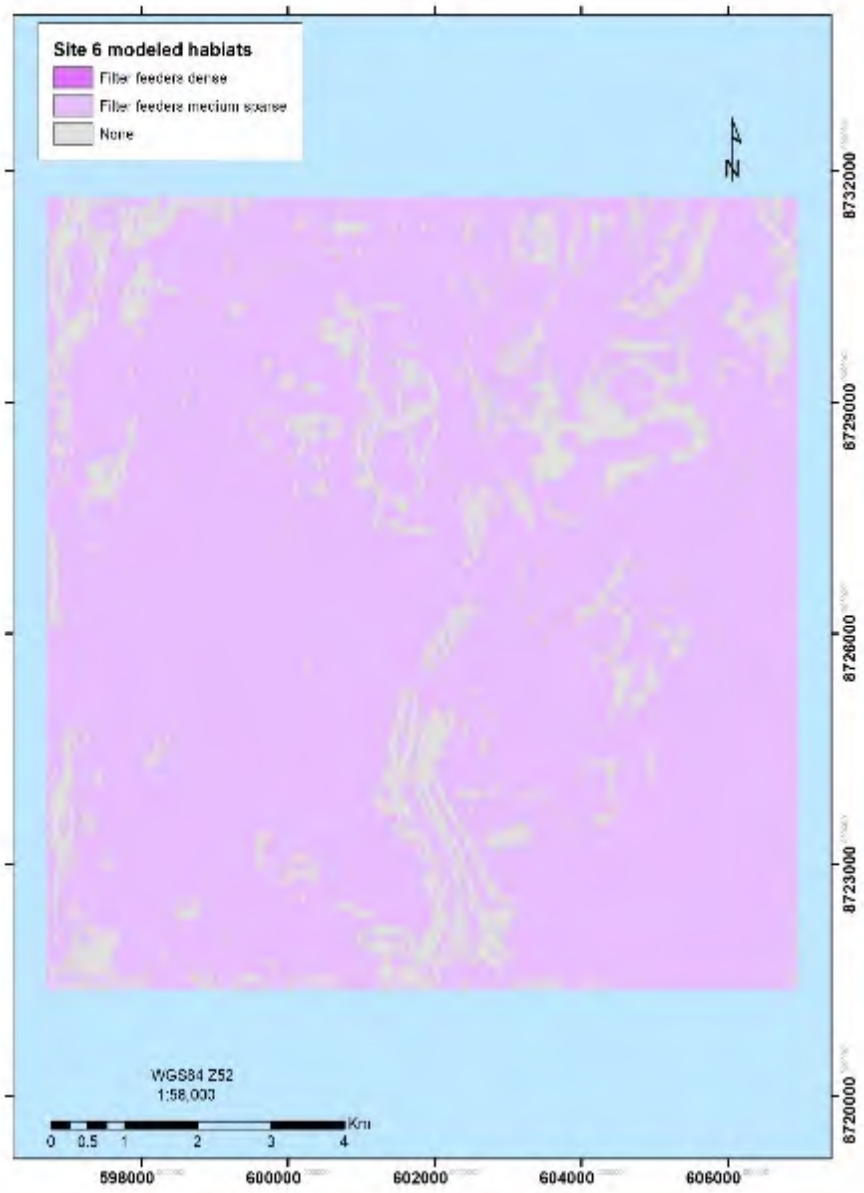












APPENDIX B: EPBC ACT PROTECTED MATTERS SEARCH TOOL REPORT

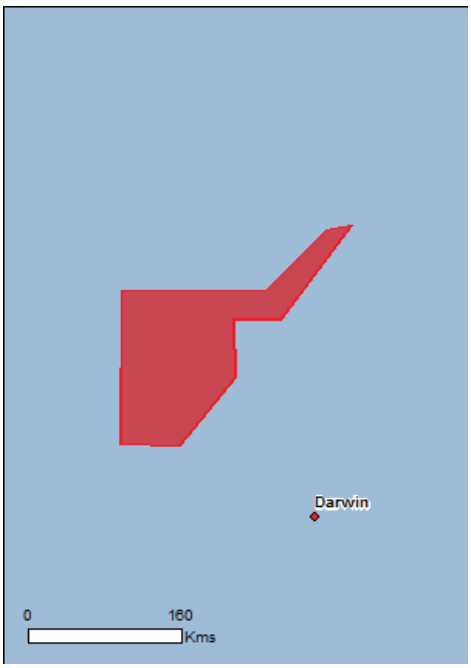
EPBC Act Protected Matters Report

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: 20/06/18 17:41:54



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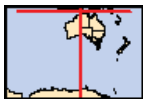

Matters of National Environmental Significance

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:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	2
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	20
Listed Migratory Species:	38

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:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	71
Whales and Other Cetaceans:	24
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	1

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	None
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	2

Matters of National Environmental Significance

Commonwealth Marine Area [Resource Information]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside 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
Extended Continental Shelf

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
North

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat 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	Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Chelonia mydas Green Turtle [1765]	Vulnerable	Congregation or aggregation known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Congregation or aggregation known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Congregation or aggregation known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Sharks		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis garricki Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat may occur within area
Glyphis glyphis Speartooth Shark [82453]	Critically Endangered	Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat known to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat 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		
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Migratory Marine Species		

Name	Threatened	Type of Presence
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Congregation or aggregation known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Congregation or aggregation known to occur within area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Congregation or aggregation known to occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat likely to occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat known to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Species or species habitat may occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area

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 may occur within area
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat may occur within area
Fish		
Bhanotia fasciolata Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
Corythoichthys flavofasciatus Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys haematopterus Reef-top Pipefish [66201]		Species or species habitat may occur within area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophorus Ribboned Pipehorse, Ribboned Seadragon [66226]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys parvicarinatus Short-keel Pipefish, Short-keeled Pipefish [66230]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammals		
Dugong dugon Dugong [28]		Species or species habitat may occur within area
Reptiles		
Acalyptophis peronii Horned Seasnake [1114]		Species or species habitat may occur within area
Aipysurus duboisii Dubois' Seasnake [1116]		Species or species habitat may occur within area
Aipysurus eydouxii Spine-tailed Seasnake [1117]		Species or species habitat may occur within area
Aipysurus laevis Olive Seasnake [1120]		Species or species habitat may occur within area
Astrotia stokesii Stokes' Seasnake [1122]		Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Congregation or aggregation known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Disteira kingii Spectacled Seasnake [1123]		Species or species habitat may occur within area
Disteira major Olive-headed Seasnake [1124]		Species or species habitat may occur within area
Enhydrina schistosa Beaked Seasnake [1126]		Species or species habitat may occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Congregation or aggregation known to occur within area
Hydrophis atriceps Black-headed Seasnake [1101]		Species or species habitat may occur within area
Hydrophis coggeri Slender-necked Seasnake [25925]		Species or species habitat may occur within area
Hydrophis elegans Elegant Seasnake [1104]		Species or species habitat may occur within area
Hydrophis inornatus Plain Seasnake [1107]		Species or species habitat may occur within area
Hydrophis mcdowelli null [25926]		Species or species habitat may occur within area
Hydrophis ornatus Spotted Seasnake, Ornate Reef Seasnake [1111]		Species or species habitat may occur within area
Hydrophis pacificus Large-headed Seasnake, Pacific Seasnake [1112]		Species or species habitat may occur within area
Lapemis hardwickii Spine-bellied Seasnake [1113]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Congregation or aggregation known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area

Name	Threatened	Type of Presence
Parahydrophis mertoni Northern Mangrove Seasnake [1090]		Species or species habitat may occur within area
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

Whales and other Cetaceans [Resource Information]

Name	Status	Type of Presence
Mammals		
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Delphinus delphis Common Dophin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Feresa attenuata Pygmy Killer Whale [61]		Species or species habitat may occur within area
Globicephala macrorhynchus Short-finned Pilot Whale [62]		Species or species habitat may occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Kogia breviceps Pygmy Sperm Whale [57]		Species or species habitat may occur within area
Kogia simus Dwarf Sperm Whale [58]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Species or species habitat may occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat may occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Commonwealth Reserves Marine [Resource Information]

Name	Label
Oceanic Shoals	Multiple Use Zone (IUCN VI)

Extra Information

Key Ecological Features (Marine) [Resource Information]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Carbonate bank and terrace system of the Van	North
Shelf break and slope of the Arafura Shelf	North

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

-11.741355 129.03636,-10.331929 129.044161,-10.331929 130.401741,-9.775581 130.966767,-9.729131 131.202095,-10.594242 130.535116,-10.594242 130.095662,-11.126057 130.111373,-11.756736 129.585567,-11.741355 129.036251,-11.741355 129.036251,-11.741355 129.036251,-11.741355 129.03636

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

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

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

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

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APPENDIX C: DESCRIPTION OF ENVIRONMENTAL IMPACTS AND RISKS

Physical presence – interactions with commercial fishing

Commercial fishing is recognised as a value of the Oceanic Shoals marine park in the North Marine Parks Network Management Plan (2018) and is an allowable activity with approval from the Director of National Parks in both the multiple use zone and the HPZ that would be crossed by the proposed pipeline. The jurisdictions for two active fisheries overlap the multiple use zone and HPZ of the marine park, the Northern Prawn Fishery (NPF) and the Timor Reef Fishery (TRF). The NPF is a demersal trawl fishery, with trawling designated as an activity not allowed under the management plan for the Oceanic Shoals marine park except for within the Special Purpose Zone (Trawl), distant from the proposed pipeline route. Therefore, impacts to the NPF are unlikely as the fishery operates outside of the marine park zones traversed by the proposed pipeline route. No concerns have been raised during the consultation undertaken with the NPF as part of the Barossa OPP development and assessment process. The TRF is recognised as primarily a dropline fishery, a fishing method that is an allowable activity with authorisation, within the multiple use zone and HPZ of the marine park. However, stakeholder consultation undertaken by ConocoPhillips with the Northern Territory (NT) Department of Primary Industry and Fisheries (DPIF) and the NT Seafood Council (NTSC), confirmed there are only two active fishers currently operating in the fishery. One fisher is using traps to target goldband snapper in water depths between 80 m–150 m (maximum of 250 m) along reef fronts and on sand flats located near pinnacles (distant from the proposed pipeline route through the multiple use zone of the marine park). Trap fishing is an allowable activity, with authorisation, only within the multiple use zone of the marine park. The other active licence holder also uses traps but is currently trialling the use of trawl gear as part of a gear trial.

Impacts from interactions from the physical presence of the proposed pipeline and vessel movements associated with installation and IMR activities within the multiple use zone where allowable commercial activities may occur are considered remote given the minor physical scale of the pipeline infrastructure in this zone and the expected short- term presence of installation and IMR vessels (days to weeks).

ConocoPhillips will continue to undertake consultation with relevant commercial fishing stakeholders during the preparation of activity-specific EPs, as part of the Stakeholder Engagement Plan.

Physical presence – interactions with marine fauna

Physical presence of the pipeline:

The proposed pipeline route within the marine park crosses a portion of inter-nesting habitat critical to the survival of flatback turtles and overlaps a portion of the inter-nesting BIA for flatback turtles. It is distant from the foraging BIA for marine turtles. The physical presence of the pipeline during operations is considered highly unlikely to impact the species use of the area, considering the area affected represents a small portion of the inter-nesting habitat critical to the survival of flatback turtles (in the order of approximately < 0.3 km^2 for the direct physical footprint of the pipeline or approximately < 0.0001% for the habitat critical to the survival of flatback turtles – note these figures are for the entire pipeline route, not just the portion of the route within the marine park). Therefore, no impacts are expected at a population level to marine fauna, particularly EPBC listed species.

Vessel movements:

The risk of vessel strike to marine fauna is inherent to movements of all vessel types, including recreational vessels, fishing vessels, passenger ships, whale-watching boats, container ships and naval ships. A review of records of vessel collisions with marine megafauna reported a higher number of collisions occurred with whale- watching boats, naval ships and container ships (DoEE 2016).

The recovery plans and conservation advices for whales (blue, humpback, sei and fin whales) and marine turtles (flatback, olive ridley, green, loggerhead, hawksbill, leatherback) recognise vessel strikes/disturbance as a key threat to these EPBC listed species. It is noted that the Recovery Plan for Marine Turtles in Australia considered both vessel strikes with turtles and disturbance to important benthic feeding and inter-nesting behaviours (DoEE 2017).

The impact from vessel interactions with marine fauna can be as minimal as temporary behavioural changes, ranging to severe impacts, such as injury or mortality resulting from vessel strikes. The potential risk of a collision with marine fauna is directly related to the abundance of marine fauna, the number of vessels and the actual likelihood of a collision occurring is also influenced by vessel speed. As presented in DoEE's Draft National Strategy for Mitigating Vessel Strike of Marine Megafauna (DoEE 2016), the majority of the reported vessel collisions have occurred along eastern or south-eastern Australia, with no reported incidences in NT waters (DoEE 2016).

Vessel speed has been demonstrated to be a key factor in relation to collision with marine fauna, particularly cetaceans and turtles, with faster moving vessels posing a greater collision risk than slower vessels (Laist et.al 2001; Jensen and Silber 2003; Hazel 2009). Laist et al. (2001) suggest that the most severe and lethal injuries to cetaceans are caused by vessels travelling at 14 knots or faster. Turtles will typically avoid vessels by rapidly diving, however, their ability to respond varies greatly depending on the speed of the vessel.

The proposed pipeline route within the marine park crosses a portion of inter-nesting habitat critical to the survival of flatback turtles and overlaps a portion of the inter-nesting BIA for flatback turtles.

Therefore, there may be an increase in number of individuals in this area that are at risk from a vessel strike (particularly during this species' peak nesting period, June to September). The pipelay vessel will be travelling at very low speeds as it expected to lay in the order of approximately 3 km–5 km of the pipeline per day. Therefore, the risk of coming into contact with turtles is low as it is expected turtles will dive or move away from the vessels. The installation of the pipeline within the marine park is also expected to take in the order of one month to complete, with IMR activities expected to occur for days to weeks (refer to **Table 3**). Consequently, the likelihood of a vessel strike and the possibility of injury/mortality to individual turtles during installation and operation of the pipeline is considered remote. The Recovery Plan for Marine Turtles in Australia notes that while a vessel strike can be fatal for an individual turtle, vessels strikes (as a standalone threat) have not been shown to cause declines at a population or stock level and have considered vessel disturbance to be of minor consequence to turtle populations in the NT (DoEE 2017).

Various species of cetacean may traverse the marine park during the proposed pipelay installation and IMR activities, including pygmy blue whales, Bryde's whale, Omura's whales, sei and fin whales, as well as various dolphin species. Given the short timeframe for installation and IMR activities and the wide distribution of whale species, vessel movements are not anticipated to cause any effects at a population or migration level.

Seabed disturbance

The installation and placement of proposed pipeline within the marine park will directly contact the seafloor and will inevitably result in localised impact (direct and indirect) to seabed features and the benthic environment in the vicinity of the proposed pipeline. Disturbance associated with the localised lateral movement or scouring of the proposed pipeline may occur in cyclonic and storm events.

However, based on observations of other pipelines in the region, it is expected that the pipeline will become partially buried which provides further stabilisation in storm events. At this early stage of the project, it is assumed that direct disturbance will be limited and within design specifications that accommodate lateral movement. Detailed design studies will be undertaken

as the engineering progresses to understand how the proposed pipeline would behave in cyclone/storm conditions.

Further assessment of seabed disturbance associated with the potential movement of the proposed pipeline will be included in the activity-specific EP.

Direct impacts:

Benthic habitats (including those within the KEFs and Oceanic Shoals marine park)

The seabed along the proposed pipeline route within the marine park is relatively smooth with gentle slopes. Marine sediments comprise of fine to medium sands/silt and clay. No cemented sediments (i.e. rock/reef outcrops) have been identified from survey work carried out to date along the proposed pipeline route within the marine park.

Within the multiple use zone of the marine park, the proposed pipeline route crosses a small portion of the KEF of the shelf break and slope of the Arafura Shelf and also traverses a portion of the carbonate bank and terrace system of the Van Diemen Rise. These KEFs are recognised as unique seafloor features with ecological properties of regional significance. While the seabed in this area is characteristic of the continental slope, no unique features of ecological significance associated with the values and sensitivities of the shelf break and slope of the Arafura Shelf KEF, such as patch reefs and hard substrate pinnacles, and the seafloor features characteristic of the carbonate bank and terrace system of the Van Diemen Rise KEF, such as hard substrate terraces and banks, ridges, valleys and pinnacles, were observed during the Barossa marine studies program. Nor are these topographically distinct features evident from the bathymetry data derived from multiple seismic, geophysical and bathymetric surveys undertaken across this area. However, even if these features were to occur, the installation, operations (including IMR activities) and physical presence of the proposed pipeline would result in disturbance to only a very small portion of these KEFs and thus not result in a significant impact to the ecological values associated with these seabed features.

From results of studies undertaken by AIMS (Heyward et al. 2017, see Appendix F of the Barossa OPP), benthic habitats within the gas export pipeline corridor are predicted to consist of predominantly burrowers/crinoids (approximately 12%), filter feeders (approximately 7%), macroalgae (approximately 5%), with a substantial portion of the area supporting no benthic habitat (approximately 81%) (**Figure C-1**) and Section 5.5.2.2 of the Barossa OPP). All these habitats are well represented in both the marine park and wider region Heyward et al. 2017 and no significant or restricted areas of benthic habitat are known to occur.

Based on the data available, the proposed pipeline route (including a 250 m buffer either side of the pipeline) only overlaps filter feeders and no benthic habitat within the HPZ, but does overlap burrowers/crinoids habitat in the multiple use zone. Based on this overlap, the physical footprints of the pipeline and installation within the HPZ are expected to result in the loss of approximately 0.05% of the filter feeder habitat present in HPZ% or 0.009% of the total filter feeder habitat available within the marine park. When considering potential loss across the multiple use zone, 0.03% of the burrowers/crinoid habitat present in the marine park and 0.02% of the filter feeder habitat present in the marine park may be lost.

Representativeness of species, assemblages and associated values of the Oceanic Shoals marine park

In response to comments received from Parks Australia during the Barossa OPP public comment period, ConocoPhillips included an environmental performance outcome (EPO) in the OPP that stated:

"To minimise impact to representative species, assemblages and associated values of the Oceanic Shoals marine park, further studies will be used to inform final pipeline routing so the pipeline will not be installed on those representative species, assemblages and associated values if they have not been found in the marine park outside the pipeline corridor."

The collaboration with AIMS (described in **Section 4.1** above and in **Figure C-1**) to undertake additional survey work to provide targeted benthic habitat and fish biodiversity information for six key areas associated with the pipeline corridor (potential pipeline routes) inside and outside the Oceanic Shoals marine park and HPZ was undertaken to address this commitment. Using the data collected during this survey in conjunction with previous survey data, the habitats along the proposed pipeline route and broader pipeline corridor were compared and analysed against the habitats in the Oceanic Shoals marine park.

Statistical analysis undertaken by AIMS on modelled habitats (**Figure C-1**) revealed no significant difference between the proportion of habitats along the pipeline route (plus a 250 m buffer either side of the route) inside and outside the park. Generally, the habitats on the pipeline route and in the pipeline corridor were a proportional subset of the habitats found in the marine park. Given that only two habitat types were found along the proposed pipeline route (filter feeders and none), and as the pipeline route (plus 250 m buffer) is very narrow (i.e. limited data for analyses) further analyses were undertaken using the pipeline corridor data using a 10 sq km moving window Kernel (hotspot analysis). This analysis is considered conservative as the pipeline corridor includes a much larger area and has a greater habitat diversity compared to that of the proposed pipeline route making it more similar to the wider marine park. Despite this, the analysis showed that the marine park had a higher diversity of habitats than the pipeline corridor (suspected to largely be driven by topography and depth characteristics). While univariate statistical analysis suggested the difference in habitat diversity was not significant, Monte Carlo simulation (based on a random subset of data) suggests a 93% probability of significant difference between the habitat diversity in the marine park (higher diversity) and the pipeline corridor (lower diversity) (**Figure C-2**). According to AIMS, Monte Carlo random subset data are likely to be more representative of the try nature of diversity because is less bias to the distribution of habitat types within each area and bias due to the two areas being quite different in size.

It is worth noting that those areas within the pipeline corridor that have higher habitat diversity are located outside the marine park, e.g. at Goodrich Bank and Cape Helvetius (both of which AIMS has previously surveyed and reported on in Heyward et. al. 2017).

Therefore, based on the targeted survey work and analyses undertaken by AIMS, the habitats present under both the proposed pipeline route and the wider pipeline corridor are well represented in both the HPZ and the wider marine park. Consequently, it is highly unlikely that the physical presence of the pipeline, installation activities and operations will result in a significant impact to the ecological values associated with the marine park.

Overall, the seabed disturbance resulting from the installation and operation of the proposed pipeline within the marine park is expected to cause very localised disturbance of benthic habitats and short- term changes to invertebrate communities in the immediate vicinity (within tens of metres). The risk to benthic habitats, including those associated with the KEFs and Oceanic Shoals marine park is considered low.

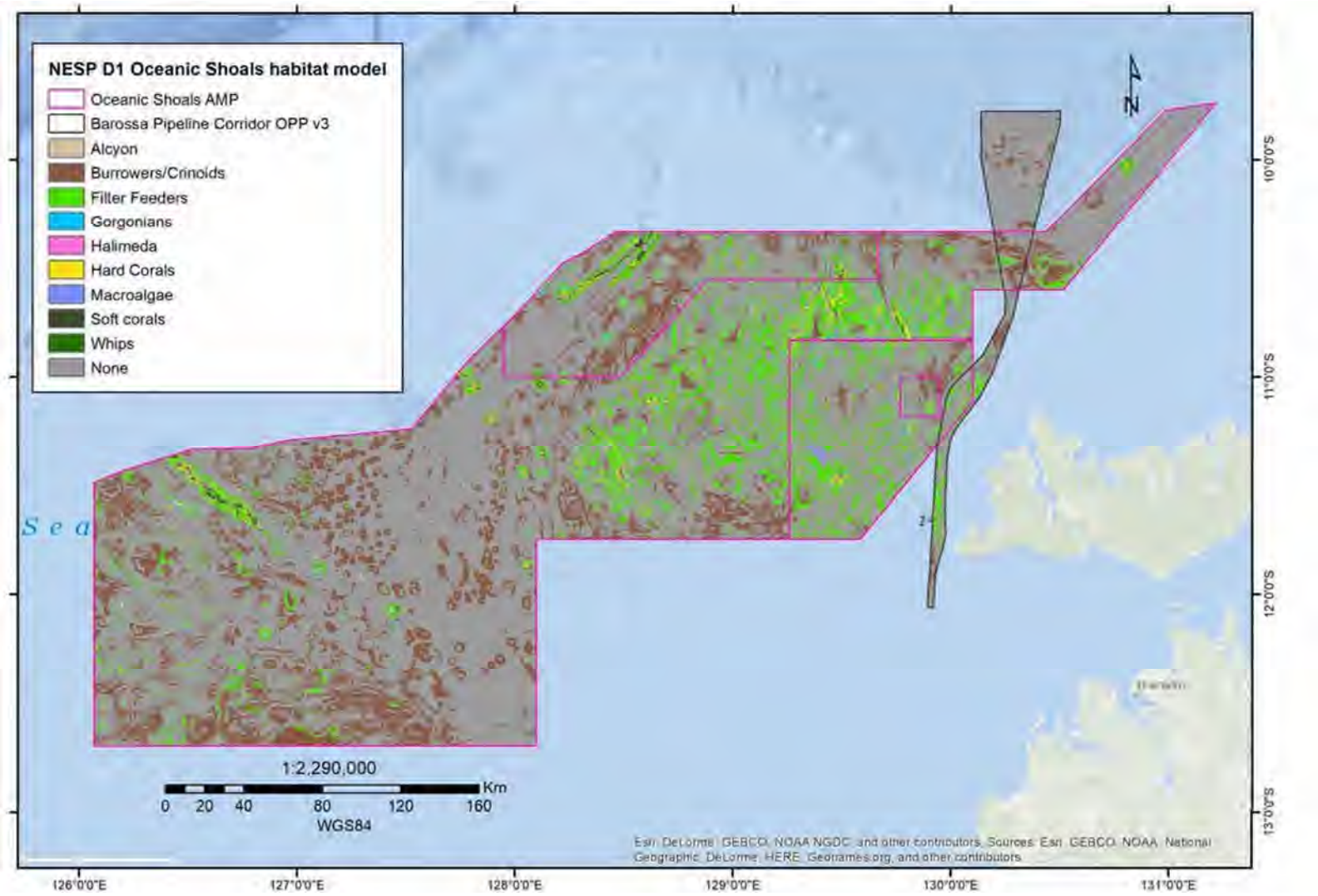

Figure C-1: Map showing the habitat types found in the Oceanic Shoals marine park and the Barossa pipeline corridor (data adapted from that used to produce Figure 5-9 of the Barossa OPP)

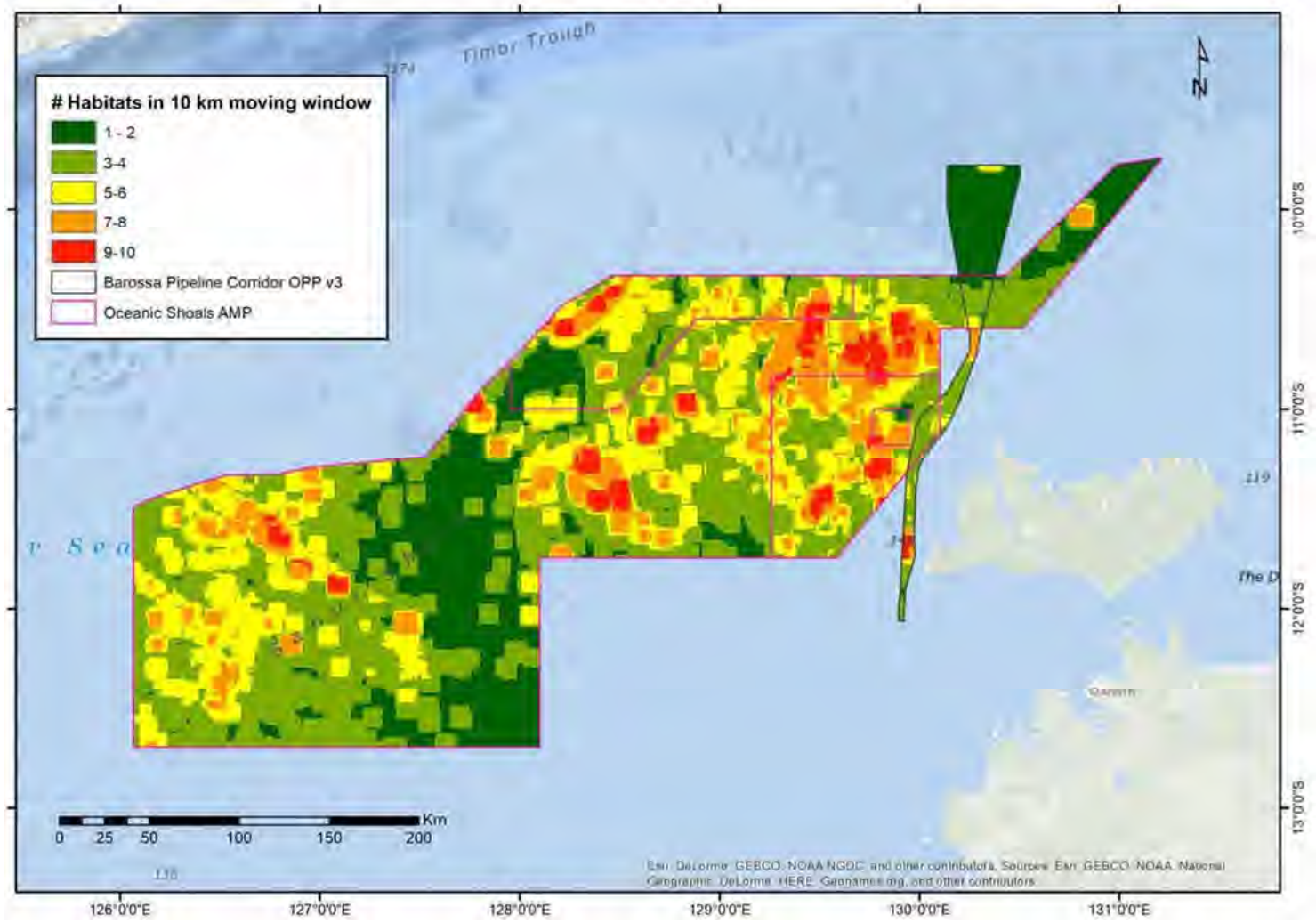

Figure C-2: Map showing number of habitats found in a 10 sq km moving window comparing the Oceanic Shoals marine park with the Barossa pipeline corridor (data adapted from that used to produce Figure 5-9 of the Barossa OPP and analysis based on a random sample of 30,000 pixels extracted with replacement from each area).

Marine fauna

Disturbance of the seabed is not anticipated to significantly affect mobile marine fauna, such as marine mammals, marine reptiles, fish and sharks/rays. The majority of these species are generally present within the water column and are not solely reliant on benthic habitat. The area of seabed to be disturbed represents a very small portion of the habitat available for these species. For example, the proposed pipeline route within the marine park overlaps a small portion of inter-nesting habitat critical to the survival of flatback turtles in which individuals may rest on the seabed between nesting events. Taking into account the outcomes of a professional review by Pendoley (2017), as well as a number of other studies investigating inter-nesting behaviours of marine turtles, the 30 m depth contour is considered to encompass the vast majority of the area within which flatback turtles would undertake inter-nesting activities (i.e. resting on the seabed), with the existing 24 nm (44.5 km) Contiguous Zone Boundary encompassing the extent (waters up to 55 m deep) that inter-nesting turtles are likely to extend to (Pendoley 2017). These studies have demonstrated that while turtles may be present in offshore waters with water depths of up 55 m during the inter-nesting period, they are typically freely moving through these areas before they return to shallow waters (less than 30 m deep and typically shallower than 10 m) to rest in the days leading up to re-nesting activity.

The proposed pipeline route located within the Oceanic Shoals marine park does not intersect areas in which inter-nesting behaviours occur (i.e. resting in waters less than 30 m deep prior to re-nesting) as the minimum water depths of the proposed route where it overlaps inter-nesting habitat critical to the survival of marine turtles are > 30 m deep. The broader area that is traversed by inter-nesting turtles (i.e. waters up to 55 m deep) overlaps the proposed pipeline route, however, the majority of suitable inter-nesting habitat remains available for inter-nesting turtles.

Additionally, although some loss of marine turtle foraging habitat is likely to occur as a result of the installation of the proposed pipeline on the seabed, such foraging habitat is widely represented in the region and any loss is expected to be negligible. Environmental, geophysical and bathymetric surveys have not indicated the presence of any unique or limiting benthic foraging habitat for marine turtles within either the proposed pipeline corridor or along the proposed pipeline route. Therefore, the physical presence of the proposed pipeline is not expected to adversely impact on biologically important behaviours or biologically important habitat, including habitat critical to the survival of marine turtles.

The presence of the pipeline infrastructure has the potential to provide a beneficial impact over time with creation of hard substrate for the settlement, growth and colonisation by marine flora and fauna assemblages, including for fish communities and other marine fauna.

Commercial fishing

The direct disturbance to the seabed by the proposed pipeline is not predicted to negatively affect the catchability of species targeted by commercial fishers, given the small nature of the disturbance in the context of the fishing areas available.

Indirect impacts:

Seabed intervention techniques for the pipeline (for example pre-lay and post-lay span rectification, concrete mattresses and sand bags, rock bolting) and IMR activities may create a sediment plume as the seabed may be actively disturbed. Considering that placement of the pipeline will be via a controlled, slow descent, and that the interaction of maintenance activities with the seabed is expected to be very localised and minor in nature, most of the sediments are likely to settle out within close proximity of the area disturbed (within tens of metres). While some of the finer sediments may travel greater distances (within hundreds of metres) they are highly unlikely to result in adverse impacts.

Given the temporary, reversible and small-scale nature of any increase in turbidity and sedimentation and associated habitat loss, and the nature of benthic communities known to occur within the vicinity of the proposed pipeline route within the marine park (as described above), significant impacts are considered highly unlikely. The area affected by the resulting sediment plume will be influenced by the volume of materials disturbed, the rate of sediments released into the water column, the particle sizes and current speeds. It is expected that any re-mobilisation of excavated sediments will have similar resultant impacts and risks.

Benthic habitats (including those within the KEFs and Oceanic Shoals marine park)

Based on the AIMS extended benthic habitat model (**Figure 4**), benthic communities that may occur within the area influenced by a temporary increase in sedimentation/turbidity (both within the water column and at the seabed) are likely to be predominantly filter feeders and abiotic areas that support no benthic habitat with very small areas of macroalgae and corals, gorgonians, alcynon and Halimeda.

Filter feeders may exhibit a range of physiological responses to acute and chronic sediment stress, including elevated respiration, pore closure, tissue retraction, changes in morphology, bleaching, mortality and increased instances of disease (Schönberg 2016). In general, studies have found that potential impacts are greater with increasing sediment concentration, duration and frequency; more pronounced for finer and more terrestrial (siliciclastic) sediment than for coarser and more biogenic (carbonate) sediments; and more significant for the larval/juvenile stages than the adult populations (Schönberg 2016).

Some species of filter feeders are able to cope with moderate sediment stress based on their growth form and use of passive or active cleaning mechanisms. Schönberg (2016) notes that some species within filter feeding communities have adapted to more turbid/sediment environments and therefore may persist at dredging sites. Species which display special adaptations include endopsammic sponges (living partially buried within sediments), species that are fast growing with morphological plasticity, erect growth forms and growth forms with exhalant openings on apical body parts. Filter feeders that are capable of keeping their surfaces sediment-free are also more likely to be resilient to increased sedimentation and turbidity (Schönberg 2016).

Macroalgal abundance and community composition in coastal areas is known to be influenced by sedimentation. A study by Eriksson and Johansson (2005) investigating the long term effects of natural sediment deposition on the development of a macroalgal community over several growing seasons observed that macroalgae cover and density increased when the process of natural sediment deposition was removed. However, the study observed that responses were species- specific, for example species of ephemeral green algae were highly tolerant to sedimentation while belt-forming perennial brown algae were less so. The study also noted that vegetative propagation and dispersal by fragmentation was common in the study area and suggested this response allowed these species to tolerate sedimentation (Eriksson and Johansson 2005).

A comprehensive review of the effects (direct and indirect) of sedimentation/turbidity on corals concluded the key proximal stressors associated with these activities were reduced light attenuation affecting photosynthesis, high suspended sediment concentrations affecting feeding processes and sediment deposition causing smothering and restriction of solute exchange and light (Jones et al. 2017). A study by Curtin University suggests that inshore corals may be more resilient to natural and human-induced sediment and resuspension events than previously thought (Browne et al. 2015). The study subjected three species of coral to two exposure regimes: pulsed turbidity events for four weeks followed by two months of recovery (constant regime) or pulsed turbidity events every other week followed by one month of recovery (periodic regime). The study observed that the periodic exposure regime was less detrimental to all coral species than the constant exposure regime, as shown by elevated yields and lower tissue morality rates (Browne et al. 2015). Little to no change in coral health was observed following one month of moderate sediment exposure. However, respirations rates increased, and photosynthesis rates declined when exposed to extreme sediment levels suggesting coral stress and reduced health. At extreme sedimentation levels (65 mg cm-2 per day, with an average turbidity of 90 mg/L), species morphological differences were considered to be key determinants of coral survival. For example, the more sensitive foliose corals showed tissue death of up to 17% at extreme sediment levels while no necrosis was observed in the massive (boulder-shaped) coral species and only limited declines in photosynthetic yield (Browne et al. 2015).

Considering the expected short duration of increased sedimentation at any one area, and that benthic habitats in these areas are likely to have a natural resilience to higher sediment/turbid conditions, significant impacts are considered unlikely.

Marine fauna

There is potential for a small portion of inter-nesting habitat critical to the survival of flatback turtles to be affected by increased sedimentation/turbidity as seabed intervention works for the proposed pipeline may be required within the inter-nesting habitat critical to the survival of this species. The potential loss or reduction in quality of habitat may temporarily reduce available foraging and inter-nesting habitats available for marine turtles. In the context of indirect impacts, potential marine turtle habitat may be temporarily lost indirectly through an increase in localised turbidity in the water column.

There is likely to be temporary indirect impacts on potential foraging habitat in the immediate vicinity of the pipeline installation activities. The majority of the benthic habitats within the vicinity of the proposed pipeline route within the marine park are expected to be characterised by filter feeders and burrowers/crinoids, with a substantial portion of the area supporting no benthic habitat (as summarised above). These habitats are well represented elsewhere within the region, with foraging grounds for marine turtles represented across the wider Timor Sea. The area that may be indirectly affected is also not known to support biologically important foraging grounds for any species of marine turtle. Environmental, geophysical and bathymetric surveys have not indicated the presence of any unique or limiting benthic foraging habitat for marine turtles within the vicinity of the proposed pipeline route. In addition, the area has naturally high levels of turbidity and periodic severe events associated with cyclones, demonstrating that local habitats are able to persist in a high turbidity environment.

Flatback and olive ridley turtles are known to naturally feed in turbid, shallow inshore waters. It is expected that sedimentation effects from seabed intervention activities will be localised in extent, commensurate with the nature of specific method(s) that will be further assessed as part of activity- specific EPs. In summary, there may be a temporary, localised, indirect impacts on flatback turtles associated with the loss of benthos, resulting in a negligible, temporary reduction in foraging habitat.

However, individual turtles are expected to simply move to similar habitats that are well represented in the region, with no significant population level impacts predicted. Therefore, indirect impacts to foraging habitat are not expected to adversely impact on biologically important behaviours or habitat critical to the survival of marine turtles.

Inter-nesting habitat in the immediate vicinity of the pipeline installation and IMR activities may be impacted by sedimentation/turbidity, however, the potential impact is considered low due to the restricted spatial extent that could be impacted by sedimentation/turbidity and as other significant areas for inter-nesting occur beyond the proposed pipeline route. The area of local disturbance may be expected to be in the order of several hundred metres (e.g. as described for the Macedon project, with separation buffer of up to 700 m from primary features), depending on the nature of the activities and local seabed and oceanographic conditions at the time.

Geophysical and bathymetric survey data have indicated that secondary stabilisation, such as trenching/ dredging, is not required for the proposed pipeline route within the marine park. Seabed intervention techniques are expected to be limited to span rectifications using concrete mattresses or grout bags, and rock berms. Therefore, any indirect impacts within the inter-nesting habitat critical to the survival of flatback turtles are likely to be localised and temporary in nature (lasting a matter of days) and would not significantly reduce the amount of available habitat.

Underwater noise emissions

Underwater noise will be generated by vessels and seabed intervention activities during the installation of the proposed pipeline and IMR activities during operation of the pipeline. While several support vessels will be present, the pipelay vessel will be the largest source of noise due to it being the largest vessel. The smaller support vessels will result in a negligible increase in overall noise emissions and therefore are not considered separately. Indicative source levels for pipelay and support vessels are provided in **Table C-1**.

Table C-1: Indicative source levels for pipelay and support vessels

Vessel type	Indicative source level (at 1 m)
Dynamically positioned pipelay vessel	192 dB re 1µPa @ 1 m (SPL)
Support vessel	184 dB re 1µPa @ 1 m

A study by Nedwell and Edward (2004) measured underwater noise from the dynamically positioned Solitaire pipelay vessel at distances between 200 m and 10 km while the vessel was laying a pipeline in deep water (depths between 100 m–250 m) west of the Shetland Islands (north-east of Scotland). The highest SPLs were recorded at a distance of approximately 400 m and showed an almost linear spectrum ranging from 120 dB re 1 µPa at 50 Hz to 80 dB re 1 µPa at 10 kHz (Nedwell and Edward 2004).

Underwater noise from rock dumping and the placement of sand/grout bags is expected to be negligible. A study measuring underwater noise during rock placement by a fall-pipe rock installation vessel in Yell Sound (north of Scotland) concluded there was no evidence that rock placement contributed to underwater noise levels (Nedwell and Edward 2004). Vessel noise was observed to be the dominant source of noise. A review of underwater sound produced by oil and gas activities also stated that noise measurements from rock dumping and pipeline trenching activities were insignificant compared to those generated by construction vessels (Genesis Oil and Gas Consultants 2011).

No significant feeding, breeding or aggregation areas for marine mammals, sea snakes, fish, sharks or rays are known within the vicinity of the proposed pipeline route within the marine park. However, the pipeline route within the marine park traverses inter-nesting habitat critical to the survival of flatback turtles. Therefore, flatback turtles may transit the area, particularly during the peak inter-nesting period (June to September).

While underwater noise generated by installation activities may affect individuals passing through the area, impacts at a population level are considered unlikely given the area affected is localised (within hundreds of metres) and only represents a very small portion of the habitat available to marine turtles within the Timor Sea. The key noise sources associated with installation and IMR activities along the proposed pipeline route will also be relatively slow moving (approximately 2 km - 5 km of the pipeline will be laid per day) and/or of short term duration (approximately one to three months to install the proposed pipeline and IMR activities expected to take days to weeks) and will be below levels therefore, no significant impacts are expected.

A number of cetacean species may traverse the marine park in the vicinity of the proposed pipeline installation and IMR activities, with all of the expected species having broad distributions within Australian waters. Impacts to cetaceans at a population level from underwater noise generated by installation and IMR activities is considered highly unlikely given there are no regionally significant feeding, breeding or aggregation areas for marine mammals in the vicinity of the proposed pipeline route within the marine park. Any spatial and temporal scale of behavioural response effects would be limited to the localised area. Therefore, only individual marine mammals that transit the area may be affected, with these individuals being exposed for only a relatively short period of time. Significant impacts at a population level are not expected.

In general, considering the open water location of the project, known movements of marine fauna, underwater noise generated from the project is considered unlikely to significantly affect these key values and sensitivities, particularly at a population level.

No significant impacts to the catchability of fish species targeted by commercial or Indigenous fishers are expected given the short duration and localised nature of any potential impacts (within hundreds of metres), as discussed above. Therefore, the area of the marine environment influenced by underwater noise associated with the installation of the proposed pipeline and IMR activities represents a very small proportion of the area available to be fished.

Given the relatively localised source of noise from vessels and short duration of installation activities at any one location, significant impacts on any marine fauna transiting through the area are highly unlikely.

Light emissions

Light emissions from the installation of the proposed pipeline and IMR activities within the marine park have the potential to affect marine fauna, particularly marine turtles, migratory seabirds, fish and sharks.

There are no permanent light sources associated with this subsea infrastructure and installation and IMR vessels will be the only project-related light source associated with the proposed pipeline.

Vessels will be lit at night to provide a safe working environment and to comply with relevant maritime navigation requirements. The pipelay vessel will be the largest of the project vessels that may operate within the marine park. The pipe welding deck for modern pipelay vessels is typically encased within the vessel structure, reducing light spill to the marine environment when compared to vessels where the welding deck is open. Other areas of the vessel such as cranes and ramps (e.g. pipeline ‘stinger’) are typically lit for operational safety. Cranes are typically the highest point on pipelay vessels. External lighting on working vessels is often reduced (while maintaining a safe working environment) to promote bridge crew night vision.

Assuming a pipelay vessel height of 65 m (based on the highest point on the pipelay vessel Castorone, one of the largest pipelay vessels currently in commission), line of sight calculations have estimated that the highest point of the vessel will be directly visible from the vessel out to approximately 29 km. It is important to note that this is associated with lighting on the crane, with such lighting often being reduced compared to other enclosed sources of lighting on

pipelay vessels. It is also expected that the temporary presence of the pipelay vessel in the area will not significantly increase the volume of vessel traffic that operates in the area. During the installation period, the pipelay vessel will continuously traverse along the pipeline alignment (i.e. not a stationary vessel), therefore the small area of light spill will not impact any one location for an extended duration and is not expected to have any impacts additional to existing vessel traffic traversing the area.

The potential for marine fauna individuals to be affected by light emissions is limited as there are no significant feeding, breeding or aggregation areas for marine fauna, with the exception of marine turtles (discussed below). Therefore, there is likely to be a relatively limited abundance of individuals present in the vicinity of the pipeline route where it traverses the marine park at any time, with individuals likely to be passing through the area.

Light impacts to inter-nesting flatback turtles are of particular relevance to this impact assessment, given the fact that the pipeline route within the marine park intersects inter-nesting habitat critical to the survival of flatback turtles. The actual area likely to be affected by light emissions during pipeline installation or IMR activities at any one time will be considerably localised, given the reality that the area of disturbance will be based on a vessel slowly moving along a defined pipeline route. There is no evidence, published or anecdotal to suggest inter-nesting turtles are impacted by light from offshore vessels, and nothing in their biology would indicate this is a plausible threat (Pendoley 2017, Witherington and Martin 2003). Light spill is likely to be localised to within a few kilometres of the pipeline installation or IMR activity, and the inter-nesting turtle population are exposed to existing light spill from shipping activities using the area between the proposed pipeline route and the Tiwi Islands as a channel for entry/exit to Darwin Harbour. The number of inter-nesting turtles potentially exposed to the pipeline operations over the short-term period during installation or IMR activities within the marine park is considered to be low.

Taking into account the outcomes of a professional review by Pendoley (2017), as well as a number of other studies investigating inter-nesting behaviours of flatback and olive ridley turtles (Section 5.6.3 of the Barossa OPP), the 30 m depth contour is considered to encompass the vast majority of the area within which flatback turtles would undertake inter-nesting activities (i.e. resting on the seabed), with the existing 24 nm (44.5 km) Contiguous Zone Boundary encompassing the extent (waters up to 55 m deep) that inter-nesting turtles are likely to extend to (Pendoley 2017). These studies have demonstrated that while turtles may be present in offshore waters with water depths of up 55 m during the inter-nesting period, they are typically freely moving through these areas before they return to shallow waters (less than 30 m deep and typically shallower than 10 m) to rest in the days leading up to re-nesting activity. The area in which inter-nesting behaviours occur (i.e. resting in waters less than 30 m deep prior to re-nesting) is not within the vicinity the proposed pipeline route within the marine park. In summary, light from installation vessels is unlikely to have a significant effect on individual inter-nesting marine turtles transiting the area given the relatively short-term nature of the installation and IMR activities within the marine park (days to months).

In summary, the impact evaluation demonstrates that impacts to turtles from light during pipeline installation and IMR activities at any time of year are expected to be minor and are not anticipated to result in impacts at a population level, with the risk to the marine turtle populations from the proposed activities considered to be low and undetectable against normal population fluctuations.

Atmospheric emissions

Atmospheric emissions will be generated by the project vessels undertaking installation, IMR and decommissioning activities throughout the life of the proposed pipeline. Emissions to atmosphere from project vessels will be primarily from the combustion of fossil fuels, and potentially from the incineration of waste.

The main emissions identified include carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOX), sulphur dioxide (SO_2), particulate matter, non-methane volatile organic compounds (VOCs) and BTEX (benzene, ethylbenzene, toluene and xylenes). Given the short term duration of installation and decommissioning activities, and the frequency and short term duration of IMR activities, atmospheric emissions will be limited. The actual expected volumes will be dependent on the size of vessel, the duration of the activity and the probability of the vessel having/using a waste incinerator. Although atmospheric emissions from project vessels can result in the localised deterioration of air quality, the impact to the values of the marine park are considered negligible.

Planned discharges

The only planned discharges that will occur within the marine park during installation and IMR activities are routine vessel discharges which include discharge of treated sewage, grey water, putrescible waste, deck drainage and bilge water. The actual expected volumes will be dependent on the size of vessel and the duration of the activities.

Impacts from the discharge of sewage, grey water and putrescible waste are associated with eutrophication, where an increase in nutrients within the water column leads to a depletion of dissolved oxygen and an increase in phytoplankton (i.e. phytoplankton bloom). Deck drainage and bilge generally contain small quantities of hydrocarbons and other chemicals (e.g. detergents). The impact of these substances can vary depending on the types of contaminants, volumes discharged and sensitivity of the receiving environment. If discharged in large enough quantities or for a significant time period, many of these chemicals can have toxic effects to marine organisms.

However, at small quantities and over short durations (as expected during installation and IMR activities) chemicals are expected to disperse rapidly to levels below those which would cause adverse impacts.

Given the listed values and physical environmental characteristics of the marine park (i.e. open, relatively deep offshore environment with significant current and tidal action) any potential impacts from discharged of treated sewage, grey-water, putrescible waste, deck drainage, and bilge water are expected to be highly localised and temporary decreases in water quality, with a negligible increase in cumulative discharges from other vessels in the area and negligible impacts to any marine organisms. In summary, the potential impacts and risks to the marine park from routine discharges described above are considered low.

Waste management

General wastes will be produced during installation and IMR activities and may include domestic wastes (such as paper, plastic, bottles, scrap materials) and industrial/operational wastes (such as chemicals, chemical drums, waste oil and consumables).

The unplanned discharge of solid (hazardous and non-hazardous) waste as a result of inappropriate storage or handling/transfer is likely to result in minor impacts only. Attempts to recover wastes or dropped objects will be made where safe and practicable to do so. Non-buoyant materials not able to be recovered are expected to sink to the seabed within the immediate vicinity of the activity and cause a small, localised impact to benthic habitats. However, as discussed under Seabed Disturbance, benthic habitat in the vicinity of the proposed pipeline route within the marine park is consistent with the broader marine park where benthic habitats are similarly characterised predominantly by filter feeders, burrowers/crinoids and abiotic areas that support no benthic habitat.

Buoyant materials, which are mostly inert and non-hazardous, have the potential to impact marine fauna individuals through ingestion or entanglement as they transit the area. Good housekeeping practices will be implemented on all vessels, therefore reducing the risk of accidental over board discharge of solid waste on marine fauna.

Should an unplanned liquid discharge (e.g. chemicals or waste oil) occur to the marine environment, the discharged fluids would be subject to rapid dispersion and dilution as a result of the prevailing ocean currents that exist within the marine park. Given the typical small volumes and temporary (i.e. instantaneous) duration of accidental discharge events, impacts to water quality would be temporary and highly localised. Subsequently, there would be limited potential for toxicity to marine fauna due to temporary exposure and low toxicity as a result of rapid dilution.

Therefore, any potential impacts to marine fauna would be limited to any individuals that may be transiting within the immediate area of the discharge (within tens to several hundred metres).

Introduction of invasive marine species (IMS)

Activities associated with installation, IMR and decommissioning of the proposed pipeline have the potential to translocate and/or introduce IMS to the marine environment, particularly through the discharge of vessel ballast water or marine biofouling on submersible infrastructure/equipment and vessels. Vessels and equipment associated with the project that are sourced from foreign waters have the potential to introduce IMS. IMS species are of particular concern due to the potential to influence marine ecosystems such as coral reefs and commercial fisheries and, therefore, lead to indirect impacts to marine fauna. Potential impacts caused by IMS can include effects on benthos via competition for space and food, change in species composition resulting in altered community structures, increased predation pressure to native species, introduction of pathogens, a reduction of biodiversity and biofouling of fishing equipment.

The most common transfer mechanisms for IMS that will require management throughout the life of the project include:

- discharge of vessel ballast water taken up from high risk international or domestic offshore waters
- marine biofouling:
    - on equipment that is regularly submerged in water, such as drilling equipment
    - on hulls of MODUs/drill ships, vessels or the FPSO facility and other external niches, such as thruster tunnels
    - of internal niches of MODUs/drill ships, vessels or the FPSO facility, such as anchor chain lockers, sea chests, strainers and seawater pipework, where relevant.

The portion of the proposed pipeline route that intersects the marine park is predominantly located in the mid-shelf region where water depths range between approximately 50 m and 120 m. The KEF of the carbonate bank and terrace system of the Van Diemen Rise and the majority of the open waters associated with the Oceanic Shoals marine park occur in areas where seabed depths range between 50 m and 120 m. IMS are generally unable to successfully establish in deep water ecosystems (Geiling 2014), most likely due to a lack of light or suitable habitat to sustain the growth and survival of IMS. Therefore, most IMS are found in tidal and subtidal zones with only a few species known to extend into deeper waters of the continental shelf (Bax et al. 2003). The likelihood of IMS being introduced as a result of the project are considered to be manageable following implementation of effective key management controls.

Given the suite of management controls that will be implemented throughout the project, the risk of introducing IMS as a result of project activities is considered low and therefore socio-economic impacts on commercial fishing and other marine users in the vicinity of the Tiwi Islands are not expected.

Unplanned wet buckle event during pipeline installation

One of the risks that exists during installation of the proposed pipeline is buckling. If a buckle occurs, it could result in rupture of the pipeline and seawater flooding the pipeline. This is referred to as 'wet buckle' and may occur anywhere along the proposed pipeline route within the marine park.

Should a wet buckle occur the seawater will need to be displaced from the pipeline with chemically-treated (e.g. corrosion and scale inhibitors and biocides) seawater to prevent internal corrosion, and then dewatered to facilitate continued installation of the pipeline. In the event wet buckling occurs during installation of the proposed pipeline within the Oceanic Shoals marine park, the maximum volume of discharge within the marine park would be expected to be significantly less than the full dewatering discharge associated with the planned dewatering of the entire pipeline (approximately 96,710 m^3, note that this planned dewatering discharge will occur at the FPSO location and will not impact the Oceanic Shoals marine park).

The addition of biocides, corrosion inhibitors, scale inhibitors and oxygen scavengers to the seawater is necessary in order to limit activity of corrosion inducing microbial and bacterial micro-organisms in the water to preserve long-term integrity of the pipeline. While the toxicity of biocides, corrosion inhibitors, scale inhibitors and oxygen scavengers is influenced by the specific type of chemical product, ConocoPhillips' preference to select low toxicity chemicals, which still meet technical requirements, will reduce the potential for any risks to the marine environment to a low level.

The selection of chemical products within the dewatering discharge stream will be subject to a chemical assessment process. Products that are rated as Gold or Silver under the OCNS CHARM model or have a OCNS group rating of D or E (i.e. are considered inherently biodegradable and nonbioaccumulative) are considered suitable for use and controlled discharge to the marine environment is permitted. Products that do not meet these criteria will only be considered following assessment and approval. The Gluteraldehyde and THPS biocides are rated as Gold or Silver (Centre for Environment, Fisheries and Aquaculture Science (CEFAS) 2017), are readily biodegradable and do not bioaccumulate (Dow 2013, 2010). Hydrosure 0-3670R is not currently listed under the OCNS CHARM model, however other comparable Hydrosure products are Gold or Silver rated chemicals (CEFAS 2017). Based on a review of Hydrosure 0-3670R and testing on analogous substances containing the same active chemical component as Hydrosure (e.g. quaternary ammonium chloride or alkyl dimethyl benzyl ammonium chloride), the components were not found to bioaccumulate and displayed a degradation rate or half-life in seawater of 8–15 days (i.e. biodegradable) (Chevron 2015). The acute toxicity (96 hour LC50) for Hydrosure has been reported at 1 ppm (Chevron 2015).

While biocide is the predominant chemical constituent of interest in the dewatering discharge, other chemicals may also be present within the discharge stream and have the potential to interact with the marine environment. Ethylene glycols (such as mono-ethylene glycol (MEG) and triethylene glycol (TEG)) biodegrade readily when released to the environment, and several strains of micro-organisms are capable of using ethylene glycol as a carbon source. Evans and David (1974) studied the biodegradation of ethylene glycol in four samples of river water under controlled laboratory conditions. The samples were dosed with 0 mg/L, 2 mg/L or 10 mg/L of ethylene glycol and incubated at two temperatures (20°C or 8°C). At 20°C, primary biodegradation was complete within three days in all four samples, while at 8°C, it was complete after 14 days. Water temperatures near the seabed along the proposed pipeline route within the marine park are expected to result in rapid biodegradation. Further, MEG and TEG are ranked as gold or silver (depending on the chemical supplier) under the OCNS CHARM ranked list of notified chemicals and are considered inherently biodegradable, non-bioaccumulative and suitable for discharge to the marine environment (CEFAS 2017). Given the low residual concentrations of hydration inhibitors of MEG/TEG expected, rapid biodegradation and low toxicity, no significant impacts are expected to the marine environment.

The dewatering discharge associated with a wet buckle event is expected to result in a localised and temporary decline in water quality immediately above the seabed. The biocide concentration is expected to dilute and the area potentially affected by the discharge plume is expected to be localised to within a few hundred metres. The dewatering plume is not expected to impact non- transitory environmental values/sensitivities, such as the surrounding shoals and banks. While individuals of marine fauna may pass through the area, they are unlikely to come into contact with the dewatering discharge for any significant periods of time. Given the dispersion characteristics of the plume and the transient movement of marine fauna, exposure times of sufficient duration that may lead to toxic effects are not expected. The majority of marine fauna species (e.g. turtles, whales, sea snakes, fish) are also generally present within pelagic waters and are not known to dive regularly to these depths. Therefore, contact with the discharge plume is unlikely as they are expected to transit the area above the plume. The likelihood of potential impacts is also further reduced by the temporary nature of the discharge.

As the plume is expected to travel in close proximity to the seabed, there is the potential for localised exposure of benthic habitats and associated species within the vicinity of the discharge location.

From results of studies undertaken by AIMS, benthic habitats within vicinity of the proposed pipeline route within the marine park are expected to consist of predominantly burrowers/crinoids and filter feeders, with a substantial portion of the area also supporting no benthic habitat. No significant or restricted areas of benthic habitat are known to occur. The dewatering discharge is not expected to contact the KEF of the shelf break and slope of the Arafura shelf as the values associated with unique seafloor feature were not observed to occur in the Barossa offshore development area during the Barossa marine studies program, nor are these topographically distinct features evident from the bathymetry data derived from previous seismic surveys acquired by ConocoPhillips in 2007 and 2016, recent geophysical surveys in 2015 and 2017, ROV/ AUV footage collected during pre and post-spud surveys during exploration and appraisal drilling campaigns and from the extensive baseline studies undertaken across this area.

Therefore, the risk of the plume contacting the sensitive benthic habitat values associated with the KEF is improbable. Any potential impacts to benthic communities from the dewatering discharge are expected to be minor and temporary, given the localised area affected and the short-term nature of the discharge.

Decommissioning

Considering that the project is in the early design phase and given the expected life of the project is approximately 25 years, it is premature to define a decommissioning strategy that aims to address environmental impacts in detail. Sources of risk and potential impacts from decommissioning activities at the end of the field life are expected to be broadly comparable with that generated from installation activities, as discussed above.

A detailed EP specific to decommissioning activities will be prepared for review and acceptance towards the end of the field life for the Barossa project. At that time, a detailed evaluation of environmental risk and impacts will be undertaken, with practicable options assessed for ALARP and acceptability. A commitment to meet this forward process is reflected in Appendix D (also see Section 7 of the Barossa OPP).

APPENDIX D: IMPACT AND RISK MANAGEMENT

Table D-1: Environmental Performance Outcomes (adapted from Table 7-1 in the accepted Barossa OPP)

Aspect	Key factors	Potential impacts for key factors	Key management controls	Environmental performance outcomes
Physical presence of the pipeline and project related vessels - interactions with other users of the marine park.	Commercial fishing	Interference with and/or exclusion of commercial fishing vessels. Business interruption (abnormal) to the activities of other marine users due to damage to commercial vessels or fishing gear.	The project will comply with the OPGGS Act 2006 – Section 616 (2) Petroleum safety zones, which includes establishment and maintenance of a petroleum safety zone offshore structure or equipment which prohibits vessels entering or being present within the specified area without written consent. Accepted procedures will be implemented to meet the requirements of ConocoPhillips' Marine Operations Manual (IOSC/OPS/HBK/0003), which includes details of: • roles, responsibilities and competency requirements • requirements (e.g. storage, transfer) for bulk cargo and bulk liquids (including bunker fuel) operations • general requirements for entering/departure and movement within the designated exclusion or petroleum safety zones • checklist required to be completed for vessels entering the exclusion zones in the development area • safe and sustainable dynamic positioning operations. The Stakeholder Engagement Plan will include consultation with commercial fisheries, shipping, AHO and other relevant stakeholders operating in the vicinity of the proposed pipeline route to inform them of the proposed project. Ongoing consultation will also be undertaken throughout the life of the project. Subsea infrastructure and pipelines will be clearly marked on Australian nautical charts published by the AHO. Project-vessels operating within the operational area along the proposed pipeline route will comply with maritime standards such as COLREGS, Chapter V of SOLAS	Infrastructure and equipment associated with the pipeline will not be located in key areas of importance for commercial fishing and other marine users. No vessel collisions or significant adverse interactions with other marine users.
Physical presence of pipeline and project related vessels – interactions with marine fauna	Marine mammals Marine reptiles	Injury or mortality of conservation significant fauna. Change in marine fauna behaviour and movements.	The interaction of the vessels associated with the project with listed cetacean species will be consistent with the EPBC Regulations 2000 - Part 8 Division 8.1 Interacting with cetaceans (except in emergency conditions or when manoeuvring is not possible, such as in the case of pipelay activities), which include: • vessels will not knowingly travel > 6 knots within 300 m of a whale • vessels will not knowingly approach closer than 100 m to a whale • vessels will not knowingly restrict the path of cetaceans. Vessel speed restrictions will be implemented within the defined operational area of the proposed pipeline route, except where necessary to preserve the safety of human life at sea. This will be reinforced through training of selected vessel crew to sight and manage interactions with turtles. Personnel associated with vessel activities will be subject to project inductions which will address the requirements for vessel operators in relation to interactions with marine fauna. Installation schedule of the proposed pipeline will take into consideration seasonal presence/ activity of marine turtles to prevent significant adverse impacts during peak seasonal inter-nesting period for flatback (June to September) and olive ridley (April to August) turtles in proximity to the Tiwi Islands. Should pipeline installation activities be required to be undertaken during this period, within proximity (60 km) of the Tiwi Islands, the following process will be undertaken to identify how the pipeline will be installed to reduce impacts to ALARP and acceptable levels: 1. identify the pipeline installation methods that can achieve the technical requirements of the project and use this to define the operational area within which all pipeline installation activities will be undertaken and within which all environmental impacts and risks relating to pipeline installation will be assessed and managed to achieve the EPOs 2. update of latest knowledge on marine turtle density and seasonal movements within the inter-nesting habitat critical to the survival of flatback and olive ridley turtles, drawing on latest literature, any field observations from future pipeline survey work and advice from discipline experts – building on the information presented in the accepted Barossa OPP 3. combine the outputs from items 1 and 2 above with understanding of the existing environment to identify key environmental values/sensitivities at risk from pipeline installation activities with consideration of any seasonal presence 4. undertake an additional impact assessment that builds on the assessment presented in the accepted Barossa OPP and incorporates the information from items 1, 2 and 3 above to evaluate the environmental impacts and risks and verify the impact assessment conclusions are consistent with those presented in the accepted Barossa OPP. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in the accepted Barossa OPP. As part of the development and implementation of the pipeline installation EP, measures will be defined including no anchoring on shoals/banks, definition of speed limits that will be enforced during pipeline installation, and	Vessel speeds restricted in defined operational areas within the project area, to reduce the risk of physical interactions between cetaceans/marine reptiles and project vessels. Zero incidents of injury/mortality of cetaceans/marine reptiles from collision with project vessels operating within the project area. No significant impacts to turtle populations from installation of the pipeline.

Aspect	Key factors	Potential impacts for key factors	Key management controls	Environmental performance outcomes
			implementation of practical controls for key aspects (e.g. sedimentation/turbidity, underwater noise emissions and light emissions).	
Seabed disturbance	Physical environment – seabed features. Marine reptiles. Marine Parks – Oceanic Shoals. KEF – shelf break and slope of the Arafura Kef - Shelf, and the carbonate bank and terrace system of the Van Diemen Rise.	Direct loss or indirect disturbance of benthic habitat. Physical damage and/ or disturbance to unique seafloor KEFs. Physical damage and/ or disturbance to benthic habitat within the Oceanic Shoals marine park.	Pre-lay surveys of the proposed pipeline installation route will be used to identify areas of seabed that are associated with the seafloor features/values of the shelf break and slope of the Arafura Shelf and carbonate bank and terrace system of the Van Diemen Rise KEFs, seabed related conservation values associated with the Oceanic Shoals marine park or nearby shoals and banks (including Goodrich Bank, Marie Shoal and Shepparton Shoal). The outcomes of the pre-lay surveys will be used to inform route optimisation and reduce environmental impacts. Installation schedule of the proposed pipeline will take into consideration seasonal presence/ activity of marine turtles to prevent significant adverse impacts during peak seasonal inter-nesting period for flatback (June to September) and olive ridley (April to August) turtles in proximity to the Tiwi Islands. Should pipeline installation activities be required to be undertaken during this period, within proximity (60 km) of the Tiwi Islands, the following process will be undertaken to identify how the pipeline will be installed to reduce impacts to ALARP and acceptable levels: 1. identify the pipeline installation methods that can achieve the technical requirements of the project and use this to define the operational area within which all pipeline installation activities will be undertaken and within which all environmental impacts and risks relating to pipeline installation will be assessed and managed to achieve the EPOs 2. update of latest knowledge on marine turtle density and seasonal movements within the inter-nesting habitat critical to the survival of flatback and olive ridley turtles, drawing on latest literature, any field observations from future pipeline survey work and advice from discipline experts – building on the information presented in the accepted Barossa OPP 3. combine the outputs from items 1 and 2 above with understanding of the existing environment to identify key environmental values/sensitivities at risk from pipeline installation activities with consideration of any seasonal presence 4. undertake an additional impact assessment that builds on the assessment presented in the accepted Barossa OPP and incorporates the information from items 1, 2 and 3 above to evaluate the environmental impacts and risks and verify the impact assessment conclusions are consistent with those presented in the accepted Barossa OPP. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in the accepted Barossa OPP. As part of the development and implementation of the pipeline installation EP, measures will be defined including no anchoring on shoals/banks, definition of speed limits that will be enforced during pipeline installation, and implementation of practical controls for key aspects (e.g. sedimentation/turbidity, underwater noise emissions and light emissions). Further surveys along the proposed pipeline route will be used to supplement existing knowledge from habitat assessments to date, to support an evaluation of the representativeness of species and species assemblages found within the vicinity of the proposed pipeline route that intersects the Oceanic Shoals marine park, with other areas of the marine park.	No permanent disturbance to benthic habitats beyond the physical footprint of the proposed pipeline, as relevant to both direct and indirect sources of disturbance to seabed and associated benthic habitats. Minimise disturbance beyond the physical footprint by preventing the loss of significant equipment/ cargo overboard from project vessels. The proposed pipeline route will be designed to minimise, where practicable, areas of seabed that are associated with the seafloor features/values of KEFs and shoals/ banks. To minimise impact to representative species, assemblages and associated values of the Oceanic Shoals marine park, further studies will be used to inform final pipeline routing so the pipeline will not be installed on those representative species, assemblages and associated values if they have not been found in the marine park outside the pipeline corridor. No significant impacts to turtle populations from impacts (direct or indirect) associated with installation of the pipeline.
Underwater noise emissions	Marine mammals Marine reptiles Fish Sharks and Rays	Behavioural disturbance or physiological damage, such as hearing loss, to sensitive marine fauna. Masking or interference with marine fauna communications or echolocation.	Key noise-generating equipment will be maintained in accordance with the manufacturer's specifications, vessel planned maintenance system and/or regulatory requirements. Installation schedule of the pipeline will take into consideration seasonal presence/ activity of marine turtles to prevent significant adverse impacts during peak seasonal inter-nesting period for flatback (June to September) and olive ridley (April to August) turtles in proximity to the Tiwi Islands. Should pipeline installation activities be required to be undertaken during this period, within proximity (60 km) of the Tiwi Islands, the following process will be undertaken to identify how the pipeline will be installed to reduce impacts to ALARP and acceptable levels: 1. identify the pipeline installation methods that can achieve the technical requirements of the project and use this to define the operational area within which all pipeline installation activities will be undertaken and within which all environmental impacts and risks relating to pipeline installation will be assessed and managed to achieve the EPOs 2. update of latest knowledge on marine turtle density and seasonal movements within the inter-nesting habitat critical to the survival of flatback and olive ridley turtles, drawing on latest literature, any field observations from future pipeline survey work and advice from discipline experts – building on the information presented in the accepted Barossa OPP 3. combine the outputs from items 1 and 2 above with understanding of the existing environment to identify key environmental values/sensitivities at risk from pipeline installation activities with consideration of any seasonal presence 4. undertake an additional impact assessment that builds on the assessment presented in the accepted Barossa OPP and incorporates the information from items 1, 2 and 3 above to evaluate the environmental impacts and risks and verify the impact assessment conclusions are consistent with	No significant impacts to turtle populations from noise generated during installation of the pipeline.

Aspect	Key factors	Potential impacts for key factors	Key management controls	Environmental performance outcomes
			those presented in the accepted Barossa OPP. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in the accepted Barossa OPP. As part of the development and implementation of the pipeline installation EP, measures will be defined including no anchoring on shoals/banks, definition of speed limits that will be enforced during pipeline installation, and implementation of practical controls for key aspects (e.g. sedimentation/turbidity, underwater noise emissions and light emissions).	
Light emissions	Marine reptiles Birds	Change in fauna movements and/ or behaviour, such as the attraction or disorientation of individuals.	All vessels in Australian waters adhere to the navigation safety requirements contained within COLREGS, Chapter 5 of SOLAS, the Navigation Act 2012 and subordinate Marine Order 30 (Prevention of Collisions) (as appropriate to vessel class) with respect to navigation and workplace safety equipment (including lighting). IALA Recommendation O-139 on The Marking of Man- Made Offshore Structures will be followed. Installation schedule of the pipeline will take into consideration seasonal presence/ activity of marine turtles to prevent significant adverse impacts during peak seasonal inter-nesting period for flatback (June to September) and olive ridley (April to August) turtles in proximity to the Tiwi Islands. Should pipeline installation activities be required to be undertaken during this period, within proximity (60 km) of the Tiwi Islands, the following process will be undertaken to identify how the pipeline will be installed to reduce impacts to ALARP and acceptable levels: 1. identify the pipeline installation methods that can achieve the technical requirements of the project and use this to define the operational area within which all pipeline installation activities will be undertaken and within which all environmental impacts and risks relating to pipeline installation will be assessed and managed to achieve the EPOs 2. update of latest knowledge on marine turtle density and seasonal movements within the inter-nesting habitat critical to the survival of flatback and olive ridley turtles, drawing on latest literature, any field observations from future pipeline survey work and advice from discipline experts – building on the information presented in the accepted Barossa OPP 3. combine the outputs from items 1 and 2 above with understanding of the existing environment to identify key environmental values/sensitivities at risk from pipeline installation activities with consideration of any seasonal presence 4. undertake an additional impact assessment that builds on the assessment presented in the accepted Barossa OPP and incorporates the information from items 1, 2 and 3 above to evaluate the environmental impacts and risks and verify the impact assessment conclusions are consistent with those presented in the accepted Barossa OPP. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in the accepted Barossa OPP. As part of the development and implementation of the pipeline installation EP, measures will be defined including no anchoring on shoals/banks, definition of speed limits that will be enforced during pipeline installation, and implementation of practical controls for key aspects (e.g. sedimentation/turbidity, underwater noise emissions and light emissions).	
Atmospheric emissions	Physical environment – air quality	Localised reduction in air quality. Contribution to the incremental build- up of GHG in the atmosphere.	All vessels (as appropriate to vessel class) will comply with Marine Order 97 (Marine pollution prevention – air pollution), which requires vessels to have a valid IAPP Certificate (for vessels > 400 tonnage) and use of low sulphur diesel fuel, when possible. The sulphur content of fuel used by project vessels will comply with Regulation 14 of MARPOL Annex VI (as appropriate to vessel class) in order to control SOx and particulate matter emissions. A preventative maintenance system will be implemented, which includes regular inspections and maintenance of engines and key emission sources and emissions control equipment in accordance with the vendor specifications.	Atmospheric emissions associated with the project will meet all regulatory source emission standards. Combustion engines and flaring equipment will be maintained according to vendor specifications to achieve optimal performance.
Planned discharges	Physical environment – water quality and sediment quality. KEFs – shelf break and slope of the Arafura Shelf.	Localised and temporary reduction in water quality associated with increased turbidity, water temperature or salinity leading to impacts to marine fauna. Localised displacement, smothering (mainly associated with discharge of drill fluids and cuttings) or toxicity of benthic habitats/communities that are regionally widespread.	All planned discharges from vessels will comply with relevant MARPOL 73/78 and Australian Marine Order requirements (as appropriate for vessel classification). All planned operational discharges will be managed in accordance with a project Waste Management Plan (and as detailed in activity-specific EPs). Detailed performance criteria for planned discharges will be defined in the activity-specific EPs.	Reduce impacts to water quality from vessel utility discharges by maintaining discharge streams in accordance with standard maritime practices.
Waste management	Physical environment – water quality	Temporary and localised reduction in water quality, i.e. pollution or contamination of the marine environment.	All wastes generated offshore will be managed in accordance with relevant legal requirements, including MARPOL 73/78 and Australian Marine Order requirements (as appropriate for vessel classification). A project Waste Management Plan will be developed and implemented, and will include details of:	Zero unplanned discharge of hazardous and non-hazardous wastes into the marine environment as a result of project activities.

Aspect	Key factors	Potential impacts for key factors	Key management controls	Environmental performance outcomes
	Marine mammals Marine reptiles	Interaction of marine fauna with solid wastes, such as plastic packaging, which may result in physical injury or mortality (through ingestion or entanglement) of the individual.	• the types of waste that will be generated by the project and will require containment, transport to, and disposal at, a licensed facility onshore • management protocols for the handling, segregation and responsible disposal of wastes. For example, non-hazardous and hazardous solid and liquid wastes will be transported safely to shore and disposed onshore at licensed treatment and disposal facilities. • measurable performance criteria • competency and training • audits, reporting and review, including compliance checks via waste manifests. Hydrocarbon and chemical storage and handling procedures will be implemented, including: • secure storage of bulk hydrocarbons and chemicals in areas with secondary containment • storage of hydrocarbon and chemical residues in appropriate containers • stocks of SOPEP spill response kits readily available to respond to deck spills of hazardous liquids and personnel trained to use them • planned maintenance system including maintenance of key equipment used to store and handle hydrocarbons/chemicals (e.g. bulk transfer hoses, bunding) • MSDS available on board for all hazardous substances. Non-hazardous and hazardous wastes will be managed, handled and stored in accordance with their MSDS, and tracked from source to their final destination at an appropriately licensed waste facility. Heavy lifting operations will be undertaken using competent personnel and certified lifting equipment and accessories to minimise the risk of dropped objects.	Hazardous waste will be transported onshore for treatment and/or disposal at licenced treatment and disposal facilities.
IMS	Shoals and banks. Oceanic Shoals marine park KEFs – shelf break and slope of the Arafura Shelf, and the carbonate bank and terrace system of the Van Diemen Rise.	Displacement of native marine species. Reduction in species biodiversity and decline in ecosystem integrity, particularly of shoals/banks.	A Quarantine Management Plan will be developed and implemented, which will include as a minimum: • compliance with all relevant Australian legislation and current regulatory guidance • outline of when an IMS risk assessment is required and the associated inspection, cleaning and certification requirements • implementation of management measures commensurate with the level of risk (based on the outcomes of the IMS risk assessment), such as inspections and movement restrictions • anti-fouling prevention measures including details on maintenance and inspection of anti- fouling coatings. Ballast water exchange operations will comply with the IMO International Convention for the Control and Management of Ships' Ballast Water and Sediments 2004 – MARPOL 73/78 (as appropriate to vessel class), Australian Ballast Water Management Requirements (DoAWR 2017) and Biosecurity Act 2015, including: • all ballast water exchanges conducted > 12 nm from land and in > 200 m water depth • vessel Ballast Water Management Plan stipulating that ballast water exchange records will be maintained • completion of DoAWR Ballast Water Management Summary sheet for any ballast water discharge in Australian waters. The International Convention on the Control of Harmful Anti-fouling Systems on Ships will be complied with, including vessels (of appropriate class) having a valid IAFS Certificate.	Prevent the displacement of native marine species as a result of the introduction and establishment of IMS via project-related activities.
Unplanned discharges	Physical environment– water quality and sediment quality. Shoals and banks. Tiwi Islands. Other offshore reefs and islands and NT/ WA mainland coastline. Marine mammals. Marine reptiles. Birds. Fish.	Hydrocarbon/ chemical contact with shoals/ banks, reefs and islands at concentrations that result in adverse impacts. Alteration of biological communities as a result of the effects on key marine biota. Socio-economic impacts on commercial fishing, traditional fishing (Tiwi Islands) and tourism.	General Bunkering procedures will be implemented, which include: • use of bulk hoses that have dry break couplings, weak link break-away connections, vacuum breakers and floats • correct valve line-up • defined roles and responsibilities – bunkering to be undertaken by trained staff • visual inspection of hose prior to bunkering to confirm they are in good condition • testing emergency shutdown mechanism on the transfer pumps • assessment of weather/sea state • maintenance of radio contact with vessel during bunkering operations. Hydrocarbon and chemical storage and handling procedures appropriate to nature and scale of potential risk of accidental release will be implemented, which will include: • bulk hydrocarbons and chemicals stored in designated areas, with secondary containment • stocks of SOPEP spill response kits readily available onboard and personnel trained to use them • MSDS available on board for all hazardous substances.	Zero unplanned discharge of hydrocarbons or chemicals to the marine environment as a result of project activities. An activity-specific OPEP that demonstrates adequate arrangements for responding to and monitoring oil pollution in the event of a major unplanned release will be accepted by NOPSEMA prior to commencing the activity. An OSMP will be implemented in the event of a major unplanned release. The OSMP will include a number of operational monitoring plans and scientific monitoring plans to guide the spill response and assess potential environmental impacts. Reduce impacts to the marine environment from an unplanned wet buckle event through the application of a chemical selection process of

Aspect	Key factors	Potential impacts for key factors	Key management controls	Environmental performance outcomes
	Sharks and rays. Commercial fishing. Recreational and traditional fishing (Tiwi Islands)		An Inspection Monitoring and Maintenance Program will be developed for the proposed pipeline to assess structural integrity and for any potential leaks. A SIMOPS procedure will be implemented to control and manage any concurrent SIMOPS activities. Vessels Vessel specific controls will align with MARPOL 73/78 and Australian Marine Orders (as appropriate for vessel classification), which includes managing spills aboard, emergency drills and waste management requirements. Vessel movements will comply with maritime standards such as COLREGS and Chapter V of SOLAS. All marine contracted vessels will undergo the ConocoPhillips Global Marine vetting process, which involves inspection, audit and a review assessment for acceptability for use, prior to working on the project. Vessel selection criteria will make considerations for designs and operations which reduce the likelihood of hydrocarbon spills to the marine environment as a result of a vessel collision. All vessels involved in the project will have a valid SOPEP or SMPEP (as appropriate for vessel classification). Spill response in the event of a hydrocarbon or chemical spill will be implemented safely and be commensurate with the type, nature, scale and risks of the spill to key values and sensitivities, as defined in activity-specific OPEPs. A Crisis Management Plan (CMP) will be implemented in the event of a spill, which includes: • emergency response planning • emergency management structure • incident notification • emergency response responsibilities and support providers. An Operational and Scientific Monitoring Plan (OSMP) will be initiated and implemented as appropriate to the nature and scale of the spill and the existing environment, as informed by a net environmental benefit assessment. Discharge associated with unplanned wet buckle event Flooding fluid chemicals (e.g. biocide, oxygen scavengers and dye) will be selected for environmental performance (i.e. low toxicity chemicals), whilst maintaining technical performance requirements, and follow the chemical assessment process (as detailed above). The dewatering of flooding fluid will be detailed in the relevant activity-specific EPs developed during the detailed engineering and design studies for the project. The EPs will detail dewatering requirements, including definition of discharge characteristics (i.e. chemical additives and concentrations), methodology and species thresholds.	flooding chemicals, which includes an environment risk assessment.
Decommissioning	Physical environment (seabed features, water quality and underwater noise).	Physical damage and/ or disturbance to marine substrates and, benthic habitats and marine biota. Temporary and localised reduction in water quality.	Prior to the end of operating life, a decommissioning options study will be undertaken to inform the development of a Decommissioning EP that will be submitted to NOPSEMA. The Decommissioning EP will consider a range of decommissioning options (including those outlined in Section 4.3.4 of the Barossa OPP). The decommissioning options study will consider the merits of each option in the context of health, safety and environmental protection, technological feasibility, local capacity, regulatory compliance, public participation and economic stewardship within a broader ALARP framework to inform selection of the preferred decommissioning strategy. The ALARP framework will seek to minimise disturbance to marine habitats and will include justification for removing or leaving infrastructure on the seabed. The Decommissioning EP will be implemented for the duration of the decommissioning activities.	Decommissioning will not commence until a Decommissioning EP is accepted (by the regulator with jurisdiction for decommissioning at the time), to be informed by the outcomes of a decommissioning options study that considers ALARP and acceptability. The accepted Decommissioning EP will be consistent with any published Commonwealth Government policy or legislation prevailing at the time, as relevant to the environmental merit of removing or leaving infrastructure on the seabed upon abandonment and decommissioning of project facilities.

Attachment C: Analysis of licence application against management plan decision-making criteria

Decision-making criteria	**Advice**
The Director will not authorise an activity unless satisfied that:	
4.3.1.5 (a) The activity is consistent with the zone objectives for the zone or zones in which the activity will be conducted	*Multiple Use Zone (IUCN VI) – The objective of the MUZ is to provide for ecologically sustainable use and the conservation of ecosystems habitats and native species* Benthic habitat modelling carried out by AIMS for the Oceanic Shoals Marine Park indicates the pipeline route through this zone will comprise around 78% bare sediment with relatively small areas of filter feeder, burrower/crinoid and macroalgal benthic habitats. The impact from the pipeline installation and maintenance activities will not significantly affect the representativeness of the habitats and habitat diversity in the marine park. The impact areas are likely to recover over time. The activity is consistent with; (a) the class approval (subject to issuing of an EP for the pipeline by NOPSEMA, and (b) the objective of sustainable use of the MUZ. *Habitat Protection Zone (IUCN IV) – the objective of the HPZ is to provide for the conservation of ecosystems habitats and native species in as natural state as possible while allowing activities that do not harm or cause destruction of seafloor habitats.* The installation of the pipeline is expected to result in the direct loss of 0.05% loss of filter feeder habitat present in the HPZ. This is not considered to be a significant loss of diversity or representativeness in the context of the marine park as it will not result in destruction of habitat types or ecological communities unique to that area of the marine park. The proposed route is estimated to be 78% bare sediment and does not overlie the key ecological features or topographically distinct features considered to contribute to the natural values of the marine park. Thus it is unlikely to impact park values. The *North Marine Parks Network Management Plan 2018* allows for the installation and operations of pipelines in this zone. Thus the activity is consistent with the zone objectives and management plan.
4.3.1.5 (b) The potential impacts and risks of the activity on marine park values will be avoided or reduced to as low as reasonably practicable	This criteria will be addressed by the EP assessment process undertaken by NOPSEMA. They will only accept an environment plan once it has determined the plan meets all the requirements of the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Environment Regulations).The Environment Regulations provide eight acceptance criteria that NOPSEMA must assess each environment plan against. These criteria are that the environment plan: • is appropriate for the nature and scale of the activity • demonstrates that the environmental impacts and risks of the activity will be reduced to as low as reasonably practicable

	• demonstrates that the environmental impacts and risks of the activity will be of an acceptable level • provides for appropriate environmental performance outcomes, environmental performance standards and measurement criteria • includes an appropriate implementation strategy • does not occur in a World Heritage Property (with the exception of environmental monitoring or responding to an emergency) • demonstrates that appropriate consultation has been, and will continue to be, undertaken • complies with the OPGGS Act 2006 and its associated regulations. Inherent within the acceptance criteria and explicit in the Environment Regulations is the requirement to address impacts and risks to protected matters under part 3 of the *Environment Protection and Biodiversity Conservation Act 1999*. As such, if the proponent satisfies these criteria then the risk to park values will be deemed to be as low as is reasonably practicable.
4.3.1.5 (c) The potential impacts and risks of the activity on marine park values and representativeness are acceptable	The proposed route plus a 250m buffer through the HPZ is a small proportion of the area of the HPZ (0.0002%). Based on the results of surveys of the habitats inside and outside the pipeline corridor, the benthic habitats and communities within the route are a subset of those present elsewhere in the marine park. The habitats present along the route are well represented elsewhere in the park and the majority of the route in the HPZ is over bare sediment (78%). Benthic communities are likely to recover from the localised disturbance under and around the pipeline over time and the pipeline will likely provide substrate for the development of new communities. Thus the installation of the pipeline through the HPZ is an acceptable impact and, as it will only contain only dry gas (no liquid hydrocarbon condensate or oil), the operation of the pipeline represents a very low risk to park values.
Before authorising a proposed activity the Director must be satisfied that:	
4.3.1.4 (a) The proponent suitably understands the marine park values.	Section 4 of the application demonstrates ConocoPhillips have addressed the four key categories of marine park values in the Oceanic Shoals Marine Park. The values identified for the Marine Park are primarily natural values due to the remoteness of the marine park from coastal areas. In partnership with AIMS, ConocoPhillips has undertaken habitat survey and modelling to extrapolate the findings of the survey to the rest of the Marine Park. The findings of this work has significantly expanded Parks Australia's knowledge of the marine park natural values and contributed information useful for park management. ConocoPhillips have also undertaken consultation to establish an understanding of the significance of the pipeline corridor to Tiwi Island traditional owners. The Tiwi Land Council has not submitted any concerns to ConocoPhillips about the pipeline or its intended location. s. 47E(d) This

	consultation is considered sufficient for the purposes of understanding cultural values of the reserve. The pipeline route does not intersect any areas of heritage significance nor are there expected to be any impacts to social and economic values from the pipeline installation as it will not affect any currently licenced fishing operations or other activities.
4.3.1.4 (b) The environmental impacts and risks of marine park values are understood, evaluated and able to be avoided or reduced to as low as reasonably practicable	The application has identified that the Oceanic Shoals Marine Park values are primarily natural values. As outlined above (4.3.1.5 (b)) the pipeline construction is contingent on NOPSEMA's approval of the EP. The role of EP assessment process is to ensure that risks to the environment are reduced to as low as is reasonably practicable. As such, the risk to the environment and hence park values will be minimised. As a relevant person, the DNP also has the opportunity to comment on the preparation of the EP and thus provide input into that assessment process.
4.3.1.4 (c) The proponent has the capacity to comply with the conditions of the authorisation.	The proposed conditions of the authorisation will primarily be applied through the approved EP. The only conditions applied in the licence will be around licence charges and the requirement to notify the DNP prior to commencing activities in the marine park or in the low likelihood of pollution incidents or loss of equipment in the marine park. In addition, the applicant will have the opportunity during the licence negotiations to raise any concerns with conditions that they will be held to through a licence.
4.3.1.4 (d) The relevant regulatory requirements have been or will be met.	ConocoPhillips have been active in addressing all the requirements of both NOPSEMA and the DNP's regulatory requirements. ConocoPhillips responded to Parks Australia's comments on the draft OPP that further studies were required in order to understand whether the potential impacts of the pipeline installation on park values were likely to be minimal and therefore acceptable. The level of environmental survey subsequently undertaken to assess the impact of the activity on the Habitat Protection Zone is considered adequate and the licence will meet the required regulatory requirement for Parks Australia.
General decision making prescriptions	
4.3.1.1 Decisions about activities will be consistent with the objectives of this plan, objectives of the zone or zones in which the activity will be or is being conducted, and the applicable reserve management principles (Schedule 8 of the EPBC Regulations).	Allowing the installation of the pipeline is consistent with the objective of the plan to conserve natural values. The plan provides for the ecologically sustainable use of the marine park. Whilst the small scale disturbance does directly impact some benthic habitat in the HPZ, the proposed route is consistent with EPBC reserve management principle 5.02 for the zone, because it is very unlikely to remove *habitat conditions necessary to protect significant species, groups or collections of species, biotic communities or physical features of the environment*. For discussion of zone objectives see 4.3.1.5 (a) above.

4.3.1.2 Decisions will take into account the impacts and risks of the activity on the values of the North Network and/or specific marine park/s, acceptability of those impacts and risks, and potential impacts on marine park users, stakeholders and indigenous people.	ConocoPhillips have undertaken consultation with stakeholders potentially affected by the project during the development of the Barossa OPP. Further opportunity for public comment and formal consultation with be required as per OPGGS Regulations during development of EPs for the pipeline installation, operation and decommissioning. According the application, neither the Northern Land Council nor the Tiwi Land Council have raised any issues with ConocoPhillips plans for the development of the Barossa gas field to date. s. 47E(d) ConocoPhillips have engaged with the fishing industry, regulators and fisheries researchers by coordinating a group to identify opportunities for collaborative research and data gathering to inform fishery management in the region. Their assessment of current fishing activity in the marine park is that there are only two currently licenced commercial fishers that may operate in the vicinity of the pipeline. Both these fishers however, are not likely to be affected by the activity as the methods and area they operate in do not overlap with the proposed route.
4.3.1.3 Impacts and risks of an activity will be assessed in accordance with the processes and policies established under the assessments and authorisations program.	The application has been assessed in accordance with same assessment processes and policies that all activities in marine parks that require authorisation are subject to.

Australian Government
Director of National Parks

STANDARD-FORM COMMERCIAL ACTIVITY LICENCE

A commercial activity licence agreement for installation, operation and decommissioning of a pipeline

Director of National Parks
ABN 13 051 694 963 (**Director**)

ConocoPhillips Australia Barossa Pty Ltd
ABN 44 109 974 932
SK E&S Australia Pty Ltd
ABN 55 158 702 071
Santos Offshore Pty Ltd
ABN 38 005 475 589
(collectively, the **Licensees**)

Australian Government
Director of National Parks

Commercial Activity Licence

PART A – Brief Particulars of Licence

1. How this Licence works – Overview

1.1 **Components of this Licence**

This Licence is comprised of:

(a) Part A – The brief Particulars of this Licence and the execution page;

(b) Part B – Terms and conditions specific to the Licensed Activities and/or the Park, plus an Annexure specifying further details of the Particulars; and

(c) Part C – The general terms and conditions that apply to this Licence.

1.2 **Definitions**

Unless the contrary intention is expressed, capitalised terms used in this Licence are defined in clause 6.1 of Part C.

2. Particulars of this Licence

Item No.	Description	Clause reference	Details
2.1	**Authorisation Number**	Not applicable	**PA2018-00041-1**
2.2	**Director**	Part C clause 6.1	**Director of National Parks** (ABN 13 051 694 963) being a corporation sole continuing under section 514A of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), of Level 1, 51 Allara St, Canberra ACT 2601
2.3	**Licensees**	Part C clause 6.1	**ConocoPhillips Australia Barossa Pty Ltd** (ABN 44 109 974 932) of Level 3, 53 Ord Street, West Perth WA 6005 **SK E&S Australia Pty Ltd** (ABN 55 158 702 071) of Level 30, 108 St Georges Terrace, Perth WA 6000 **Santos Offshore Pty Ltd** (ABN 38 005 475 589) of Santos Centre, 60 Flinders Street, Adelaide SA 5000

Item No.	Description	Clause reference	Details
2.4	**Commencement Date**	Part C clauses 6.1 & 7	The date on which the GEP Licence is granted to the Licensees under the OPGGS Act.
2.5	**Term**	Part C clauses 6.1 & 7.1	The period beginning on the Commencement Date and ending on the date that: (a) is 40 years following the Commencement Date; or (b) the GEP Licence expires, terminates, is revoked or otherwise ends in accordance with the OPGGS Act, whichever is the sooner (as may be extended by agreement of the parties in accordance with clause 7.1).
2.6	**Licensed Activities**	Part B clause 4 & Annexure Part C clauses 6.1; 7.2 & 9	The construction, installation, operation, inspection, maintenance, repair, and decommissioning of the GEP and the related capture of images, video and sound within or of the Park, as more specifically described in the Annexure to Part B.
2.7	**Park**	Part B clause 4 & Annexure Part C clause 6.1	Oceanic Shoals Marine Park.
2.8	**Licence Area**	Part B Annexure Part C clauses 6.1; 8; 9.1 & 22.1	Part of Habitat Protection Zone (IUCN IV) – Zone 2, as specified in the *North Marine Parks Network Management Plan 2018* for the Oceanic Shoals Marine Park available at the Federal Register of Legislation, and as more specifically described in the Annexure to Part B.
2.9	**Director Representative**	Part C clauses 6.1 & 26.1	Position: Director of National Parks Address: 51 Allara Street, Canberra ACT 2600 Email: marineparks@environment.gov.au At the Commencement Date being: James Findlay Phone: 02 6274 1111
2.10	**Licensees Representative**	Part C clauses 6.1 & 26.1	Name: ConocoPhillips Australia Barossa Pty Ltd Attention: Director

Item No.	Description	Clause reference	Details
			Address: 53 Ord Street, West Perth WA 6005 At the Commencement Date being: s. 47F(1) Phone: s. 47F(1) Email: s. 47F(1) @conocophillips.com

3. Execution of this Licence

EXECUTED by the parties as an agreement

SIGNED for and on behalf of the **Director of National Parks ABN 13 051 694 963** by a duly authorised representative

DR JAMES FINDLAY
Name of authorised representative (print)

s. 47F(1)
Signature of authorised representative

5 APRIL 2019
Date

In the presence of

s. 22(1)(a)(ii)
Name of witness (print)

s. 22(1)(a)(ii)
Signature of witness

5 APRIL 2019
Date

SIGNED by **ConocoPhillips Australia Barossa Pty Ltd ABN 44 109 974 932** in accordance with section 127 of the *Corporations Act 2001* (Cth) by:

Name of Director (print)

Signature of Director

Date

Name of Director / Company Secretary (print)

Signature of Director / Company Secretary

Date

SIGNED by **SK E&S Australia Pty Ltd ABN 55 158 702 071** in accordance with section 127 of the *Corporations Act 2001* (Cth) by:

Name of Director (print)	Name of Director / Company Secretary (print)
Signature of Director	Signature of Director / Company Secretary
Date	Date

SIGNED for and on behalf of **Santos Offshore Pty Ltd ABN 38 005 475 589** by its attorney appointed under a Power of Attorney dated :

In the presence of:

Name of attorney (print)	Name of witness (print)
Signature of attorney	Signature of witness
Date	Date

Part B – Park and Licensed Activities specific conditions

4. Licensed Activities specific conditions

4.1 The Licensees must consult the Director as a Relevant Person during the development of all Environment Plans.

4.2 The Licensees must ensure that they and their Personnel fully inform themselves of, and equip themselves for, all potential hazards and conditions they may encounter while conducting the Licensed Activities within the Licence Area.

4.3 The Licensees acknowledge that the Director has no ability to monitor or warn the Licensees of changing environmental hazards or developing hazards within the Park.

4.4 The Licensees must:

(a) notify the Director of the grant of the GEP Licence (if granted) within 24 hours of its grant;

(b) notify the Director of the acceptance or refusal of an Environment Plan by NOPSEMA within 24 hours of its acceptance or refusal;

(c) following acceptance of an Environment Plan by NOPSEMA, provide the Director with a copy of that Environment Plan within 10 Business Days of its acceptance; and

(d) following the completion of construction of the GEP, promptly provide the Director with as built coordinates for the location of the GEP in degrees, minutes and seconds using geographic coordinate system GDA94.

5. Park and Licence Area specific conditions

5.1 The Licensed Activities conducted within the Licence Area must be conducted in accordance with an Environment Plan.

5.2 In developing each Environment Plan, the Licensees must ensure that they:

(a) consult with all relevant representative organisations for Aboriginal or Torres Strait Islander persons whose custodianship or traditional use of the Licence Area or the Park may be negatively impacted by the Licensed Activities;

(b) use reasonable endeavours to:

(i) address any feedback received in consultation undertaken for the purposes of clause 5.2(a); and

(ii) mitigate or avoid negative impacts, by amending the proposed Environment Plan and manner in which the Licensees propose to undertake the Licensed Activities; and

(c) at the same time that the Licensees provide the Director with a copy of the relevant Environment Plan in accordance with clause 4.4(c), provide the Director with a report setting out:

(i) the scope of the consultation undertaken in accordance with clause 5.2(a), including names of organisations from whom feedback was sought;

(ii) a summary of the feedback received from organisations with whom consultation occurred; and

(iii) a summary of the amendments to the Environment Plan and manner in which the Licensed Activities are proposed to occur, made by the Licensees in order to address feedback and mitigate or avoid negative impacts on the Aboriginal or Torres Strait Islander persons referred to in clause 5.2(a).

Annexure to Part B – Further details and plans of matters referred to in the Particulars

1. Further descriptions of matters referred to in the Particulars

1.1 Licensed Activities:

(a) The construction, installation, operation, inspection, maintenance, repair, and decommissioning of the GEP, including any activities that the Licensees are authorised to undertake under the GEP Licence and authorised to undertake under the Environment Plan.

(b) The capture of images, video and sound within or of the Park for commercial uses associated with the Licensed Activities specified in Item 1.1(a) of this Annexure.

1.2 Licence Area:

The pipeline installation corridor consisting of an area designated by a line connecting the following coordinates:

Longitude	Latitude
130° 5' 59.9889"	-11° 0' 19.1548
130° 5' 44.8964"	-11° 0' 41.2944"
130° 5' 30.4414"	-11° 1' 3.4594"
130° 5' 16.2732"	-11° 1' 26.1877"
130° 5' 2.5790"	-11° 1' 49.1981"
130° 0' 3.3460"	-11° 10' 29.8114"
129° 59' 596.7837"	-11° 10' 41.8497"
129° 59' 590.6014"	-11° 10' 54.4453"
129° 59' 582.9030"	-11° 11' 12.4343"
129° 59' 576.3108"	-11° 11' 30.8467"
129° 59' 570.8485"	-11° 11' 49.6163"
129° 59' 566.5357"	-11° 12' 8.67548"
129° 59' 564.0652"	-11° 12' 23.1187"
129° 58' 536.7204"	-11° 15' 30.6456"

* Coordinates presented in degrees, minutes and seconds using geographic coordinate system GDA94

buffered by 2000 m on either side.

Part C – General terms and conditions

6. Definitions and interpretation

6.1 Definitions

In this Licence, except where the contrary intention is expressed, the following definitions are used:

s. 47G(1)(a); s. 45(1)

Annexure	means an annexure to this Licence.
Authorisation	means any consent, authorisation, registration, filing, recording, agreement, notarisation, certificate, permission, licence, approval, permit, authority or exemption from, by or with, a Government Agency or judicial body, including any Environment Plan and Safety Case.
Business Day	means, in relation to the taking of an action or the occurrence of an event in a place, a day other than a Saturday, Sunday or public holiday in that place.
Commencement Date	means the date specified in Item 2.4 of the Particulars.
Commonwealth	means the Commonwealth of Australia.
Commonwealth reserve	means an area proclaimed as a Commonwealth reserve under section 344 of the EPBC Act.

s. 47G(1)(a); s. 45(1)

Conflict of Interest	means any circumstance in which a Licensee or any of its Personnel has an interest (whether financial or non-financial) or an affiliation that is affecting, will affect, or could be perceived to affect: (a) the Licensee's ability to comply with its obligations under this Licence and undertake Licensed Activities within the Licence Area; or (b) the Director's ability to carry out its functions specified in section 514B of the EPBC Act, fairly and independently.

s. 47G(1)(a); s. 45(1)

Director	means the party specified in Item 2.2 of the Particulars, or any other Commonwealth department or agency that administers this Licence from time to time.
Director Material	means any Material provided to the Licensees by the Director, including any Third Party Material included or embodied in or attached to such Material.
Director Representative	means the person specified in Item 2.9 of the Particulars or otherwise as advised by the Director to the Licensees by notice from time to time.
Environment Plan	means the environment plan or plans (as the case may be) accepted and in force from time to time under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth) in respect of the Licensed Activities, including any associated oil pollution emergency plans.
EPBC Act	means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).
EPBC Regulations	means the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth).
GEP	means the gas export pipeline (including all associated equipment, facilities, structures, infrastructure, and appurtenances) to be constructed and maintained by the Licensees from the Barossa field located offshore, Northern Territory in the Timor Sea and interconnecting with the Bayu-Undan to Darwin gas export pipeline the subject of pipeline licence NT/PL1 granted under the OPGGS Act.
GEP Licence	means the pipeline licence or licences (as the case may be) granted to the Licensees under the OPGGS Act in respect of the GEP.
Government Agency	means any government, governmental or semi-government or judicial entity, any body politic, any ministry, department, commission, tribunal, agency, inspectorate, official, public or statutory person or other statutory, administrative, supervisory or regulatory entity, domestic or foreign, federal, state or local.
GST Act	means the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).
Intellectual Property Rights	means all intellectual property rights, including the following rights: (a) copyright, patents, rights in circuit layouts, trademarks, designs, trade secrets, know how, domain names and any right to have Confidential Information kept confidential; (b) any application or right to apply for registration of any of the rights referred to in paragraph (a); and (c) all rights of a similar nature to any of the rights in paragraphs (a) and (b) which may subsist in Australia or elsewhere,

	whether or not such rights are registered or capable of being registered.
Item	means an item in the Particulars or a Schedule (as the case may require).
Law	means any applicable statute, regulation, by-law, ordinance or subordinate legislation in force from time to time in Australia, whether made by a State, Territory, the Commonwealth, or a local government, and includes the EPBC Act, EPBC Regulations and any relevant Management Plan.
Licence	means this licence agreement and includes its Schedules, Annexures and any attachments.
Licence Area	means the area or areas where the Licensees are allowed to undertake the Licensed Activities, as described in Item 2.8 of the Particulars and more specifically detailed in the Annexure to Part B.

s. 47G(1)(a); s. 45(1)

Licence Material	means any Material that is: (a) created by the Licensees for the purpose of, or as a result of, the Licensees' performance of their obligations under this Licence; and (b) provided by the Licensees to the Director under this Licence, including any Third Party Material included or embodied in or attached to such Material.
Licence Year	means a period of 12 consecutive months commencing on and from the Commencement Date or an anniversary of the Commencement Date.
Licensed Activities	means the activities specified in Item 2.6 of the Particulars, and more specifically detailed in the Annexure to Part B.

s. 47G(1)(a); s. 45(1)

Licensees	means the parties specified in Item 2.3 of the Particulars, and includes any assignee, transferee or novatee of such a party permitted under clause 23, and **Licensee** will be construed accordingly.
Licensees Representative	means the person specified in Item 2.10 of the Particulars or otherwise as advised by the Licensees to the Director by notice from time to time.
Management Plan	means a plan detailing management arrangements for the Park, in force and made under section 368 of the EPBC Act.
Material	means any software, firmware, documented methodology or process, documentation or other material in whatever form, and the subject matter of any category of Intellectual Property

Rights.

s. 47G(1)(a); s. 45(1)

New GEP Licensee	has the meaning given in clause 23(b)(i).
NOPSEMA	means the National Offshore Petroleum Safety and Environmental Management Authority established under Part 6.9 of the OPGGS Act, and any successor authority or body of it.
OPGGS Act	means the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth).
Park	means the Commonwealth reserve(s) specified in Item 2.7 of the Particulars.
Particulars	means the particulars of this Licence, specified in the table at clause 2.
Personal Information	has the meaning given to that term in the *Privacy Act 1988* (Cth).
Personnel	means: (a) in the case of the Director, every person working for or on behalf of the Director, past or present, including employees, contractors, subcontractors, agents, representatives, advisors and volunteers of the Director and of the Commonwealth; and (b) in the case of a Licensee, every person who performs, or is otherwise involved in undertaking the Licensed Activities, or operation of the Licensee's organisation, including employees, contractors, subcontractors, agents, representatives, advisors and volunteers.
Related Body Corporate	has the meaning given in section 50 of the *Corporations Act 2001* (Cth), as at the date of this Licence.
Relevant Person	has the meaning given to that term in the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth).

s. 47G(1)(a); s. 45(1)

Safety Case	means the safety case or cases (as the case may be) accepted and in force from time to time under the *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009* (Cth) in respect of the Licensed Activities.
Schedule	means a schedule to this Licence.
Term	means the period specified in Item 2.5 of the Particulars.
Third Party	means any person other than a party to this Licence.
Third Party Material	means any Material created by a Third Party.

s. 47G(1)(a); s. 45(1)

Transferring Licensee	has the meaning given in clause 23(b).

Warden has the meaning given to that term in the EPBC Act.

6.2 **Interpretation**

In this Licence, except where the contrary intention is expressed:

(a) the singular includes the plural and vice versa, and a gender includes other genders;

(b) another grammatical form of a defined word or expression has a corresponding meaning;

(c) a reference to a document or instrument includes the document or instrument as novated, altered, supplemented or replaced from time to time;

(d) a reference to A$, AUD$, dollar or $ is to Australian currency;

(e) a reference to time is to the time in the place where the obligation is to be performed;

(f) a reference to a party is to a party to this Licence, and a reference to a party to a document includes the party's executors, administrators, successors and permitted assignees and substitutes;

(g) a reference to a person includes a natural person, partnership, body corporate, association, governmental or local authority or agency or other entity;

(h) if a Licensee is a trustee, the Licensee enters into this Licence personally and in its capacity as trustee and:

(i) any warranties given under this Licence are given in both capacities; and

(ii) warrants that it has the power to perform its obligations under this Licence;

(i) a reference to a statute, ordinance, code or other Law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;

(j) the meaning of general words is not limited by specific examples introduced by the terms 'including', 'such as', 'for example' or similar expressions;

(k) any agreement, representation, warranty or indemnity by two or more parties (including where two or more persons are included in the same defined term) binds them jointly and severally;

(l) any agreement, representation, warranty or indemnity in favour of two or more parties (including where two or more persons are included in the same defined term) is for the benefit of them jointly and severally;

(m) a rule of construction does not apply to the disadvantage of a party because the party was responsible for the preparation of this Licence or any part of it;

(n) if a day on or by which an obligation must be performed or an event must occur is not a Business Day, the obligation must be performed or the event must occur on or by the next Business Day; and

(o) headings are for ease of reference only and do not affect interpretation.

6.3 **Completion of Schedules**

To the extent that the parties have not completed Items in the Particulars, a Schedule or Annexure, unless otherwise stated, those Items will be taken to be 'not applicable' for the purposes of this Licence.

6.4 **Priority of Licence parts and documents**

If there is inconsistency between any of the parts or documents forming part of this Licence, those parts and documents will be interpreted in the following order of priority to the extent of any inconsistency:

(a) Part A – Brief Particulars of Licence;

(b) Part B – Park and Licensed Activities specific conditions;

(c) Part C – General terms and conditions;

(d) any Schedules and Annexures (in their order of appearance); and

(e) any documents incorporated by reference in this Licence.

7. Duration and activities prior to commencement

7.1 **Period of Licence**

(a) This Licence commences on the Commencement Date.

(b) Unless terminated earlier in accordance with clause 25, this Licence will remain in force for the Term.

(c) If the Licensees believe that the Licensed Activities will or may be undertaken in the Licence Area beyond the date on which the Term will end (other than due to the GEP Licence expiring, terminating, being revoked or otherwise ending), the Licensees may give notice to the Director of such belief and request negotiations with the Director in respect of an extension of the Term.

(d) The notice given by the Licensees under clause 7.1(c) must specify the extension of the Term sought by the Licensees, the Licensed Activities that will or may be undertaken in the Licence Area during the extended period, and any other relevant information.

(e) If the Licensees give the Director a notice under clause 7.1(c), the parties must meet within a reasonable period and negotiate in good faith to attempt to agree an extension of the Term having regard to:

(i) the existing terms and conditions of this Licence;

(ii) the matters and information specified by the Licensees in their notice; and

(iii) the commercial and regulatory environment prevailing at the time of those negotiations, including any then current Management Plan and Environment Plan, and the state of repair and predicted useful life of the GEP.

(f) Any agreement of the parties under clause 7.1(e) to extend the Term must be set out in a written agreement.

7.2 **Licensed Activities prior to Commencement Date**

Nothing in this Licence authorises the Licensees to conduct the Licensed Activities within the Licence Area prior to the Commencement Date.

8. Licence

8.1 **Grant of Licence**

The Director grants to the Licensees a licence to carry out the Licensed Activities within the Licence Area, provided that the Licensees comply with the terms and conditions of this Licence.

8.2 **Contractual nature of Licence**

This Licence is a contractual licence only and does not:

(a) give the Licensees a lease or any other interest or estate in the Licence Area or any other area; or

(b) confer any right of exclusive use or occupation of the Licence Area on the Licensees.

9. Conduct of Licensed Activities and use of Licence Area

9.1 **Use of Licence Area for Licensed Activities**

The Licensees must:

(a) use the Licence Area solely for the Licensed Activities and must not use, or cause or permit to be used by the Licensees' Personnel, the Licence Area for any other purpose; and

(b) not conduct the Licensed Activities anywhere in the Park outside the Licence Area,

unless authorised by another permit issued by, or licence entered into with, the Director.

9.2 **Compliance with Laws and Authorisations**

(a) In undertaking the Licensed Activities within the Licence Area and performing the Licensees' obligations under this Licence, the Licensees must comply with:

(i) all applicable Laws, including the EPBC Act, EPBC Regulations and any Management Plan;

(ii) all applicable Authorisations; and

(iii) any direction or determination issued by the Director or a Warden under Law about use of the Park or conduct of the Licensed Activities.

(b) The Licensees must hold all Authorisations required for the conduct of the Licensed Activities within the Licence Area.

10. Licensees' Personnel

10.1 **Requirements for Licensees' Personnel**

The Licensees must ensure that the Licensees' Personnel involved in undertaking the Licensed Activities within the Licence Area:

(a) have the relevant experience to undertake the Licensed Activities;

(b) hold all qualifications and Authorisations necessary to undertake the Licensed Activities; and

(c) understand and comply with the Licensees' obligations under this Licence.

10.2 **Exclusion of certain persons as Licensees' Personnel or from the Park**

(a) If a Licensee is a company or other incorporated body, the Licensee must not, without the approval of the Director, have as a director (or similar office holder) a person who has been convicted of an offence against the EPBC Act or EPBC Regulations within the previous ten years.

(b) If any of a Licensee's Personnel:

(i) contravene the provisions of the EPBC Act, EPBC Regulations or any Management Plan; or

(ii) cause or contribute to causing the Licensees to breach a provision of this Licence,

then the Director may, in addition to any other right or remedy available to the Director under this Licence, at Law or in equity:

(iii) notify the Licensees of the contravention or breach, providing reasonable details about the actions of the relevant Personnel member; and

(iv) direct the Licensees to cease using the services of that person within the Licence Area for a specified time and the Licensees must immediately comply with that direction.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

13. Taxes, duties and government charges

13.1 **Interpretation**

In this clause 13:

GST	has the meaning given to that term in the GST Act.
tax invoice	means a tax invoice meeting the requirements of the GST Act.
taxable supply	has the meaning given to that term in the GST Act.

13.2 **Liability for taxes, duties and government charges**

Subject to this clause 13, all taxes, duties and government charges imposed or levied in Australia or overseas in connection with this Licence or the Licensed Activities must be borne by the Licensees.

13.3 **Payment of GST**

(a) Unless otherwise stated, all amounts listed in this Licence are expressed as GST exclusive amounts.

(b) If GST applies to any taxable supply by the Director to the Licensees under this Licence, the Licensees must reimburse the Director for GST paid or payable by the Director, subject to the Director issuing the Licensees with a valid tax invoice.

(c) If GST applies to any taxable supply by the Licensees to the Director under this Licence, the Director must reimburse the Licensees for GST paid or payable by the Licensees, subject to the Licensees issuing the Director with a valid tax invoice.

(d) Nothing in this Licence obliges a party to reimburse the other party for GST paid or payable by the other party in respect of a taxable supply to the extent that the other party is entitled to claim an input tax credit.

14. Audit and access

14.1 **Right to conduct audits**

The Director or a representative may conduct audits relevant to the performance of the Licensees' obligations under this Licence. Audits may be conducted of:

(a) the Licensees' operational practices and procedures as they relate to undertaking the Licensed Activities within the Licence Area; and

(b) the Licensees' compliance with the terms and conditions of this Licence and the requirements of Law applicable to the Licensed Activities undertaken within the

Licence Area, including the EPBC Act, EPBC Regulations and any Management Plan.

14.2 **Access by the Director**

The Director may, at reasonable times and on giving reasonable notice to the Licensees:

(a) require the provision by the Licensees or their Personnel of records and information in a data format and storage medium accessible by the Director; and

(b) inspect and copy Material, however stored, in the custody or under the control of the Licensees or their Personnel,

for the purposes of ensuring the Licensees' compliance with the terms and conditions of this Licence.

14.3 **Conduct of audit and access**

The Director must use reasonable endeavours to ensure that:

(a) audits performed pursuant to clause 14.1; and

(b) the exercise of the general rights granted under clause 14.2 to the Director,

do not unreasonably delay or disrupt in any material respect the Licensees or their Personnel undertaking the Licensed Activities.

14.4 **Confidentiality**

Any Material or information obtained by the Director or any other person as a result of the exercise of the rights under clauses 14.1 or 14.2 will be deemed to be Confidential Information and subject to clause 18.

14.5 **Costs**

Each party must bear its own out-of-pocket costs of any record keeping, inspections, reviews, audits and inquiries conducted pursuant to this clause 14.

14.6 **Auditor-General, Ombudsman and Commissioners**

The rights of the Director under clauses 14.1 and 14.2 apply equally to the Commonwealth Auditor-General, Ombudsman, Information Commissioner, Privacy Commissioner and Freedom of Information Commissioner, or his or her delegate, for the purpose of performing their statutory functions or powers.

14.7 **No reduction in responsibility**

The requirement for, and participation in, audits does not in any way reduce the Licensees' responsibility to perform their obligations in accordance with this Licence.

15. Treatment of intellectual property

15.1 **Vesting of Intellectual Property Rights**

(a) Subject to clause 15.1(b), all Intellectual Property Rights in the Licence Material will vest, upon creation, in the Licensees.

(b) This Licence does not affect the ownership of the Intellectual Property Rights in any Third Party Material.

15.2 **Licensing of Intellectual Property Rights**

(a) Despite any other provision of this Licence, the Licensees grant, or must procure for, the Director a perpetual, irrevocable, royalty-free, worldwide, non-exclusive licence (including a right of sub-license) to use, reproduce, communicate and modify the Licence Material for the purposes of managing and administering the

Park, and carrying out the Director's functions under section 514B of the EPBC Act.

(b) Intellectual Property Rights and title to Director Material remains vested at all times in the Director. The Director grants to each Licensee a perpetual, irrevocable, royalty-free, world-wide, non-exclusive licence (including a right to sub-license) to use, reproduce, communicate and modify the Director Material for the purposes of this Licence and undertaking the Licensed Activities, but subject to any conditions reasonably imposed by the Director on that use.

15.3 **Warranties about Intellectual Property Rights**

(a) The Licensees warrant that the Director or its sub-licensees will not, at any time, be infringing the Intellectual Property Rights of any person when using Licence Material in a manner consistent with clause 15.2(a) or otherwise for the purpose of the Director exercising its rights or performing its obligations under this Licence.

(b) The Director warrants that the Licensees or their sub-licensees will not, at any time, be infringing the Intellectual Property Rights of any person when using Director Material in a manner consistent with clause 15.2(b) or otherwise for the purpose of the Licensees exercising their rights or performing their obligations under this Licence.

15.4 **Making of scientific research and monitoring Material publically available**

The Director must use reasonable endeavours to ensure that any Material generated through scientific research and monitoring activities funded in whole or part from the Licensed Activities Fees paid by the Licensees is made available to the public:

(a) in the case of Material in which Intellectual Property Rights are owned by the Director, under licence terms no less permissive than a Creative Commons (Attribution) 4.0 International licence; and

(b) in the case of Material in which Intellectual Property Rights are owned by a Third Party, under the most permissive terms the Director is reasonably capable of negotiating licences and sublicences for at the time it enters into the arrangement with the Third Party for provision of that Material.

16. Publicity

16.1 **Restrictions on use of trademarks and logos**

(a) Except to the extent required by Law, no party will use the trademark(s) or logo of another party without its written consent.

(b) In no event will any party knowingly make any inaccurate or misleading statement concerning another party in relation to this Licence, or concerning this Licence, to a Third Party.

16.2 **Approving media releases and public announcements**

(a) Subject to clause 16.2(d), all media releases and public announcements relating to this Licence must be provided:

(i) where the Director is the proposing party, to the Licensees Representative; and

(ii) where a Licensee is the proposing party, to the Director Representative,

for review and approval prior to publication, release or disclosure.

(b) Upon receipt of a draft media release or public announcement under clause 16.2(a), the receiving party or parties must promptly review that material and, within 5 Business Days, respond to the proposing party either:

(i) approving publication, release or disclosure, including with reasonable amendments; or

(ii) withholding approval where it is reasonable to do so.

(c) For the purposes of clause 16.2(b):

(i) where the receiving party or parties fail(s) to respond within the timeframe specified in that clause, it will be deemed to have provided its approval to publication, release or disclosure of the material; and

(ii) it will be reasonable to withhold approval or require amendments to the material where publication, release or disclosure is likely to disclose Confidential Information, Personal Information or otherwise not be in the best interests of the receiving party or parties.

(d) Despite clause 16.2(a), any party may, without the approval of another party:

(i) publicise the existence and general subject matter of this Licence; and

(ii) publish, release or disclose a media release or public announcement relating to this Licence to the extent required to comply with applicable Laws or the requirements of a securities exchange on which the shares of the party or its Related Body Corporate are listed.

17. Protection of Personal Information

17.1 Interpretation and application of clause

(a) In this clause 17, 'Australian Privacy Principle' has the same meaning as it has in the *Privacy Act 1988* (Cth).

(b) This clause applies only where the Licensees deal with Personal Information when, and for the purposes of, complying with their obligations under this Licence or undertaking the Licensed Activities within the Licence Area.

17.2 Obligations in relation to Personal Information

(a) The Licensees agree, in complying with their obligations under this Licence and in conducting the Licensed Activities within the Licence Area, to:

(i) not to do any act or engage in any practice that may breach an Australian Privacy Principle; and

(ii) comply with any directions, guidelines, determinations or recommendations of the Director, to the extent that they are consistent with the Australian Privacy Principles.

(b) The Licensees agree to notify the Director immediately if they become aware of a breach or possible breach of any of their obligations under this clause 17.

18. Protection of Confidential Information

18.1 Confidential Information not to be disclosed

Subject to clause 18.2, a party must not, without the prior written consent of the other parties, disclose any Confidential Information of another party to a Third Party.

18.2 **Exceptions to obligations**

(a) The obligations on the parties under clause 18.1 will not be breached to the extent that Confidential Information:

(i) is disclosed by a party to its Personnel solely in order to comply with obligations, or to exercise or enforce rights, under this Licence;

(ii) is disclosed to a party's internal management Personnel, solely to enable effective management or auditing of this Licence and undertaking the Licensed Activities;

(iii) is disclosed by a Licensee to its Related Body Corporate or the Personnel of its Related Body Corporate for legitimate purposes;

(iv) is disclosed by a Licensee to a bona fide proposed or prospective purchaser or assignee of the Licensee's interest in the GEP Licence or the shares of the Licensee or its Related Body Corporate;

(v) is disclosed by the Director to the responsible Minister;

(vi) is disclosed by the Director, in response to a request by a House or a Committee of the Parliament of the Commonwealth;

(vii) is shared by the Director within the Director's organisation, or with another agency, where this serves the Director's or the Commonwealth's legitimate interests; or

(viii) is authorised or required by Law, or the requirements of a securities exchange on which the shares of the party or its Related Body Corporate are listed, to be disclosed.

(b) Where a party discloses Confidential Information to another person pursuant to clauses 18.2(a)(i) to 18.2(a)(vii) (inclusive), the disclosing party must notify the receiving person that the information is confidential.

(c) In the circumstances referred to in clauses 18.2(a)(i), 18.2(a)(ii), 18.2(a)(iii), 18.2(a)(iv) and 18.2(a)(vii), the disclosing party agrees not to provide the information unless the receiving person agrees to keep the information confidential on terms no less stringent than contained in this clause 18.

18.3 **Freedom of Information Act**

In the event of a request under the *Freedom of Information Act 1982* (Cth) for any document that constitutes or contains Confidential Information, the Director must:

(a) promptly notify the Licensees of the request and the general scope of the request;

(b) subject to the constraints and timeframes for decision-making under that Act, use all reasonable endeavours to give the Licensees the opportunity to provide their views to the Director as to whether any exemptions under that Act may apply to the relevant document prior to any decision being made as to the release of the document; and

(c) claim any reasonably available exemptions under that Act applicable to the document.

18.4 **No reduction in privacy obligations**

This clause 18 does not detract from any of the Licensees' obligations under the *Privacy Act 1988* (Cth) or under clause 17 in relation to the protection of Personal Information.

19. Conflicts of Interest

(a) Each Licensee warrants in respect of itself that, to the best of its knowledge at the date of this Licence, no Conflict of Interest exists or is likely to arise in the performance of its obligations under this Licence.

(b) If during the Term, a Conflict of Interest arises, or appears likely to arise, in respect of a Licensee, that Licensee must:

(i) immediately notify the Director and the other Licensees of the Conflict of Interest making a full disclosure of all relevant information relating to the Conflict of Interest and setting out the steps the Licensee proposes to take to resolve or otherwise deal with the Conflict of Interest; and

(ii) take such steps as the Director may reasonably require to resolve or otherwise deal with that Conflict of Interest.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

22. Allowance for Park management actions

22.1 **Management actions by the Director**

(a) The Licensees acknowledge that the Director is responsible for the administration, management and control of Commonwealth reserves (such as the Park) in accordance with the EPBC Act, EPBC Regulations and any Management Plan.

(b) Despite any other clause of this Licence, the Licensees agree that the Director may, subject to clause 22.2, exercise all rights and powers of the Director under the EPBC Act, EPBC Regulations and otherwise at Law to:

(i) implement any Management Plan for the Park;

(ii) conserve the environment and heritage in the Park;

(iii) preserve or promote the safety of persons in the Park, including in response to emergencies; and

(iv) preserve or promote the efficient use and enjoyment of the Park by Third Parties.

22.2 **Consultation and variation of the Licence Area**

(a) Where any proposed action by the Director referred to under clause 22.1(b) will materially impact the rights, benefits or interests granted to the Licensees under this Licence but subject to clause 22.2(b), the Director must notify the Licensees of such proposed action prior to undertaking the action and allow a reasonable period, and in any event not less than 20 Business Days, for the Licensees to provide written submissions to the Director in respect of such proposed action. The Director must consider and have regard to any submissions provided by the Licensees under this clause 22.2(a) in determining whether to take the relevant action.

(b) Where the Director reasonably believes:

(i) that an action referred to under clause 22.1(b) is required in order to respond to an emergency or other situation likely to cause imminent harm to persons, property or the environment in the Park; and

(ii) that seeking and considering submissions from the Licensees in accordance with clause 22.2(a) would not be practical in order to avoid or mitigate that harm,

then the Director:

(iii) may take the proposed action without complying with clause 22.2(a); and

(iv) must use reasonable endeavours to notify the Licensees prior to taking the proposed action but in any event must provide them with notice of having taken the action as soon as is practicable thereafter.

(c) Provided the Director complies with this clause 22.2, the Director will not be required to compensate the Licensees for any increased costs, losses or expenses suffered by the Licensees as a result of the Director's actions under clause 22.1(b).

(d) The Director acknowledges that once constructed the GEP will be a fixed structure and as such agrees that the Licence Area must not be altered, amended or varied in any way whatsoever by the Director during the Term, except in accordance with clause 27.9.

23. Assignment, sub-licensing and novation

(a) Subject to this clause 23, a Licensee must not assign, novate, transfer or sub-license its rights or obligations, in whole or part, under this Licence without the prior written approval of the Director.

(b) If a Licensee (**Transferring Licensee**) transfers:

(i) the whole or part of its interest in the GEP Licence to a Third Party (**New GEP Licensee**), then the Transferring Licensee, the New GEP Licensee

and the other parties to this Licence must, subject to clause 23(d), execute an agreement or deed under which:

(A) the New GEP Licensee obtains the rights, benefits and obligations under, and becomes bound by the provisions of, this Licence as if it were named as a Licensee in this Licence;

(B) the parties to this Licence agree that the New GEP Licensee will have the rights, benefits and obligations under this Licence as if it were named as a Licensee in this Licence; and

(C) where the whole of the Transferring Licensee's interest in the GEP Licence is transferred to the New GEP Licensee, the Transferring Licensee is relieved and released from all of its liabilities and obligations under this Licence; or

(ii) the whole of its interest in the GEP Licence to another party to this Licence, the Transferring Licensee and the other parties to this Licence must, subject to clause 23(d), execute an agreement or deed under which the other parties relieve and release the Transferring Licensee from all of its liabilities and obligations under this Licence.

(c) The Transferring Licensee must:

(i) provide to the Director a copy of the agreement or deed referred to under clause 23(b)(i) or 23(b)(ii) signed by the Transferring Licensee, the other Licensees, and, where applicable, the New GEP Licensee; and

(ii) notify the Director once the transfer of its interest in the GEP Licence to the New GEP Licensee or the party to this Licence (as applicable) has been registered in accordance with the OPGGS Act.

(d) The Director acknowledges and agrees that:

(i) provided:

(A) the Transferring Licensee has s. 47G(1)(a); s. 45(1) and

(B) the transfer of the Transferring Licensee's interest in the GEP Licence to the New GEP Licensee or the party to this Licence (as applicable) has been registered in accordance with the OPGGS Act,

the Director must not withhold its consent or approval to:

(C) the transfer of this Licence to the New GEP Licensee and, where applicable, the release of the Transferring Licensee, as contemplated under clause 23(b)(i); or

(D) the release of the Transferring Licensee as contemplated under clause 23(b)(ii); and

(ii) promptly after receiving the Transferring Licensee's notice under clause 23(c)(ii), it will execute the copy of the agreement or deed provided to it under clause 23(c)(i) and return such executed copy of the document to the Transferring Licensee.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

26. Notices

26.1 Providing of notices

(a) A notice under this Licence is only effective if it is in writing, and dealt with as follows:

(i) *if given by the Licensees to the Director* – addressed to the Director Representative as specified in Item 2.9 of the Particulars, or as otherwise notified by the Director from time to time; or

(ii) *if given by the Director to the Licensees* – addressed to the Licensees Representative as specified in Item 2.10 of the Particulars, or as otherwise notified by the Licensees from time to time.

(b) A notice is to be:

(i) signed by the person giving the notice and delivered by hand;

(ii) signed by the person giving the notice and sent by pre-paid post; or

(iii) transmitted electronically by the person giving the notice by electronic mail.

26.2 Receipt of notices

(a) Subject to clause 26.2(b), a notice is deemed to be effected:

(i) *if delivered by hand* – upon delivery to the relevant address;

(ii) *if sent by post* – upon delivery to the relevant address; or

(iii) *if transmitted electronically by electronic mail* – at the time the notice would be taken to be delivered under the *Electronic Transactions Act 1999* (Cth).

(b) A notice received after 5.00pm, or on a day that is not a Business Day in the place of receipt, is deemed to be effected on the next Business Day in that place.

27. General provisions

27.1 Relationship of the parties

(a) The Licensees must not represent themselves, and must ensure that their officers, employees, agents and subcontractors do not represent themselves as being an officer, employee, partner or agent of the Director, or as otherwise able to bind or represent the Director.

(b) The Director must not represent itself, and must ensure that its officers, employees, agents and subcontractors do not represent themselves as being an officer, employee, partner or agent of the Licensees, or as otherwise able to bind or represent the Licensees.

(c) Nothing in this Licence is to be considered or construed as creating the relationship of partners in a joint venture, partnership, principal and agent, lessor and lessee, or of employer and employee between the Director and the Licensees.

(d) Unless and until all the Licensees give notice to the Director to the contrary, the Licensees Representative is entitled to:

(i) deal with the Director as agent for and on behalf of all Licensees, including give and receive notices on behalf of all Licensees; and

(ii) exercise the rights and perform the obligations of the Licensees under this Licence as agent for and on behalf of the Licensees.

27.2 **Counterparts**

This Licence may be executed in counterparts. All executed counterparts constitute one validly executed agreement.

27.3 **Severability**

If any provision of this Licence is held invalid, unenforceable or illegal for any reason, this Licence will remain otherwise in full force apart from such provision which will be deemed deleted.

27.4 **Entire agreement**

This Licence constitutes the entire agreement between the parties in relation to its subject matter, and supersedes all prior representations, agreements, statements and understandings, whether oral or in writing.

27.5 **Costs**

Each party must bear its own costs arising out of:

(a) the negotiation, preparation and execution of this Licence; and

(b) unless expressly stated otherwise, any transaction contemplated by this Licence.

27.6 **Further action**

Each party must do, at its own expense, everything reasonably necessary (including executing documents) to give full effect to this Licence and any transaction contemplated by it.

27.7 **No merger**

The rights and obligations of the parties under this Licence do not merge on completion of any transaction contemplated by this Licence.

27.8 **Waiver**

(a) A failure or delay by a party to exercise any right or remedy it holds under this Licence, at Law or in equity does not operate as a waiver of that right.

(b) A single or partial exercise by a party of any right or remedy it holds under this Licence, at Law or in equity does not prevent the party from exercising the right again or to the extent it has not fully exercised the right.

27.9 **Variation**

No variation of this Licence is binding unless it is agreed in writing and signed by all of the parties.

27.10 **Consent or approval**

Unless otherwise stated, if a party's consent or approval is required under this Licence:

(a) the requested party must consider and respond to the request promptly;

(b) consent or approval must not be unreasonably withheld;

(c) the requested party may require the requesting party to comply with reasonable conditions before giving its consent or approval; and

(d) consent or approval is not effective unless in writing.

27.11 **Governing law**

(a) This Licence is to be construed in accordance with, and any matter related to it is to be governed by, the law of the Australian Capital Territory.

(b) The parties submit to the jurisdiction of the courts of the Australian Capital Territory.

Australian Government
Director of National Parks

STANDARD-FORM COMMERCIAL ACTIVITY LICENCE

A commercial activity licence agreement for installation, operation and decommissioning of a pipeline

Director of National Parks
ABN 13 051 694 963 (**Director**)

ConocoPhillips Australia Barossa Pty Ltd
ABN 44 109 974 932
SK E&S Australia Pty Ltd
ABN 55 158 702 071
Santos Offshore Pty Ltd
ABN 38 005 475 589
(collectively, the **Licensees**)

Australian Government
Director of National Parks

Commercial Activity Licence

PART A – Brief Particulars of Licence

1. How this Licence works – Overview

1.1 **Components of this Licence**

This Licence is comprised of:

(a) Part A – The brief Particulars of this Licence and the execution page;

(b) Part B – Terms and conditions specific to the Licensed Activities and/or the Park, plus an Annexure specifying further details of the Particulars; and

(c) Part C – The general terms and conditions that apply to this Licence.

1.2 **Definitions**

Unless the contrary intention is expressed, capitalised terms used in this Licence are defined in clause 6.1 of Part C.

2. Particulars of this Licence

2.1	**Authorisation Number**	Not applicable	**PA2018-00041-1**
2.2	**Director**	Part C clause 6.1	**Director of National Parks** (ABN 13 051 694 963) being a corporation sole continuing under section 514A of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), of Level 1, 51 Allara St, Canberra ACT 2601
2.3	**Licensees**	Part C clause 6.1	**ConocoPhillips Australia Barossa Pty Ltd** (ABN 44 109 974 932) of Level 3, 53 Ord Street, West Perth WA 6005 **SK E&S Australia Pty Ltd** (ABN 55 158 702 071) of Level 30, 108 St Georges Terrace, Perth WA 6000 **Santos Offshore Pty Ltd** (ABN 38 005 475 589) of Santos Centre, 60 Flinders Street, Adelaide SA 5000

2.4	**Commencement Date**	Part C clauses 6.1 & 7	The date on which the GEP Licence is granted to the Licensees under the OPGGS Act.
2.5	**Term**	Part C clauses 6.1 & 7.1	The period beginning on the Commencement Date and ending on the date that: **(a)** is 40 years following the Commencement Date; or **(b)** the GEP Licence expires, terminates, is revoked or otherwise ends in accordance with the OPGGS Act, whichever is the sooner (as may be extended by agreement of the parties in accordance with clause 7.1).
2.6	**Licensed Activities**	Part B clause 4 & Annexure Part C clauses 6.1; 7.2 & 9	The construction, installation, operation, inspection, maintenance, repair, and decommissioning of the GEP and the related capture of images, video and sound within or of the Park, as more specifically described in the Annexure to Part B.
2.7	**Park**	Part B clause 4 & Annexure Part C clause 6.1	Oceanic Shoals Marine Park.
2.8	**Licence Area**	Part B Annexure Part C clauses 6.1; 8; 9.1 & 22.1	Part of Habitat Protection Zone (IUCN IV) – Zone 2, as specified in the *North Marine Parks Network Management Plan 2018* for the Oceanic Shoals Marine Park available at the Federal Register of Legislation, and as more specifically described in the Annexure to Part B.
2.9	**Director Representative**	Part C clauses 6.1 & 26.1	Position: Director of National Parks Address: 51 Allara Street, Canberra ACT 2600 Email: marineparks@environment.gov.au At the Commencement Date being: James Findlay Phone: 02 6274 1111
2.10	**Licensees Representative**	Part C clauses 6.1 & 26.1	Name: ConocoPhillips Australia Barossa Pty Ltd Attention: Director

Item No.	Description	Clause reference	Details
			Address: 53 Ord Street, West Perth WA 6005 At the Commencement Date being: s. 47F(1) Phone: s. 47F(1) Email: s. 47F(1) @conocophillips.com

3. Execution of this Licence

EXECUTED by the parties as an agreement

SIGNED for and on behalf of the **Director of National Parks ABN 13 051 694 963** by a duly authorised representative	In the presence of
Name of authorised representative (print)	Name of witness (print)
Signature of authorised representative	Signature of witness
Date	Date

SIGNED by **ConocoPhillips Australia Barossa Pty Ltd ABN 44 109 974 932** in accordance with section 127 of the *Corporations Act 2001* (Cth) by:	
Name of Director (print)	Name of Director / Company Secretary (print)
Signature of Director	Signature of Director / Company Secretary
Date	Date

SIGNED by **SK E&S Australia Pty Ltd ABN 55 158 702 071** in accordance with section 127 of the *Corporations Act 2001* (Cth) by:

Name of Director (print)	Name of Director / Company Secretary (print)
Signature of Director	Signature of Director / Company Secretary
Date	Date

SIGNED for and on behalf of **Santos Offshore Pty Ltd ABN 38 005 475 589** by its attorney appointed under a Power of Attorney dated 25 January 2011 :

In the presence of:

s. 47F(1)	s. 47F(1)
Name of attorney (print)	Name of witness (print)
s. 47F(1)	s. 47F(1)
Signature of attorney	Signature of witness
27 March 2019	27/03/2019
Date	Date

Part B – Park and Licensed Activities specific conditions

4. Licensed Activities specific conditions

4.1 The Licensees must consult the Director as a Relevant Person during the development of all Environment Plans.

4.2 The Licensees must ensure that they and their Personnel fully inform themselves of, and equip themselves for, all potential hazards and conditions they may encounter while conducting the Licensed Activities within the Licence Area.

4.3 The Licensees acknowledge that the Director has no ability to monitor or warn the Licensees of changing environmental hazards or developing hazards within the Park.

4.4 The Licensees must:

(a) notify the Director of the grant of the GEP Licence (if granted) within 24 hours of its grant;

(b) notify the Director of the acceptance or refusal of an Environment Plan by NOPSEMA within 24 hours of its acceptance or refusal;

(c) following acceptance of an Environment Plan by NOPSEMA, provide the Director with a copy of that Environment Plan within 10 Business Days of its acceptance; and

(d) following the completion of construction of the GEP, promptly provide the Director with as built coordinates for the location of the GEP in degrees, minutes and seconds using geographic coordinate system GDA94.

5. Park and Licence Area specific conditions

5.1 The Licensed Activities conducted within the Licence Area must be conducted in accordance with an Environment Plan.

5.2 In developing each Environment Plan, the Licensees must ensure that they:

(a) consult with all relevant representative organisations for Aboriginal or Torres Strait Islander persons whose custodianship or traditional use of the Licence Area or the Park may be negatively impacted by the Licensed Activities;

(b) use reasonable endeavours to:

(i) address any feedback received in consultation undertaken for the purposes of clause 5.2(a); and

(ii) mitigate or avoid negative impacts, by amending the proposed Environment Plan and manner in which the Licensees propose to undertake the Licensed Activities; and

(c) at the same time that the Licensees provide the Director with a copy of the relevant Environment Plan in accordance with clause 4.4(c), provide the Director with a report setting out:

(i) the scope of the consultation undertaken in accordance with clause 5.2(a), including names of organisations from whom feedback was sought;

(ii) a summary of the feedback received from organisations with whom consultation occurred; and

(iii) a summary of the amendments to the Environment Plan and manner in which the Licensed Activities are proposed to occur, made by the Licensees in order to address feedback and mitigate or avoid negative impacts on the Aboriginal or Torres Strait Islander persons referred to in clause 5.2(a).

Annexure to Part B – Further details and plans of matters referred to in the Particulars

1. Further descriptions of matters referred to in the Particulars

1.1 Licensed Activities:

(a) The construction, installation, operation, inspection, maintenance, repair, and decommissioning of the GEP, including any activities that the Licensees are authorised to undertake under the GEP Licence and authorised to undertake under the Environment Plan.

(b) The capture of images, video and sound within or of the Park for commercial uses associated with the Licensed Activities specified in Item 1.1(a) of this Annexure.

1.2 Licence Area:

The pipeline installation corridor consisting of an area designated by a line connecting the following coordinates:

Longitude	Latitude
130° 5' 59.9889"	-11° 0' 19.1548
130° 5' 44.8964"	-11° 0' 41.2944"
130° 5' 30.4414"	-11° 1' 3.4594"
130° 5' 16.2732"	-11° 1' 26.1877"
130° 5' 2.5790"	-11° 1' 49.1981"
130° 0' 3.3460"	-11° 10' 29.8114"
129° 59' 596.7837"	-11° 10' 41.8497"
129° 59' 590.6014"	-11° 10' 54.4453"
129° 59' 582.9030"	-11° 11' 12.4343"
129° 59' 576.3108"	-11° 11' 30.8467"
129° 59' 570.8485"	-11° 11' 49.6163"
129° 59' 566.5357"	-11° 12' 8.67548"
129° 59' 564.0652"	-11° 12' 23.1187"
129° 58' 536.7204"	-11° 15' 30.6456"

* Coordinates presented in degrees, minutes and seconds using geographic coordinate system GDA94

buffered by 2000 m on either side.

Part C – General terms and conditions

6. Definitions and interpretation

6.1 Definitions

In this Licence, except where the contrary intention is expressed, the following definitions are used:

s. 47G(1)(a); s. 45(1)

Annexure	means an annexure to this Licence.
Authorisation	means any consent, authorisation, registration, filing, recording, agreement, notarisation, certificate, permission, licence, approval, permit, authority or exemption from, by or with, a Government Agency or judicial body, including any Environment Plan and Safety Case.
Business Day	means, in relation to the taking of an action or the occurrence of an event in a place, a day other than a Saturday, Sunday or public holiday in that place.
Commencement Date	means the date specified in Item 2.4 of the Particulars.
Commonwealth	means the Commonwealth of Australia.
Commonwealth reserve	means an area proclaimed as a Commonwealth reserve under section 344 of the EPBC Act.

s. 47G(1)(a); s. 45(1)

Conflict of Interest	means any circumstance in which a Licensee or any of its Personnel has an interest (whether financial or non-financial) or an affiliation that is affecting, will affect, or could be perceived to affect: (a) the Licensee's ability to comply with its obligations under this Licence and undertake Licensed Activities within the Licence Area; or (b) the Director's ability to carry out its functions specified in section 514B of the EPBC Act, fairly and independently.

s. 47G(1)(a); s. 45(1)

Director	means the party specified in Item 2.2 of the Particulars, or any other Commonwealth department or agency that administers this Licence from time to time.
Director Material	means any Material provided to the Licensees by the Director, including any Third Party Material included or embodied in or attached to such Material.
Director Representative	means the person specified in Item 2.9 of the Particulars or otherwise as advised by the Director to the Licensees by notice from time to time.
Environment Plan	means the environment plan or plans (as the case may be) accepted and in force from time to time under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth) in respect of the Licensed Activities, including any associated oil pollution emergency plans.
EPBC Act	means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).
EPBC Regulations	means the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth).
GEP	means the gas export pipeline (including all associated equipment, facilities, structures, infrastructure, and appurtenances) to be constructed and maintained by the Licensees from the Barossa field located offshore, Northern Territory in the Timor Sea and interconnecting with the Bayu-Undan to Darwin gas export pipeline the subject of pipeline licence NT/PL1 granted under the OPGGS Act.
GEP Licence	means the pipeline licence or licences (as the case may be) granted to the Licensees under the OPGGS Act in respect of the GEP.
Government Agency	means any government, governmental or semi-government or judicial entity, any body politic, any ministry, department, commission, tribunal, agency, inspectorate, official, public or statutory person or other statutory, administrative, supervisory or regulatory entity, domestic or foreign, federal, state or local.
GST Act	means the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).
Intellectual Property Rights	means all intellectual property rights, including the following rights: (a) copyright, patents, rights in circuit layouts, trademarks, designs, trade secrets, know how, domain names and any right to have Confidential Information kept confidential; (b) any application or right to apply for registration of any of the rights referred to in paragraph (a); and (c) all rights of a similar nature to any of the rights in paragraphs (a) and (b) which may subsist in Australia or elsewhere,

	whether or not such rights are registered or capable of being registered.
Item	means an item in the Particulars or a Schedule (as the case may require).
Law	means any applicable statute, regulation, by-law, ordinance or subordinate legislation in force from time to time in Australia, whether made by a State, Territory, the Commonwealth, or a local government, and includes the EPBC Act, EPBC Regulations and any relevant Management Plan.
Licence	means this licence agreement and includes its Schedules, Annexures and any attachments.
Licence Area	means the area or areas where the Licensees are allowed to undertake the Licensed Activities, as described in Item 2.8 of the Particulars and more specifically detailed in the Annexure to Part B.

s. 47G(1)(a); s. 45(1)

Licence Material	means any Material that is: (a) created by the Licensees for the purpose of, or as a result of, the Licensees' performance of their obligations under this Licence; and (b) provided by the Licensees to the Director under this Licence, including any Third Party Material included or embodied in or attached to such Material.
Licence Year	means a period of 12 consecutive months commencing on and from the Commencement Date or an anniversary of the Commencement Date.
Licensed Activities	means the activities specified in Item 2.6 of the Particulars, and more specifically detailed in the Annexure to Part B.

s. 47G(1)(a); s. 45(1)

Licensees	means the parties specified in Item 2.3 of the Particulars, and includes any assignee, transferee or novatee of such a party permitted under clause 23, and **Licensee** will be construed accordingly.
Licensees Representative	means the person specified in Item 2.10 of the Particulars or otherwise as advised by the Licensees to the Director by notice from time to time.
Management Plan	means a plan detailing management arrangements for the Park, in force and made under section 368 of the EPBC Act.
Material	means any software, firmware, documented methodology or process, documentation or other material in whatever form, and the subject matter of any category of Intellectual Property

Rights.

s. 47G(1)(a); s. 45(1)

New GEP Licensee	has the meaning given in clause 23(b)(i).
NOPSEMA	means the National Offshore Petroleum Safety and Environmental Management Authority established under Part 6.9 of the OPGGS Act, and any successor authority or body of it.
OPGGS Act	means the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth).
Park	means the Commonwealth reserve(s) specified in Item 2.7 of the Particulars.
Particulars	means the particulars of this Licence, specified in the table at clause 2.
Personal Information	has the meaning given to that term in the *Privacy Act 1988* (Cth).
Personnel	means: (a) in the case of the Director, every person working for or on behalf of the Director, past or present, including employees, contractors, subcontractors, agents, representatives, advisors and volunteers of the Director and of the Commonwealth; and (b) in the case of a Licensee, every person who performs, or is otherwise involved in undertaking the Licensed Activities, or operation of the Licensee's organisation, including employees, contractors, subcontractors, agents, representatives, advisors and volunteers.
Related Body Corporate	has the meaning given in section 50 of the *Corporations Act 2001* (Cth), as at the date of this Licence.
Relevant Person	has the meaning given to that term in the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth).

s. 47G(1)(a); s. 45(1)

Safety Case	means the safety case or cases (as the case may be) accepted and in force from time to time under the *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009* (Cth) in respect of the Licensed Activities.
Schedule	means a schedule to this Licence.
Term	means the period specified in Item 2.5 of the Particulars.
Third Party	means any person other than a party to this Licence.
Third Party Material	means any Material created by a Third Party.

s. 47G(1)(a); s. 45(1)

Transferring Licensee	has the meaning given in clause 23(b).

Warden	has the meaning given to that term in the EPBC Act.

6.2 **Interpretation**

In this Licence, except where the contrary intention is expressed:

(a) the singular includes the plural and vice versa, and a gender includes other genders;

(b) another grammatical form of a defined word or expression has a corresponding meaning;

(c) a reference to a document or instrument includes the document or instrument as novated, altered, supplemented or replaced from time to time;

(d) a reference to A$, AUD$, dollar or $ is to Australian currency;

(e) a reference to time is to the time in the place where the obligation is to be performed;

(f) a reference to a party is to a party to this Licence, and a reference to a party to a document includes the party's executors, administrators, successors and permitted assignees and substitutes;

(g) a reference to a person includes a natural person, partnership, body corporate, association, governmental or local authority or agency or other entity;

(h) if a Licensee is a trustee, the Licensee enters into this Licence personally and in its capacity as trustee and:

(i) any warranties given under this Licence are given in both capacities; and

(ii) warrants that it has the power to perform its obligations under this Licence;

(i) a reference to a statute, ordinance, code or other Law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;

(j) the meaning of general words is not limited by specific examples introduced by the terms 'including', 'such as', 'for example' or similar expressions;

(k) any agreement, representation, warranty or indemnity by two or more parties (including where two or more persons are included in the same defined term) binds them jointly and severally;

(l) any agreement, representation, warranty or indemnity in favour of two or more parties (including where two or more persons are included in the same defined term) is for the benefit of them jointly and severally;

(m) a rule of construction does not apply to the disadvantage of a party because the party was responsible for the preparation of this Licence or any part of it;

(n) if a day on or by which an obligation must be performed or an event must occur is not a Business Day, the obligation must be performed or the event must occur on or by the next Business Day; and

(o) headings are for ease of reference only and do not affect interpretation.

6.3 **Completion of Schedules**

To the extent that the parties have not completed Items in the Particulars, a Schedule or Annexure, unless otherwise stated, those Items will be taken to be 'not applicable' for the purposes of this Licence.

6.4 **Priority of Licence parts and documents**

If there is inconsistency between any of the parts or documents forming part of this Licence, those parts and documents will be interpreted in the following order of priority to the extent of any inconsistency:

(a) Part A – Brief Particulars of Licence;

(b) Part B – Park and Licensed Activities specific conditions;

(c) Part C – General terms and conditions;

(d) any Schedules and Annexures (in their order of appearance); and

(e) any documents incorporated by reference in this Licence.

7. Duration and activities prior to commencement

7.1 **Period of Licence**

(a) This Licence commences on the Commencement Date.

(b) Unless terminated earlier in accordance with clause 25, this Licence will remain in force for the Term.

(c) If the Licensees believe that the Licensed Activities will or may be undertaken in the Licence Area beyond the date on which the Term will end (other than due to the GEP Licence expiring, terminating, being revoked or otherwise ending), the Licensees may give notice to the Director of such belief and request negotiations with the Director in respect of an extension of the Term.

(d) The notice given by the Licensees under clause 7.1(c) must specify the extension of the Term sought by the Licensees, the Licensed Activities that will or may be undertaken in the Licence Area during the extended period, and any other relevant information.

(e) If the Licensees give the Director a notice under clause 7.1(c), the parties must meet within a reasonable period and negotiate in good faith to attempt to agree an extension of the Term having regard to:

(i) the existing terms and conditions of this Licence;

(ii) the matters and information specified by the Licensees in their notice; and

(iii) the commercial and regulatory environment prevailing at the time of those negotiations, including any then current Management Plan and Environment Plan, and the state of repair and predicted useful life of the GEP.

(f) Any agreement of the parties under clause 7.1(e) to extend the Term must be set out in a written agreement.

7.2 **Licensed Activities prior to Commencement Date**

Nothing in this Licence authorises the Licensees to conduct the Licensed Activities within the Licence Area prior to the Commencement Date.

8. Licence

8.1 **Grant of Licence**

The Director grants to the Licensees a licence to carry out the Licensed Activities within the Licence Area, provided that the Licensees comply with the terms and conditions of this Licence.

8.2 **Contractual nature of Licence**

This Licence is a contractual licence only and does not:

(a) give the Licensees a lease or any other interest or estate in the Licence Area or any other area; or

(b) confer any right of exclusive use or occupation of the Licence Area on the Licensees.

9. Conduct of Licensed Activities and use of Licence Area

9.1 **Use of Licence Area for Licensed Activities**

The Licensees must:

(a) use the Licence Area solely for the Licensed Activities and must not use, or cause or permit to be used by the Licensees' Personnel, the Licence Area for any other purpose; and

(b) not conduct the Licensed Activities anywhere in the Park outside the Licence Area,

unless authorised by another permit issued by, or licence entered into with, the Director.

9.2 **Compliance with Laws and Authorisations**

(a) In undertaking the Licensed Activities within the Licence Area and performing the Licensees' obligations under this Licence, the Licensees must comply with:

(i) all applicable Laws, including the EPBC Act, EPBC Regulations and any Management Plan;

(ii) all applicable Authorisations; and

(iii) any direction or determination issued by the Director or a Warden under Law about use of the Park or conduct of the Licensed Activities.

(b) The Licensees must hold all Authorisations required for the conduct of the Licensed Activities within the Licence Area.

10. Licensees' Personnel

10.1 **Requirements for Licensees' Personnel**

The Licensees must ensure that the Licensees' Personnel involved in undertaking the Licensed Activities within the Licence Area:

(a) have the relevant experience to undertake the Licensed Activities;

(b) hold all qualifications and Authorisations necessary to undertake the Licensed Activities; and

(c) understand and comply with the Licensees' obligations under this Licence.

10.2 **Exclusion of certain persons as Licensees' Personnel or from the Park**

(a) If a Licensee is a company or other incorporated body, the Licensee must not, without the approval of the Director, have as a director (or similar office holder) a person who has been convicted of an offence against the EPBC Act or EPBC Regulations within the previous ten years.

(b) If any of a Licensee's Personnel:

(i) contravene the provisions of the EPBC Act, EPBC Regulations or any Management Plan; or

(ii) cause or contribute to causing the Licensees to breach a provision of this Licence,

then the Director may, in addition to any other right or remedy available to the Director under this Licence, at Law or in equity:

(iii) notify the Licensees of the contravention or breach, providing reasonable details about the actions of the relevant Personnel member; and

(iv) direct the Licensees to cease using the services of that person within the Licence Area for a specified time and the Licensees must immediately comply with that direction.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

13. Taxes, duties and government charges

13.1 **Interpretation**

In this clause 13:

GST	has the meaning given to that term in the GST Act.
tax invoice	means a tax invoice meeting the requirements of the GST Act.
taxable supply	has the meaning given to that term in the GST Act.

13.2 **Liability for taxes, duties and government charges**

Subject to this clause 13, all taxes, duties and government charges imposed or levied in Australia or overseas in connection with this Licence or the Licensed Activities must be borne by the Licensees.

13.3 **Payment of GST**

(a) Unless otherwise stated, all amounts listed in this Licence are expressed as GST exclusive amounts.

(b) If GST applies to any taxable supply by the Director to the Licensees under this Licence, the Licensees must reimburse the Director for GST paid or payable by the Director, subject to the Director issuing the Licensees with a valid tax invoice.

(c) If GST applies to any taxable supply by the Licensees to the Director under this Licence, the Director must reimburse the Licensees for GST paid or payable by the Licensees, subject to the Licensees issuing the Director with a valid tax invoice.

(d) Nothing in this Licence obliges a party to reimburse the other party for GST paid or payable by the other party in respect of a taxable supply to the extent that the other party is entitled to claim an input tax credit.

14. Audit and access

14.1 **Right to conduct audits**

The Director or a representative may conduct audits relevant to the performance of the Licensees' obligations under this Licence. Audits may be conducted of:

(a) the Licensees' operational practices and procedures as they relate to undertaking the Licensed Activities within the Licence Area; and

(b) the Licensees' compliance with the terms and conditions of this Licence and the requirements of Law applicable to the Licensed Activities undertaken within the

Licence Area, including the EPBC Act, EPBC Regulations and any Management Plan.

14.2 **Access by the Director**

The Director may, at reasonable times and on giving reasonable notice to the Licensees:

(a) require the provision by the Licensees or their Personnel of records and information in a data format and storage medium accessible by the Director; and

(b) inspect and copy Material, however stored, in the custody or under the control of the Licensees or their Personnel,

for the purposes of ensuring the Licensees' compliance with the terms and conditions of this Licence.

14.3 **Conduct of audit and access**

The Director must use reasonable endeavours to ensure that:

(a) audits performed pursuant to clause 14.1; and

(b) the exercise of the general rights granted under clause 14.2 to the Director,

do not unreasonably delay or disrupt in any material respect the Licensees or their Personnel undertaking the Licensed Activities.

14.4 **Confidentiality**

Any Material or information obtained by the Director or any other person as a result of the exercise of the rights under clauses 14.1 or 14.2 will be deemed to be Confidential Information and subject to clause 18.

14.5 **Costs**

Each party must bear its own out-of-pocket costs of any record keeping, inspections, reviews, audits and inquiries conducted pursuant to this clause 14.

14.6 **Auditor-General, Ombudsman and Commissioners**

The rights of the Director under clauses 14.1 and 14.2 apply equally to the Commonwealth Auditor-General, Ombudsman, Information Commissioner, Privacy Commissioner and Freedom of Information Commissioner, or his or her delegate, for the purpose of performing their statutory functions or powers.

14.7 **No reduction in responsibility**

The requirement for, and participation in, audits does not in any way reduce the Licensees' responsibility to perform their obligations in accordance with this Licence.

15. Treatment of intellectual property

15.1 **Vesting of Intellectual Property Rights**

(a) Subject to clause 15.1(b), all Intellectual Property Rights in the Licence Material will vest, upon creation, in the Licensees.

(b) This Licence does not affect the ownership of the Intellectual Property Rights in any Third Party Material.

15.2 **Licensing of Intellectual Property Rights**

(a) Despite any other provision of this Licence, the Licensees grant, or must procure for, the Director a perpetual, irrevocable, royalty-free, worldwide, non-exclusive licence (including a right of sub-license) to use, reproduce, communicate and modify the Licence Material for the purposes of managing and administering the

Park, and carrying out the Director's functions under section 514B of the EPBC Act.

(b) Intellectual Property Rights and title to Director Material remains vested at all times in the Director. The Director grants to each Licensee a perpetual, irrevocable, royalty-free, world-wide, non-exclusive licence (including a right to sub-license) to use, reproduce, communicate and modify the Director Material for the purposes of this Licence and undertaking the Licensed Activities, but subject to any conditions reasonably imposed by the Director on that use.

15.3 **Warranties about Intellectual Property Rights**

(a) The Licensees warrant that the Director or its sub-licensees will not, at any time, be infringing the Intellectual Property Rights of any person when using Licence Material in a manner consistent with clause 15.2(a) or otherwise for the purpose of the Director exercising its rights or performing its obligations under this Licence.

(b) The Director warrants that the Licensees or their sub-licensees will not, at any time, be infringing the Intellectual Property Rights of any person when using Director Material in a manner consistent with clause 15.2(b) or otherwise for the purpose of the Licensees exercising their rights or performing their obligations under this Licence.

15.4 **Making of scientific research and monitoring Material publically available**

The Director must use reasonable endeavours to ensure that any Material generated through scientific research and monitoring activities funded in whole or part from the Licensed Activities Fees paid by the Licensees is made available to the public:

(a) in the case of Material in which Intellectual Property Rights are owned by the Director, under licence terms no less permissive than a Creative Commons (Attribution) 4.0 International licence; and

(b) in the case of Material in which Intellectual Property Rights are owned by a Third Party, under the most permissive terms the Director is reasonably capable of negotiating licences and sublicences for at the time it enters into the arrangement with the Third Party for provision of that Material.

16. Publicity

16.1 **Restrictions on use of trademarks and logos**

(a) Except to the extent required by Law, no party will use the trademark(s) or logo of another party without its written consent.

(b) In no event will any party knowingly make any inaccurate or misleading statement concerning another party in relation to this Licence, or concerning this Licence, to a Third Party.

16.2 **Approving media releases and public announcements**

(a) Subject to clause 16.2(d), all media releases and public announcements relating to this Licence must be provided:

(i) where the Director is the proposing party, to the Licensees Representative; and

(ii) where a Licensee is the proposing party, to the Director Representative,

for review and approval prior to publication, release or disclosure.

(b) Upon receipt of a draft media release or public announcement under clause 16.2(a), the receiving party or parties must promptly review that material and, within 5 Business Days, respond to the proposing party either:

(i) approving publication, release or disclosure, including with reasonable amendments; or

(ii) withholding approval where it is reasonable to do so.

(c) For the purposes of clause 16.2(b):

(i) where the receiving party or parties fail(s) to respond within the timeframe specified in that clause, it will be deemed to have provided its approval to publication, release or disclosure of the material; and

(ii) it will be reasonable to withhold approval or require amendments to the material where publication, release or disclosure is likely to disclose Confidential Information, Personal Information or otherwise not be in the best interests of the receiving party or parties.

(d) Despite clause 16.2(a), any party may, without the approval of another party:

(i) publicise the existence and general subject matter of this Licence; and

(ii) publish, release or disclose a media release or public announcement relating to this Licence to the extent required to comply with applicable Laws or the requirements of a securities exchange on which the shares of the party or its Related Body Corporate are listed.

17. Protection of Personal Information

17.1 Interpretation and application of clause

(a) In this clause 17, 'Australian Privacy Principle' has the same meaning as it has in the *Privacy Act 1988* (Cth).

(b) This clause applies only where the Licensees deal with Personal Information when, and for the purposes of, complying with their obligations under this Licence or undertaking the Licensed Activities within the Licence Area.

17.2 Obligations in relation to Personal Information

(a) The Licensees agree, in complying with their obligations under this Licence and in conducting the Licensed Activities within the Licence Area, to:

(i) not to do any act or engage in any practice that may breach an Australian Privacy Principle; and

(ii) comply with any directions, guidelines, determinations or recommendations of the Director, to the extent that they are consistent with the Australian Privacy Principles.

(b) The Licensees agree to notify the Director immediately if they become aware of a breach or possible breach of any of their obligations under this clause 17.

18. Protection of Confidential Information

18.1 Confidential Information not to be disclosed

Subject to clause 18.2, a party must not, without the prior written consent of the other parties, disclose any Confidential Information of another party to a Third Party.

18.2 **Exceptions to obligations**

(a) The obligations on the parties under clause 18.1 will not be breached to the extent that Confidential Information:

(i) is disclosed by a party to its Personnel solely in order to comply with obligations, or to exercise or enforce rights, under this Licence;

(ii) is disclosed to a party's internal management Personnel, solely to enable effective management or auditing of this Licence and undertaking the Licensed Activities;

(iii) is disclosed by a Licensee to its Related Body Corporate or the Personnel of its Related Body Corporate for legitimate purposes;

(iv) is disclosed by a Licensee to a bona fide proposed or prospective purchaser or assignee of the Licensee's interest in the GEP Licence or the shares of the Licensee or its Related Body Corporate;

(v) is disclosed by the Director to the responsible Minister;

(vi) is disclosed by the Director, in response to a request by a House or a Committee of the Parliament of the Commonwealth;

(vii) is shared by the Director within the Director's organisation, or with another agency, where this serves the Director's or the Commonwealth's legitimate interests; or

(viii) is authorised or required by Law, or the requirements of a securities exchange on which the shares of the party or its Related Body Corporate are listed, to be disclosed.

(b) Where a party discloses Confidential Information to another person pursuant to clauses 18.2(a)(i) to 18.2(a)(vii) (inclusive), the disclosing party must notify the receiving person that the information is confidential.

(c) In the circumstances referred to in clauses 18.2(a)(i), 18.2(a)(ii), 18.2(a)(iii), 18.2(a)(iv) and 18.2(a)(vii), the disclosing party agrees not to provide the information unless the receiving person agrees to keep the information confidential on terms no less stringent than contained in this clause 18.

18.3 **Freedom of Information Act**

In the event of a request under the *Freedom of Information Act 1982* (Cth) for any document that constitutes or contains Confidential Information, the Director must:

(a) promptly notify the Licensees of the request and the general scope of the request;

(b) subject to the constraints and timeframes for decision-making under that Act, use all reasonable endeavours to give the Licensees the opportunity to provide their views to the Director as to whether any exemptions under that Act may apply to the relevant document prior to any decision being made as to the release of the document; and

(c) claim any reasonably available exemptions under that Act applicable to the document.

18.4 **No reduction in privacy obligations**

This clause 18 does not detract from any of the Licensees' obligations under the *Privacy Act 1988* (Cth) or under clause 17 in relation to the protection of Personal Information.

19. Conflicts of Interest

(a) Each Licensee warrants in respect of itself that, to the best of its knowledge at the date of this Licence, no Conflict of Interest exists or is likely to arise in the performance of its obligations under this Licence.

(b) If during the Term, a Conflict of Interest arises, or appears likely to arise, in respect of a Licensee, that Licensee must:

(i) immediately notify the Director and the other Licensees of the Conflict of Interest making a full disclosure of all relevant information relating to the Conflict of Interest and setting out the steps the Licensee proposes to take to resolve or otherwise deal with the Conflict of Interest; and

(ii) take such steps as the Director may reasonably require to resolve or otherwise deal with that Conflict of Interest.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

22. Allowance for Park management actions

22.1 **Management actions by the Director**

(a) The Licensees acknowledge that the Director is responsible for the administration, management and control of Commonwealth reserves (such as the Park) in accordance with the EPBC Act, EPBC Regulations and any Management Plan.

(b) Despite any other clause of this Licence, the Licensees agree that the Director may, subject to clause 22.2, exercise all rights and powers of the Director under the EPBC Act, EPBC Regulations and otherwise at Law to:

(i) implement any Management Plan for the Park;

(ii) conserve the environment and heritage in the Park;

(iii) preserve or promote the safety of persons in the Park, including in response to emergencies; and

(iv) preserve or promote the efficient use and enjoyment of the Park by Third Parties.

22.2 **Consultation and variation of the Licence Area**

(a) Where any proposed action by the Director referred to under clause 22.1(b) will materially impact the rights, benefits or interests granted to the Licensees under this Licence but subject to clause 22.2(b), the Director must notify the Licensees of such proposed action prior to undertaking the action and allow a reasonable period, and in any event not less than 20 Business Days, for the Licensees to provide written submissions to the Director in respect of such proposed action. The Director must consider and have regard to any submissions provided by the Licensees under this clause 22.2(a) in determining whether to take the relevant action.

(b) Where the Director reasonably believes:

(i) that an action referred to under clause 22.1(b) is required in order to respond to an emergency or other situation likely to cause imminent harm to persons, property or the environment in the Park; and

(ii) that seeking and considering submissions from the Licensees in accordance with clause 22.2(a) would not be practical in order to avoid or mitigate that harm,

then the Director:

(iii) may take the proposed action without complying with clause 22.2(a); and

(iv) must use reasonable endeavours to notify the Licensees prior to taking the proposed action but in any event must provide them with notice of having taken the action as soon as is practicable thereafter.

(c) Provided the Director complies with this clause 22.2, the Director will not be required to compensate the Licensees for any increased costs, losses or expenses suffered by the Licensees as a result of the Director's actions under clause 22.1(b).

(d) The Director acknowledges that once constructed the GEP will be a fixed structure and as such agrees that the Licence Area must not be altered, amended or varied in any way whatsoever by the Director during the Term, except in accordance with clause 27.9.

23. Assignment, sub-licensing and novation

(a) Subject to this clause 23, a Licensee must not assign, novate, transfer or sub-license its rights or obligations, in whole or part, under this Licence without the prior written approval of the Director.

(b) If a Licensee (**Transferring Licensee**) transfers:

(i) the whole or part of its interest in the GEP Licence to a Third Party (**New GEP Licensee**), then the Transferring Licensee, the New GEP Licensee

and the other parties to this Licence must, subject to clause 23(d), execute an agreement or deed under which:

(A) the New GEP Licensee obtains the rights, benefits and obligations under, and becomes bound by the provisions of, this Licence as if it were named as a Licensee in this Licence;

(B) the parties to this Licence agree that the New GEP Licensee will have the rights, benefits and obligations under this Licence as if it were named as a Licensee in this Licence; and

(C) where the whole of the Transferring Licensee's interest in the GEP Licence is transferred to the New GEP Licensee, the Transferring Licensee is relieved and released from all of its liabilities and obligations under this Licence; or

(ii) the whole of its interest in the GEP Licence to another party to this Licence, the Transferring Licensee and the other parties to this Licence must, subject to clause 23(d), execute an agreement or deed under which the other parties relieve and release the Transferring Licensee from all of its liabilities and obligations under this Licence.

(c) The Transferring Licensee must:

(i) provide to the Director a copy of the agreement or deed referred to under clause 23(b)(i) or 23(b)(ii) signed by the Transferring Licensee, the other Licensees, and, where applicable, the New GEP Licensee; and

(ii) notify the Director once the transfer of its interest in the GEP Licence to the New GEP Licensee or the party to this Licence (as applicable) has been registered in accordance with the OPGGS Act.

(d) The Director acknowledges and agrees that:

(i) provided:

's. 47G(1)(a); s. 45(1)

(B) the transfer of the Transferring Licensee's interest in the GEP Licence to the New GEP Licensee or the party to this Licence (as applicable) has been registered in accordance with the OPGGS Act,

the Director must not withhold its consent or approval to:

(C) the transfer of this Licence to the New GEP Licensee and, where applicable, the release of the Transferring Licensee, as contemplated under clause 23(b)(i); or

(D) the release of the Transferring Licensee as contemplated under clause 23(b)(ii); and

(ii) promptly after receiving the Transferring Licensee's notice under clause 23(c)(ii), it will execute the copy of the agreement or deed provided to it under clause 23(c)(i) and return such executed copy of the document to the Transferring Licensee.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

26. Notices

26.1 Providing of notices

(a) A notice under this Licence is only effective if it is in writing, and dealt with as follows:

(i) *if given by the Licensees to the Director* – addressed to the Director Representative as specified in Item 2.9 of the Particulars, or as otherwise notified by the Director from time to time; or

(ii) *if given by the Director to the Licensees* – addressed to the Licensees Representative as specified in Item 2.10 of the Particulars, or as otherwise notified by the Licensees from time to time.

(b) A notice is to be:

(i) signed by the person giving the notice and delivered by hand;

(ii) signed by the person giving the notice and sent by pre-paid post; or

(iii) transmitted electronically by the person giving the notice by electronic mail.

26.2 Receipt of notices

(a) Subject to clause 26.2(b), a notice is deemed to be effected:

(i) *if delivered by hand* – upon delivery to the relevant address;

(ii) *if sent by post* – upon delivery to the relevant address; or

(iii) *if transmitted electronically by electronic mail* – at the time the notice would be taken to be delivered under the *Electronic Transactions Act 1999* (Cth).

(b) A notice received after 5.00pm, or on a day that is not a Business Day in the place of receipt, is deemed to be effected on the next Business Day in that place.

27. General provisions

27.1 Relationship of the parties

(a) The Licensees must not represent themselves, and must ensure that their officers, employees, agents and subcontractors do not represent themselves as being an officer, employee, partner or agent of the Director, or as otherwise able to bind or represent the Director.

(b) The Director must not represent itself, and must ensure that its officers, employees, agents and subcontractors do not represent themselves as being an officer, employee, partner or agent of the Licensees, or as otherwise able to bind or represent the Licensees.

(c) Nothing in this Licence is to be considered or construed as creating the relationship of partners in a joint venture, partnership, principal and agent, lessor and lessee, or of employer and employee between the Director and the Licensees.

(d) Unless and until all the Licensees give notice to the Director to the contrary, the Licensees Representative is entitled to:

(i) deal with the Director as agent for and on behalf of all Licensees, including give and receive notices on behalf of all Licensees; and

(ii) exercise the rights and perform the obligations of the Licensees under this Licence as agent for and on behalf of the Licensees.

27.2 **Counterparts**

This Licence may be executed in counterparts. All executed counterparts constitute one validly executed agreement.

27.3 **Severability**

If any provision of this Licence is held invalid, unenforceable or illegal for any reason, this Licence will remain otherwise in full force apart from such provision which will be deemed deleted.

27.4 **Entire agreement**

This Licence constitutes the entire agreement between the parties in relation to its subject matter, and supersedes all prior representations, agreements, statements and understandings, whether oral or in writing.

27.5 **Costs**

Each party must bear its own costs arising out of:

(a) the negotiation, preparation and execution of this Licence; and

(b) unless expressly stated otherwise, any transaction contemplated by this Licence.

27.6 **Further action**

Each party must do, at its own expense, everything reasonably necessary (including executing documents) to give full effect to this Licence and any transaction contemplated by it.

27.7 **No merger**

The rights and obligations of the parties under this Licence do not merge on completion of any transaction contemplated by this Licence.

27.8 **Waiver**

(a) A failure or delay by a party to exercise any right or remedy it holds under this Licence, at Law or in equity does not operate as a waiver of that right.

(b) A single or partial exercise by a party of any right or remedy it holds under this Licence, at Law or in equity does not prevent the party from exercising the right again or to the extent it has not fully exercised the right.

27.9 **Variation**

No variation of this Licence is binding unless it is agreed in writing and signed by all of the parties.

27.10 **Consent or approval**

Unless otherwise stated, if a party's consent or approval is required under this Licence:

(a) the requested party must consider and respond to the request promptly;

(b) consent or approval must not be unreasonably withheld;

(c) the requested party may require the requesting party to comply with reasonable conditions before giving its consent or approval; and

(d) consent or approval is not effective unless in writing.

27.11 **Governing law**

(a) This Licence is to be construed in accordance with, and any matter related to it is to be governed by, the law of the Australian Capital Territory.

(b) The parties submit to the jurisdiction of the courts of the Australian Capital Territory.

Australian Government
Director of National Parks

STANDARD-FORM COMMERCIAL ACTIVITY LICENCE

A commercial activity licence agreement for installation, operation and decommissioning of a pipeline

Director of National Parks
ABN 13 051 694 963 (**Director**)

ConocoPhillips Australia Barossa Pty Ltd
ABN 44 109 974 932
SK E&S Australia Pty Ltd
ABN 55 158 702 071
Santos Offshore Pty Ltd
ABN 38 005 475 589
(collectively, the **Licensees**)

Australian Government
Director of National Parks

Commercial Activity Licence

PART A – Brief Particulars of Licence

1. How this Licence works – Overview

1.1 Components of this Licence

This Licence is comprised of:

(a) Part A – The brief Particulars of this Licence and the execution page;

(b) Part B – Terms and conditions specific to the Licensed Activities and/or the Park, plus an Annexure specifying further details of the Particulars; and

(c) Part C – The general terms and conditions that apply to this Licence.

1.2 Definitions

Unless the contrary intention is expressed, capitalised terms used in this Licence are defined in clause 6.1 of Part C.

2. Particulars of this Licence

Item No.	Description	Clause reference	Details
2.1	**Authorisation Number**	Not applicable	**PA2018-00041-1**
2.2	**Director**	Part C clause 6.1	**Director of National Parks** (ABN 13 051 694 963) being a corporation sole continuing under section 514A of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), of Level 1, 51 Allara St, Canberra ACT 2601
2.3	**Licensees**	Part C clause 6.1	**ConocoPhillips Australia Barossa Pty Ltd** (ABN 44 109 974 932) of Level 3, 53 Ord Street, West Perth WA 6005 **SK E&S Australia Pty Ltd** (ABN 55 158 702 071) of Level 30, 108 St Georges Terrace, Perth WA 6000 **Santos Offshore Pty Ltd** (ABN 38 005 475 589) of Santos Centre, 60 Flinders Street, Adelaide SA 5000

Item No.	Description	Clause reference	Details
2.4	**Commencement Date**	Part C clauses 6.1 & 7	The date on which the GEP Licence is granted to the Licensees under the OPGGS Act.
2.5	**Term**	Part C clauses 6.1 & 7.1	The period beginning on the Commencement Date and ending on the date that: (a) is 40 years following the Commencement Date; or (b) the GEP Licence expires, terminates, is revoked or otherwise ends in accordance with the OPGGS Act, whichever is the sooner (as may be extended by agreement of the parties in accordance with clause 7.1).
2.6	**Licensed Activities**	Part B clause 4 & Annexure Part C clauses 6.1; 7.2 & 9	The construction, installation, operation, inspection, maintenance, repair, and decommissioning of the GEP and the related capture of images, video and sound within or of the Park, as more specifically described in the Annexure to Part B.
2.7	**Park**	Part B clause 4 & Annexure Part C clause 6.1	Oceanic Shoals Marine Park.
2.8	**Licence Area**	Part B Annexure Part C clauses 6.1; 8; 9.1 & 22.1	Part of Habitat Protection Zone (IUCN IV) – Zone 2, as specified in the *North Marine Parks Network Management Plan 2018* for the Oceanic Shoals Marine Park available at the Federal Register of Legislation, and as more specifically described in the Annexure to Part B.
2.9	**Director Representative**	Part C clauses 6.1 & 26.1	Position: Director of National Parks Address: 51 Allara Street, Canberra ACT 2600 Email: marineparks@environment.gov.au At the Commencement Date being: James Findlay Phone: 02 6274 1111
2.10	**Licensees Representative**	Part C clauses 6.1 & 26.1	Name: ConocoPhillips Australia Barossa Pty Ltd Attention: Director

Item No.	Description	Clause reference	Details
			Address: 53 Ord Street, West Perth WA 6005 At the Commencement Date being: s. 47F(1) Phone: s. 47F(1) Email: s. 47F(1) @conocophillips.com

3. Execution of this Licence

EXECUTED by the parties as an agreement

SIGNED for and on behalf of the **Director of National Parks ABN 13 051 694 963** by a duly authorised representative

In the presence of

Name of authorised representative (print)

Name of witness (print)

Signature of authorised representative

Signature of witness

Date

Date

SIGNED by **ConocoPhillips Australia Barossa Pty Ltd ABN 44 109 974 932** in accordance with section 127 of the *Corporations Act 2001* (Cth) by:

s. 47F(1)

Name of Director (print)

s. 47F(1)

Name of ~~Director~~ / Company Secretary (print)

s. 47F(1)

Signature of Director

28/03/2019

Date

s. 47F(1)

Signature of ~~Director~~ / Company Secretary

28/03/2019

Date

SIGNED by **SK E&S Australia Pty Ltd ABN 55 158 702 071** in accordance with section 127 of the *Corporations Act 2001* (Cth) by:

Name of Director (print)	Name of Director / Company Secretary (print)
Signature of Director	Signature of Director / Company Secretary
Date	Date

SIGNED for and on behalf of **Santos Offshore Pty Ltd ABN 38 005 475 589** by its attorney appointed under a Power of Attorney dated :

In the presence of:

Name of attorney (print)	Name of witness (print)
Signature of attorney	Signature of witness
Date	Date

Part B – Park and Licensed Activities specific conditions

4. Licensed Activities specific conditions

4.1 The Licensees must consult the Director as a Relevant Person during the development of all Environment Plans.

4.2 The Licensees must ensure that they and their Personnel fully inform themselves of, and equip themselves for, all potential hazards and conditions they may encounter while conducting the Licensed Activities within the Licence Area.

4.3 The Licensees acknowledge that the Director has no ability to monitor or warn the Licensees of changing environmental hazards or developing hazards within the Park.

4.4 The Licensees must:

(a) notify the Director of the grant of the GEP Licence (if granted) within 24 hours of its grant;

(b) notify the Director of the acceptance or refusal of an Environment Plan by NOPSEMA within 24 hours of its acceptance or refusal;

(c) following acceptance of an Environment Plan by NOPSEMA, provide the Director with a copy of that Environment Plan within 10 Business Days of its acceptance; and

(d) following the completion of construction of the GEP, promptly provide the Director with as built coordinates for the location of the GEP in degrees, minutes and seconds using geographic coordinate system GDA94.

5. Park and Licence Area specific conditions

5.1 The Licensed Activities conducted within the Licence Area must be conducted in accordance with an Environment Plan.

5.2 In developing each Environment Plan, the Licensees must ensure that they:

(a) consult with all relevant representative organisations for Aboriginal or Torres Strait Islander persons whose custodianship or traditional use of the Licence Area or the Park may be negatively impacted by the Licensed Activities;

(b) use reasonable endeavours to:

(i) address any feedback received in consultation undertaken for the purposes of clause 5.2(a); and

(ii) mitigate or avoid negative impacts, by amending the proposed Environment Plan and manner in which the Licensees propose to undertake the Licensed Activities; and

(c) at the same time that the Licensees provide the Director with a copy of the relevant Environment Plan in accordance with clause 4.4(c), provide the Director with a report setting out:

(i) the scope of the consultation undertaken in accordance with clause 5.2(a), including names of organisations from whom feedback was sought;

(ii) a summary of the feedback received from organisations with whom consultation occurred; and

(iii) a summary of the amendments to the Environment Plan and manner in which the Licensed Activities are proposed to occur, made by the Licensees in order to address feedback and mitigate or avoid negative impacts on the Aboriginal or Torres Strait Islander persons referred to in clause 5.2(a).

Annexure to Part B – Further details and plans of matters referred to in the Particulars

1. Further descriptions of matters referred to in the Particulars

1.1 Licensed Activities:

(a) The construction, installation, operation, inspection, maintenance, repair, and decommissioning of the GEP, including any activities that the Licensees are authorised to undertake under the GEP Licence and authorised to undertake under the Environment Plan.

(b) The capture of images, video and sound within or of the Park for commercial uses associated with the Licensed Activities specified in Item 1.1(a) of this Annexure.

1.2 Licence Area:

The pipeline installation corridor consisting of an area designated by a line connecting the following coordinates:

Longitude	Latitude
130° 5' 59.9889"	-11° 0' 19.1548
130° 5' 44.8964"	-11° 0' 41.2944"
130° 5' 30.4414"	-11° 1' 3.4594"
130° 5' 16.2732"	-11° 1' 26.1877"
130° 5' 2.5790"	-11° 1' 49.1981"
130° 0' 3.3460"	-11° 10' 29.8114"
129° 59' 596.7837"	-11° 10' 41.8497"
129° 59' 590.6014"	-11° 10' 54.4453"
129° 59' 582.9030"	-11° 11' 12.4343"
129° 59' 576.3108"	-11° 11' 30.8467"
129° 59' 570.8485"	-11° 11' 49.6163"
129° 59' 566.5357"	-11° 12' 8.67548"
129° 59' 564.0652"	-11° 12' 23.1187"
129° 58' 536.7204"	-11° 15' 30.6456"

* Coordinates presented in degrees, minutes and seconds using geographic coordinate system GDA94

buffered by 2000 m on either side.

Part C – General terms and conditions

6. Definitions and interpretation

6.1 Definitions

In this Licence, except where the contrary intention is expressed, the following definitions are used:

s. 47G(1)(a); s. 45(1)

Annexure	means an annexure to this Licence.
Authorisation	means any consent, authorisation, registration, filing, recording, agreement, notarisation, certificate, permission, licence, approval, permit, authority or exemption from, by or with, a Government Agency or judicial body, including any Environment Plan and Safety Case.
Business Day	means, in relation to the taking of an action or the occurrence of an event in a place, a day other than a Saturday, Sunday or public holiday in that place.
Commencement Date	means the date specified in Item 2.4 of the Particulars.
Commonwealth	means the Commonwealth of Australia.
Commonwealth reserve	means an area proclaimed as a Commonwealth reserve under section 344 of the EPBC Act.

s. 47G(1)(a); s. 45(1)

Conflict of Interest	means any circumstance in which a Licensee or any of its Personnel has an interest (whether financial or non-financial) or an affiliation that is affecting, will affect, or could be perceived to affect: (a) the Licensee's ability to comply with its obligations under this Licence and undertake Licensed Activities within the Licence Area; or (b) the Director's ability to carry out its functions specified in section 514B of the EPBC Act, fairly and independently.

s. 47G(1)(a); s. 45(1)

Director	means the party specified in Item 2.2 of the Particulars, or any other Commonwealth department or agency that administers this Licence from time to time.
Director Material	means any Material provided to the Licensees by the Director, including any Third Party Material included or embodied in or attached to such Material.
Director Representative	means the person specified in Item 2.9 of the Particulars or otherwise as advised by the Director to the Licensees by notice from time to time.
Environment Plan	means the environment plan or plans (as the case may be) accepted and in force from time to time under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth) in respect of the Licensed Activities, including any associated oil pollution emergency plans.
EPBC Act	means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).
EPBC Regulations	means the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth).
GEP	means the gas export pipeline (including all associated equipment, facilities, structures, infrastructure, and appurtenances) to be constructed and maintained by the Licensees from the Barossa field located offshore, Northern Territory in the Timor Sea and interconnecting with the Bayu-Undan to Darwin gas export pipeline the subject of pipeline licence NT/PL1 granted under the OPGGS Act.
GEP Licence	means the pipeline licence or licences (as the case may be) granted to the Licensees under the OPGGS Act in respect of the GEP.
Government Agency	means any government, governmental or semi-government or judicial entity, any body politic, any ministry, department, commission, tribunal, agency, inspectorate, official, public or statutory person or other statutory, administrative, supervisory or regulatory entity, domestic or foreign, federal, state or local.
GST Act	means the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).
Intellectual Property Rights	means all intellectual property rights, including the following rights: (a) copyright, patents, rights in circuit layouts, trademarks, designs, trade secrets, know how, domain names and any right to have Confidential Information kept confidential; (b) any application or right to apply for registration of any of the rights referred to in paragraph (a); and (c) all rights of a similar nature to any of the rights in paragraphs (a) and (b) which may subsist in Australia or elsewhere,

	whether or not such rights are registered or capable of being registered.
Item	means an item in the Particulars or a Schedule (as the case may require).
Law	means any applicable statute, regulation, by-law, ordinance or subordinate legislation in force from time to time in Australia, whether made by a State, Territory, the Commonwealth, or a local government, and includes the EPBC Act, EPBC Regulations and any relevant Management Plan.
Licence	means this licence agreement and includes its Schedules, Annexures and any attachments.
Licence Area	means the area or areas where the Licensees are allowed to undertake the Licensed Activities, as described in Item 2.8 of the Particulars and more specifically detailed in the Annexure to Part B.

s. 47G(1)(a); s. 45(1)

Licence Material	means any Material that is: (a) created by the Licensees for the purpose of, or as a result of, the Licensees' performance of their obligations under this Licence; and (b) provided by the Licensees to the Director under this Licence, including any Third Party Material included or embodied in or attached to such Material.
Licence Year	means a period of 12 consecutive months commencing on and from the Commencement Date or an anniversary of the Commencement Date.
Licensed Activities	means the activities specified in Item 2.6 of the Particulars, and more specifically detailed in the Annexure to Part B.

s. 47G(1)(a); s. 45(1)

Licensees	means the parties specified in Item 2.3 of the Particulars, and includes any assignee, transferee or novatee of such a party permitted under clause 23, and **Licensee** will be construed accordingly.
Licensees Representative	means the person specified in Item 2.10 of the Particulars or otherwise as advised by the Licensees to the Director by notice from time to time.
Management Plan	means a plan detailing management arrangements for the Park, in force and made under section 368 of the EPBC Act.
Material	means any software, firmware, documented methodology or process, documentation or other material in whatever form, and the subject matter of any category of Intellectual Property

Rights.

s. 47G(1)(a); s. 45(1)

New GEP Licensee	has the meaning given in clause 23(b)(i).
NOPSEMA	means the National Offshore Petroleum Safety and Environmental Management Authority established under Part 6.9 of the OPGGS Act, and any successor authority or body of it.
OPGGS Act	means the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth).
Park	means the Commonwealth reserve(s) specified in Item 2.7 of the Particulars.
Particulars	means the particulars of this Licence, specified in the table at clause 2.
Personal Information	has the meaning given to that term in the *Privacy Act 1988* (Cth).
Personnel	means: (a) in the case of the Director, every person working for or on behalf of the Director, past or present, including employees, contractors, subcontractors, agents, representatives, advisors and volunteers of the Director and of the Commonwealth; and (b) in the case of a Licensee, every person who performs, or is otherwise involved in undertaking the Licensed Activities, or operation of the Licensee's organisation, including employees, contractors, subcontractors, agents, representatives, advisors and volunteers.
Related Body Corporate	has the meaning given in section 50 of the *Corporations Act 2001* (Cth), as at the date of this Licence.
Relevant Person	has the meaning given to that term in the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth).

s. 47G(1)(a); s. 45(1)

Safety Case	means the safety case or cases (as the case may be) accepted and in force from time to time under the *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009* (Cth) in respect of the Licensed Activities.
Schedule	means a schedule to this Licence.
Term	means the period specified in Item 2.5 of the Particulars.
Third Party	means any person other than a party to this Licence.
Third Party Material	means any Material created by a Third Party.

s. 47G(1)(a); s. 45(1)

Transferring Licensee	has the meaning given in clause 23(b).

Warden has the meaning given to that term in the EPBC Act.

6.2 **Interpretation**

In this Licence, except where the contrary intention is expressed:

(a) the singular includes the plural and vice versa, and a gender includes other genders;

(b) another grammatical form of a defined word or expression has a corresponding meaning;

(c) a reference to a document or instrument includes the document or instrument as novated, altered, supplemented or replaced from time to time;

(d) a reference to A$, AUD$, dollar or $ is to Australian currency;

(e) a reference to time is to the time in the place where the obligation is to be performed;

(f) a reference to a party is to a party to this Licence, and a reference to a party to a document includes the party's executors, administrators, successors and permitted assignees and substitutes;

(g) a reference to a person includes a natural person, partnership, body corporate, association, governmental or local authority or agency or other entity;

(h) if a Licensee is a trustee, the Licensee enters into this Licence personally and in its capacity as trustee and:

(i) any warranties given under this Licence are given in both capacities; and

(ii) warrants that it has the power to perform its obligations under this Licence;

(i) a reference to a statute, ordinance, code or other Law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;

(j) the meaning of general words is not limited by specific examples introduced by the terms 'including', 'such as', 'for example' or similar expressions;

(k) any agreement, representation, warranty or indemnity by two or more parties (including where two or more persons are included in the same defined term) binds them jointly and severally;

(l) any agreement, representation, warranty or indemnity in favour of two or more parties (including where two or more persons are included in the same defined term) is for the benefit of them jointly and severally;

(m) a rule of construction does not apply to the disadvantage of a party because the party was responsible for the preparation of this Licence or any part of it;

(n) if a day on or by which an obligation must be performed or an event must occur is not a Business Day, the obligation must be performed or the event must occur on or by the next Business Day; and

(o) headings are for ease of reference only and do not affect interpretation.

6.3 **Completion of Schedules**

To the extent that the parties have not completed Items in the Particulars, a Schedule or Annexure, unless otherwise stated, those Items will be taken to be 'not applicable' for the purposes of this Licence.

6.4 **Priority of Licence parts and documents**

If there is inconsistency between any of the parts or documents forming part of this Licence, those parts and documents will be interpreted in the following order of priority to the extent of any inconsistency:

(a) Part A – Brief Particulars of Licence;

(b) Part B – Park and Licensed Activities specific conditions;

(c) Part C – General terms and conditions;

(d) any Schedules and Annexures (in their order of appearance); and

(e) any documents incorporated by reference in this Licence.

7. Duration and activities prior to commencement

7.1 **Period of Licence**

(a) This Licence commences on the Commencement Date.

(b) Unless terminated earlier in accordance with clause 25, this Licence will remain in force for the Term.

(c) If the Licensees believe that the Licensed Activities will or may be undertaken in the Licence Area beyond the date on which the Term will end (other than due to the GEP Licence expiring, terminating, being revoked or otherwise ending), the Licensees may give notice to the Director of such belief and request negotiations with the Director in respect of an extension of the Term.

(d) The notice given by the Licensees under clause 7.1(c) must specify the extension of the Term sought by the Licensees, the Licensed Activities that will or may be undertaken in the Licence Area during the extended period, and any other relevant information.

(e) If the Licensees give the Director a notice under clause 7.1(c), the parties must meet within a reasonable period and negotiate in good faith to attempt to agree an extension of the Term having regard to:

(i) the existing terms and conditions of this Licence;

(ii) the matters and information specified by the Licensees in their notice; and

(iii) the commercial and regulatory environment prevailing at the time of those negotiations, including any then current Management Plan and Environment Plan, and the state of repair and predicted useful life of the GEP.

(f) Any agreement of the parties under clause 7.1(e) to extend the Term must be set out in a written agreement.

7.2 **Licensed Activities prior to Commencement Date**

Nothing in this Licence authorises the Licensees to conduct the Licensed Activities within the Licence Area prior to the Commencement Date.

8. Licence

8.1 **Grant of Licence**

The Director grants to the Licensees a licence to carry out the Licensed Activities within the Licence Area, provided that the Licensees comply with the terms and conditions of this Licence.

8.2 **Contractual nature of Licence**

This Licence is a contractual licence only and does not:

(a) give the Licensees a lease or any other interest or estate in the Licence Area or any other area; or

(b) confer any right of exclusive use or occupation of the Licence Area on the Licensees.

9. Conduct of Licensed Activities and use of Licence Area

9.1 **Use of Licence Area for Licensed Activities**

The Licensees must:

(a) use the Licence Area solely for the Licensed Activities and must not use, or cause or permit to be used by the Licensees' Personnel, the Licence Area for any other purpose; and

(b) not conduct the Licensed Activities anywhere in the Park outside the Licence Area,

unless authorised by another permit issued by, or licence entered into with, the Director.

9.2 **Compliance with Laws and Authorisations**

(a) In undertaking the Licensed Activities within the Licence Area and performing the Licensees' obligations under this Licence, the Licensees must comply with:

(i) all applicable Laws, including the EPBC Act, EPBC Regulations and any Management Plan;

(ii) all applicable Authorisations; and

(iii) any direction or determination issued by the Director or a Warden under Law about use of the Park or conduct of the Licensed Activities.

(b) The Licensees must hold all Authorisations required for the conduct of the Licensed Activities within the Licence Area.

10. Licensees' Personnel

10.1 **Requirements for Licensees' Personnel**

The Licensees must ensure that the Licensees' Personnel involved in undertaking the Licensed Activities within the Licence Area:

(a) have the relevant experience to undertake the Licensed Activities;

(b) hold all qualifications and Authorisations necessary to undertake the Licensed Activities; and

(c) understand and comply with the Licensees' obligations under this Licence.

10.2 **Exclusion of certain persons as Licensees' Personnel or from the Park**

(a) If a Licensee is a company or other incorporated body, the Licensee must not, without the approval of the Director, have as a director (or similar office holder) a person who has been convicted of an offence against the EPBC Act or EPBC Regulations within the previous ten years.

(b) If any of a Licensee's Personnel:

(i) contravene the provisions of the EPBC Act, EPBC Regulations or any Management Plan; or

(ii) cause or contribute to causing the Licensees to breach a provision of this Licence,

then the Director may, in addition to any other right or remedy available to the Director under this Licence, at Law or in equity:

(iii) notify the Licensees of the contravention or breach, providing reasonable details about the actions of the relevant Personnel member; and

(iv) direct the Licensees to cease using the services of that person within the Licence Area for a specified time and the Licensees must immediately comply with that direction.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

13. Taxes, duties and government charges

13.1 Interpretation

In this clause 13:

GST	has the meaning given to that term in the GST Act.
tax invoice	means a tax invoice meeting the requirements of the GST Act.
taxable supply	has the meaning given to that term in the GST Act.

13.2 Liability for taxes, duties and government charges

Subject to this clause 13, all taxes, duties and government charges imposed or levied in Australia or overseas in connection with this Licence or the Licensed Activities must be borne by the Licensees.

13.3 Payment of GST

(a) Unless otherwise stated, all amounts listed in this Licence are expressed as GST exclusive amounts.

(b) If GST applies to any taxable supply by the Director to the Licensees under this Licence, the Licensees must reimburse the Director for GST paid or payable by the Director, subject to the Director issuing the Licensees with a valid tax invoice.

(c) If GST applies to any taxable supply by the Licensees to the Director under this Licence, the Director must reimburse the Licensees for GST paid or payable by the Licensees, subject to the Licensees issuing the Director with a valid tax invoice.

(d) Nothing in this Licence obliges a party to reimburse the other party for GST paid or payable by the other party in respect of a taxable supply to the extent that the other party is entitled to claim an input tax credit.

14. Audit and access

14.1 Right to conduct audits

The Director or a representative may conduct audits relevant to the performance of the Licensees' obligations under this Licence. Audits may be conducted of:

(a) the Licensees' operational practices and procedures as they relate to undertaking the Licensed Activities within the Licence Area; and

(b) the Licensees' compliance with the terms and conditions of this Licence and the requirements of Law applicable to the Licensed Activities undertaken within the

Licence Area, including the EPBC Act, EPBC Regulations and any Management Plan.

14.2 **Access by the Director**

The Director may, at reasonable times and on giving reasonable notice to the Licensees:

(a) require the provision by the Licensees or their Personnel of records and information in a data format and storage medium accessible by the Director; and

(b) inspect and copy Material, however stored, in the custody or under the control of the Licensees or their Personnel,

for the purposes of ensuring the Licensees' compliance with the terms and conditions of this Licence.

14.3 **Conduct of audit and access**

The Director must use reasonable endeavours to ensure that:

(a) audits performed pursuant to clause 14.1; and

(b) the exercise of the general rights granted under clause 14.2 to the Director,

do not unreasonably delay or disrupt in any material respect the Licensees or their Personnel undertaking the Licensed Activities.

14.4 **Confidentiality**

Any Material or information obtained by the Director or any other person as a result of the exercise of the rights under clauses 14.1 or 14.2 will be deemed to be Confidential Information and subject to clause 18.

14.5 **Costs**

Each party must bear its own out-of-pocket costs of any record keeping, inspections, reviews, audits and inquiries conducted pursuant to this clause 14.

14.6 **Auditor-General, Ombudsman and Commissioners**

The rights of the Director under clauses 14.1 and 14.2 apply equally to the Commonwealth Auditor-General, Ombudsman, Information Commissioner, Privacy Commissioner and Freedom of Information Commissioner, or his or her delegate, for the purpose of performing their statutory functions or powers.

14.7 **No reduction in responsibility**

The requirement for, and participation in, audits does not in any way reduce the Licensees' responsibility to perform their obligations in accordance with this Licence.

15. Treatment of intellectual property

15.1 **Vesting of Intellectual Property Rights**

(a) Subject to clause 15.1(b), all Intellectual Property Rights in the Licence Material will vest, upon creation, in the Licensees.

(b) This Licence does not affect the ownership of the Intellectual Property Rights in any Third Party Material.

15.2 **Licensing of Intellectual Property Rights**

(a) Despite any other provision of this Licence, the Licensees grant, or must procure for, the Director a perpetual, irrevocable, royalty-free, worldwide, non-exclusive licence (including a right of sub-license) to use, reproduce, communicate and modify the Licence Material for the purposes of managing and administering the

Park, and carrying out the Director's functions under section 514B of the EPBC Act.

(b) Intellectual Property Rights and title to Director Material remains vested at all times in the Director. The Director grants to each Licensee a perpetual, irrevocable, royalty-free, world-wide, non-exclusive licence (including a right to sub-license) to use, reproduce, communicate and modify the Director Material for the purposes of this Licence and undertaking the Licensed Activities, but subject to any conditions reasonably imposed by the Director on that use.

15.3 **Warranties about Intellectual Property Rights**

(a) The Licensees warrant that the Director or its sub-licensees will not, at any time, be infringing the Intellectual Property Rights of any person when using Licence Material in a manner consistent with clause 15.2(a) or otherwise for the purpose of the Director exercising its rights or performing its obligations under this Licence.

(b) The Director warrants that the Licensees or their sub-licensees will not, at any time, be infringing the Intellectual Property Rights of any person when using Director Material in a manner consistent with clause 15.2(b) or otherwise for the purpose of the Licensees exercising their rights or performing their obligations under this Licence.

15.4 **Making of scientific research and monitoring Material publically available**

The Director must use reasonable endeavours to ensure that any Material generated through scientific research and monitoring activities funded in whole or part from the Licensed Activities Fees paid by the Licensees is made available to the public:

(a) in the case of Material in which Intellectual Property Rights are owned by the Director, under licence terms no less permissive than a Creative Commons (Attribution) 4.0 International licence; and

(b) in the case of Material in which Intellectual Property Rights are owned by a Third Party, under the most permissive terms the Director is reasonably capable of negotiating licences and sublicences for at the time it enters into the arrangement with the Third Party for provision of that Material.

16. Publicity

16.1 **Restrictions on use of trademarks and logos**

(a) Except to the extent required by Law, no party will use the trademark(s) or logo of another party without its written consent.

(b) In no event will any party knowingly make any inaccurate or misleading statement concerning another party in relation to this Licence, or concerning this Licence, to a Third Party.

16.2 **Approving media releases and public announcements**

(a) Subject to clause 16.2(d), all media releases and public announcements relating to this Licence must be provided:

(i) where the Director is the proposing party, to the Licensees Representative; and

(ii) where a Licensee is the proposing party, to the Director Representative,

for review and approval prior to publication, release or disclosure.

(b) Upon receipt of a draft media release or public announcement under clause 16.2(a), the receiving party or parties must promptly review that material and, within 5 Business Days, respond to the proposing party either:

(i) approving publication, release or disclosure, including with reasonable amendments; or

(ii) withholding approval where it is reasonable to do so.

(c) For the purposes of clause 16.2(b):

(i) where the receiving party or parties fail(s) to respond within the timeframe specified in that clause, it will be deemed to have provided its approval to publication, release or disclosure of the material; and

(ii) it will be reasonable to withhold approval or require amendments to the material where publication, release or disclosure is likely to disclose Confidential Information, Personal Information or otherwise not be in the best interests of the receiving party or parties.

(d) Despite clause 16.2(a), any party may, without the approval of another party:

(i) publicise the existence and general subject matter of this Licence; and

(ii) publish, release or disclose a media release or public announcement relating to this Licence to the extent required to comply with applicable Laws or the requirements of a securities exchange on which the shares of the party or its Related Body Corporate are listed.

17. Protection of Personal Information

17.1 Interpretation and application of clause

(a) In this clause 17, 'Australian Privacy Principle' has the same meaning as it has in the *Privacy Act 1988* (Cth).

(b) This clause applies only where the Licensees deal with Personal Information when, and for the purposes of, complying with their obligations under this Licence or undertaking the Licensed Activities within the Licence Area.

17.2 Obligations in relation to Personal Information

(a) The Licensees agree, in complying with their obligations under this Licence and in conducting the Licensed Activities within the Licence Area, to:

(i) not to do any act or engage in any practice that may breach an Australian Privacy Principle; and

(ii) comply with any directions, guidelines, determinations or recommendations of the Director, to the extent that they are consistent with the Australian Privacy Principles.

(b) The Licensees agree to notify the Director immediately if they become aware of a breach or possible breach of any of their obligations under this clause 17.

18. Protection of Confidential Information

18.1 Confidential Information not to be disclosed

Subject to clause 18.2, a party must not, without the prior written consent of the other parties, disclose any Confidential Information of another party to a Third Party.

18.2 **Exceptions to obligations**

(a) The obligations on the parties under clause 18.1 will not be breached to the extent that Confidential Information:

(i) is disclosed by a party to its Personnel solely in order to comply with obligations, or to exercise or enforce rights, under this Licence;

(ii) is disclosed to a party's internal management Personnel, solely to enable effective management or auditing of this Licence and undertaking the Licensed Activities;

(iii) is disclosed by a Licensee to its Related Body Corporate or the Personnel of its Related Body Corporate for legitimate purposes;

(iv) is disclosed by a Licensee to a bona fide proposed or prospective purchaser or assignee of the Licensee's interest in the GEP Licence or the shares of the Licensee or its Related Body Corporate;

(v) is disclosed by the Director to the responsible Minister;

(vi) is disclosed by the Director, in response to a request by a House or a Committee of the Parliament of the Commonwealth;

(vii) is shared by the Director within the Director's organisation, or with another agency, where this serves the Director's or the Commonwealth's legitimate interests; or

(viii) is authorised or required by Law, or the requirements of a securities exchange on which the shares of the party or its Related Body Corporate are listed, to be disclosed.

(b) Where a party discloses Confidential Information to another person pursuant to clauses 18.2(a)(i) to 18.2(a)(vii) (inclusive), the disclosing party must notify the receiving person that the information is confidential.

(c) In the circumstances referred to in clauses 18.2(a)(i), 18.2(a)(ii), 18.2(a)(iii), 18.2(a)(iv) and 18.2(a)(vii), the disclosing party agrees not to provide the information unless the receiving person agrees to keep the information confidential on terms no less stringent than contained in this clause 18.

18.3 **Freedom of Information Act**

In the event of a request under the *Freedom of Information Act 1982* (Cth) for any document that constitutes or contains Confidential Information, the Director must:

(a) promptly notify the Licensees of the request and the general scope of the request;

(b) subject to the constraints and timeframes for decision-making under that Act, use all reasonable endeavours to give the Licensees the opportunity to provide their views to the Director as to whether any exemptions under that Act may apply to the relevant document prior to any decision being made as to the release of the document; and

(c) claim any reasonably available exemptions under that Act applicable to the document.

18.4 **No reduction in privacy obligations**

This clause 18 does not detract from any of the Licensees' obligations under the *Privacy Act 1988* (Cth) or under clause 17 in relation to the protection of Personal Information.

19. Conflicts of Interest

(a) Each Licensee warrants in respect of itself that, to the best of its knowledge at the date of this Licence, no Conflict of Interest exists or is likely to arise in the performance of its obligations under this Licence.

(b) If during the Term, a Conflict of Interest arises, or appears likely to arise, in respect of a Licensee, that Licensee must:

(i) immediately notify the Director and the other Licensees of the Conflict of Interest making a full disclosure of all relevant information relating to the Conflict of Interest and setting out the steps the Licensee proposes to take to resolve or otherwise deal with the Conflict of Interest; and

(ii) take such steps as the Director may reasonably require to resolve or otherwise deal with that Conflict of Interest.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

22. Allowance for Park management actions

22.1 **Management actions by the Director**

(a) The Licensees acknowledge that the Director is responsible for the administration, management and control of Commonwealth reserves (such as the Park) in accordance with the EPBC Act, EPBC Regulations and any Management Plan.

(b) Despite any other clause of this Licence, the Licensees agree that the Director may, subject to clause 22.2, exercise all rights and powers of the Director under the EPBC Act, EPBC Regulations and otherwise at Law to:

(i) implement any Management Plan for the Park;

(ii) conserve the environment and heritage in the Park;

(iii) preserve or promote the safety of persons in the Park, including in response to emergencies; and

(iv) preserve or promote the efficient use and enjoyment of the Park by Third Parties.

22.2 **Consultation and variation of the Licence Area**

(a) Where any proposed action by the Director referred to under clause 22.1(b) will materially impact the rights, benefits or interests granted to the Licensees under this Licence but subject to clause 22.2(b), the Director must notify the Licensees of such proposed action prior to undertaking the action and allow a reasonable period, and in any event not less than 20 Business Days, for the Licensees to provide written submissions to the Director in respect of such proposed action. The Director must consider and have regard to any submissions provided by the Licensees under this clause 22.2(a) in determining whether to take the relevant action.

(b) Where the Director reasonably believes:

(i) that an action referred to under clause 22.1(b) is required in order to respond to an emergency or other situation likely to cause imminent harm to persons, property or the environment in the Park; and

(ii) that seeking and considering submissions from the Licensees in accordance with clause 22.2(a) would not be practical in order to avoid or mitigate that harm,

then the Director:

(iii) may take the proposed action without complying with clause 22.2(a); and

(iv) must use reasonable endeavours to notify the Licensees prior to taking the proposed action but in any event must provide them with notice of having taken the action as soon as is practicable thereafter.

(c) Provided the Director complies with this clause 22.2, the Director will not be required to compensate the Licensees for any increased costs, losses or expenses suffered by the Licensees as a result of the Director's actions under clause 22.1(b).

(d) The Director acknowledges that once constructed the GEP will be a fixed structure and as such agrees that the Licence Area must not be altered, amended or varied in any way whatsoever by the Director during the Term, except in accordance with clause 27.9.

23. Assignment, sub-licensing and novation

(a) Subject to this clause 23, a Licensee must not assign, novate, transfer or sub-license its rights or obligations, in whole or part, under this Licence without the prior written approval of the Director.

(b) If a Licensee (**Transferring Licensee**) transfers:

(i) the whole or part of its interest in the GEP Licence to a Third Party (**New GEP Licensee**), then the Transferring Licensee, the New GEP Licensee

and the other parties to this Licence must, subject to clause 23(d), execute an agreement or deed under which:

(A) the New GEP Licensee obtains the rights, benefits and obligations under, and becomes bound by the provisions of, this Licence as if it were named as a Licensee in this Licence;

(B) the parties to this Licence agree that the New GEP Licensee will have the rights, benefits and obligations under this Licence as if it were named as a Licensee in this Licence; and

(C) where the whole of the Transferring Licensee's interest in the GEP Licence is transferred to the New GEP Licensee, the Transferring Licensee is relieved and released from all of its liabilities and obligations under this Licence; or

(ii) the whole of its interest in the GEP Licence to another party to this Licence, the Transferring Licensee and the other parties to this Licence must, subject to clause 23(d), execute an agreement or deed under which the other parties relieve and release the Transferring Licensee from all of its liabilities and obligations under this Licence.

(c) The Transferring Licensee must:

(i) provide to the Director a copy of the agreement or deed referred to under clause 23(b)(i) or 23(b)(ii) signed by the Transferring Licensee, the other Licensees, and, where applicable, the New GEP Licensee; and

(ii) notify the Director once the transfer of its interest in the GEP Licence to the New GEP Licensee or the party to this Licence (as applicable) has been registered in accordance with the OPGGS Act.

(d) The Director acknowledges and agrees that:

(i) provided:

s. 47G(1)(a); s. 45(1)

(B) the transfer of the Transferring Licensee's interest in the GEP Licence to the New GEP Licensee or the party to this Licence (as applicable) has been registered in accordance with the OPGGS Act,

the Director must not withhold its consent or approval to:

(C) the transfer of this Licence to the New GEP Licensee and, where applicable, the release of the Transferring Licensee, as contemplated under clause 23(b)(i); or

(D) the release of the Transferring Licensee as contemplated under clause 23(b)(ii); and

(ii) promptly after receiving the Transferring Licensee's notice under clause 23(c)(ii), it will execute the copy of the agreement or deed provided to it under clause 23(c)(i) and return such executed copy of the document to the Transferring Licensee.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

26. Notices

26.1 Providing of notices

(a) A notice under this Licence is only effective if it is in writing, and dealt with as follows:

(i) *if given by the Licensees to the Director* – addressed to the Director Representative as specified in Item 2.9 of the Particulars, or as otherwise notified by the Director from time to time; or

(ii) *if given by the Director to the Licensees* – addressed to the Licensees Representative as specified in Item 2.10 of the Particulars, or as otherwise notified by the Licensees from time to time.

(b) A notice is to be:

(i) signed by the person giving the notice and delivered by hand;

(ii) signed by the person giving the notice and sent by pre-paid post; or

(iii) transmitted electronically by the person giving the notice by electronic mail.

26.2 Receipt of notices

(a) Subject to clause 26.2(b), a notice is deemed to be effected:

(i) *if delivered by hand* – upon delivery to the relevant address;

(ii) *if sent by post* – upon delivery to the relevant address; or

(iii) *if transmitted electronically by electronic mail* – at the time the notice would be taken to be delivered under the *Electronic Transactions Act 1999* (Cth).

(b) A notice received after 5.00pm, or on a day that is not a Business Day in the place of receipt, is deemed to be effected on the next Business Day in that place.

27. General provisions

27.1 Relationship of the parties

(a) The Licensees must not represent themselves, and must ensure that their officers, employees, agents and subcontractors do not represent themselves as being an officer, employee, partner or agent of the Director, or as otherwise able to bind or represent the Director.

(b) The Director must not represent itself, and must ensure that its officers, employees, agents and subcontractors do not represent themselves as being an officer, employee, partner or agent of the Licensees, or as otherwise able to bind or represent the Licensees.

(c) Nothing in this Licence is to be considered or construed as creating the relationship of partners in a joint venture, partnership, principal and agent, lessor and lessee, or of employer and employee between the Director and the Licensees.

(d) Unless and until all the Licensees give notice to the Director to the contrary, the Licensees Representative is entitled to:

(i) deal with the Director as agent for and on behalf of all Licensees, including give and receive notices on behalf of all Licensees; and

(ii) exercise the rights and perform the obligations of the Licensees under this Licence as agent for and on behalf of the Licensees.

27.2 **Counterparts**

This Licence may be executed in counterparts. All executed counterparts constitute one validly executed agreement.

27.3 **Severability**

If any provision of this Licence is held invalid, unenforceable or illegal for any reason, this Licence will remain otherwise in full force apart from such provision which will be deemed deleted.

27.4 **Entire agreement**

This Licence constitutes the entire agreement between the parties in relation to its subject matter, and supersedes all prior representations, agreements, statements and understandings, whether oral or in writing.

27.5 **Costs**

Each party must bear its own costs arising out of:

(a) the negotiation, preparation and execution of this Licence; and

(b) unless expressly stated otherwise, any transaction contemplated by this Licence.

27.6 **Further action**

Each party must do, at its own expense, everything reasonably necessary (including executing documents) to give full effect to this Licence and any transaction contemplated by it.

27.7 **No merger**

The rights and obligations of the parties under this Licence do not merge on completion of any transaction contemplated by this Licence.

27.8 **Waiver**

(a) A failure or delay by a party to exercise any right or remedy it holds under this Licence, at Law or in equity does not operate as a waiver of that right.

(b) A single or partial exercise by a party of any right or remedy it holds under this Licence, at Law or in equity does not prevent the party from exercising the right again or to the extent it has not fully exercised the right.

27.9 **Variation**

No variation of this Licence is binding unless it is agreed in writing and signed by all of the parties.

27.10 **Consent or approval**

Unless otherwise stated, if a party's consent or approval is required under this Licence:

(a) the requested party must consider and respond to the request promptly;

(b) consent or approval must not be unreasonably withheld;

(c) the requested party may require the requesting party to comply with reasonable conditions before giving its consent or approval; and

(d) consent or approval is not effective unless in writing.

27.11 **Governing law**

(a) This Licence is to be construed in accordance with, and any matter related to it is to be governed by, the law of the Australian Capital Territory.

(b) The parties submit to the jurisdiction of the courts of the Australian Capital Territory.

Australian Government
Director of National Parks

Commercial Activity Licence

PART A – Brief Particulars of Licence

1. How this Licence works – Overview

1.1 **Components of this Licence**

This Licence is comprised of:

(a) Part A – The brief Particulars of this Licence and the execution page;

(b) Part B – Terms and conditions specific to the Licensed Activities and/or the Park, plus an Annexure specifying further details of the Particulars; and

(c) Part C – The general terms and conditions that apply to this Licence.

1.2 **Definitions**

Unless the contrary intention is expressed, capitalised terms used in this Licence are defined in clause 6.1 of Part C.

2. Particulars of this Licence

Item No.	Description	Clause reference	Details
2.1	**Authorisation Number**	Not applicable	**PA2018-00041-1**
2.2	**Director**	Part C clause 6.1	**Director of National Parks** (ABN 13 051 694 963) being a corporation sole continuing under section 514A of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), of Level 1, 51 Allara St, Canberra ACT 2601
2.3	**Licensees**	Part C clause 6.1	**ConocoPhillips Australia Barossa Pty Ltd** (ABN 44 109 974 932) of Level 3, 53 Ord Street, West Perth WA 6005 **SK E&S Australia Pty Ltd** (ABN 55 158 702 071) of Level 30, 108 St Georges Terrace, Perth WA 6000 **Santos Offshore Pty Ltd** (ABN 38 005 475 589) of Santos Centre, 60 Flinders Street, Adelaide SA 5000

Australian Government

Director of National Parks

STANDARD-FORM COMMERCIAL ACTIVITY LICENCE

A commercial activity licence agreement for installation, operation and decommissioning of a pipeline

Director of National Parks
ABN 13 051 694 963 (**Director**)

ConocoPhillips Australia Barossa Pty Ltd
ABN 44 109 974 932
SK E&S Australia Pty Ltd
ABN 55 158 702 071
Santos Offshore Pty Ltd
ABN 38 005 475 589
(collectively, the **Licensees**)

Item No.	Description	Clause reference	Details
2.4	**Commencement Date**	Part C clauses 6.1 & 7	The date on which the GEP Licence is granted to the Licensees under the OPGGS Act.
2.5	**Term**	Part C clauses 6.1 & 7.1	The period beginning on the Commencement Date and ending on the date that: (a) is 40 years following the Commencement Date; or (b) the GEP Licence expires, terminates, is revoked or otherwise ends in accordance with the OPGGS Act, whichever is the sooner (as may be extended by agreement of the parties in accordance with clause 7.1).
2.6	**Licensed Activities**	Part B clause 4 & Annexure Part C clauses 6.1; 7.2 & 9	The construction, installation, operation, inspection, maintenance, repair, and decommissioning of the GEP and the related capture of images, video and sound within or of the Park, as more specifically described in the Annexure to Part B.
2.7	**Park**	Part B clause 4 & Annexure Part C clause 6.1	Oceanic Shoals Marine Park.
2.8	**Licence Area**	Part B Annexure Part C clauses 6.1; 8; 9.1 & 22.1	Part of Habitat Protection Zone (IUCN IV) – Zone 2, as specified in the *North Marine Parks Network Management Plan 2018* for the Oceanic Shoals Marine Park available at the Federal Register of Legislation, and as more specifically described in the Annexure to Part B.
2.9	**Director Representative**	Part C clauses 6.1 & 26.1	Position: Director of National Parks Address: 51 Allara Street, Canberra ACT 2600 Email: marineparks@environment.gov.au At the Commencement Date being: James Findlay Phone: 02 6274 1111
2.10	**Licensees Representative**	Part C clauses 6.1 & 26.1	Name: ConocoPhillips Australia Barossa Pty Ltd Attention: Director

Item No.	Description	Clause reference	Details
			Address: 53 Ord Street, West Perth WA 6005 At the Commencement Date being: s. 47F(1) Phone: s. 47F(1) Email: s. 47F(1) @conocophillips.com

3. Execution of this Licence

EXECUTED by the parties as an agreement

SIGNED for and on behalf of the **Director of National Parks ABN 13 051 694 963** by a duly authorised representative	In the presence of
Name of authorised representative (print)	Name of witness (print)
Signature of authorised representative	Signature of witness
Date	Date

SIGNED by **ConocoPhillips Australia Barossa Pty Ltd ABN 44 109 974 932** in accordance with section 127 of the *Corporations Act 2001* (Cth) by:	
Name of Director (print)	Name of Director / Company Secretary (print)
Signature of Director	Signature of Director / Company Secretary
Date	Date

SIGNED by **SK E&S Australia Pty Ltd ABN 55 158 702 071** in accordance with section 127 of the *Corporations Act 2001* (Cth) by:

s. 47F(1)

Name of Director (print)

s. 47F(1)

Name of Director / Company Secretary (print)

s. 47F(1)

Signature of Director

s. 47F(1)

Signature of Director / Company Secretary

March-28-2019

Date

March -28- 2019

Date

SIGNED for and on behalf of **Santos Offshore Pty Ltd ABN 38 005 475 589** by its attorney appointed under a Power of Attorney dated :

In the presence of:

Name of attorney (print)

Name of witness (print)

Signature of attorney

Signature of witness

Date

Date

Part B – Park and Licensed Activities specific conditions

4. Licensed Activities specific conditions

4.1 The Licensees must consult the Director as a Relevant Person during the development of all Environment Plans.

4.2 The Licensees must ensure that they and their Personnel fully inform themselves of, and equip themselves for, all potential hazards and conditions they may encounter while conducting the Licensed Activities within the Licence Area.

4.3 The Licensees acknowledge that the Director has no ability to monitor or warn the Licensees of changing environmental hazards or developing hazards within the Park.

4.4 The Licensees must:

(a) notify the Director of the grant of the GEP Licence (if granted) within 24 hours of its grant;

(b) notify the Director of the acceptance or refusal of an Environment Plan by NOPSEMA within 24 hours of its acceptance or refusal;

(c) following acceptance of an Environment Plan by NOPSEMA, provide the Director with a copy of that Environment Plan within 10 Business Days of its acceptance; and

(d) following the completion of construction of the GEP, promptly provide the Director with as built coordinates for the location of the GEP in degrees, minutes and seconds using geographic coordinate system GDA94.

5. Park and Licence Area specific conditions

5.1 The Licensed Activities conducted within the Licence Area must be conducted in accordance with an Environment Plan.

5.2 In developing each Environment Plan, the Licensees must ensure that they:

(a) consult with all relevant representative organisations for Aboriginal or Torres Strait Islander persons whose custodianship or traditional use of the Licence Area or the Park may be negatively impacted by the Licensed Activities;

(b) use reasonable endeavours to:

(i) address any feedback received in consultation undertaken for the purposes of clause 5.2(a); and

(ii) mitigate or avoid negative impacts, by amending the proposed Environment Plan and manner in which the Licensees propose to undertake the Licensed Activities; and

(c) at the same time that the Licensees provide the Director with a copy of the relevant Environment Plan in accordance with clause 4.4(c), provide the Director with a report setting out:

(i) the scope of the consultation undertaken in accordance with clause 5.2(a), including names of organisations from whom feedback was sought;

(ii) a summary of the feedback received from organisations with whom consultation occurred; and

(iii) a summary of the amendments to the Environment Plan and manner in which the Licensed Activities are proposed to occur, made by the Licensees in order to address feedback and mitigate or avoid negative impacts on the Aboriginal or Torres Strait Islander persons referred to in clause 5.2(a).

Annexure to Part B – Further details and plans of matters referred to in the Particulars

1. Further descriptions of matters referred to in the Particulars

1.1 Licensed Activities:

(a) The construction, installation, operation, inspection, maintenance, repair, and decommissioning of the GEP, including any activities that the Licensees are authorised to undertake under the GEP Licence and authorised to undertake under the Environment Plan.

(b) The capture of images, video and sound within or of the Park for commercial uses associated with the Licensed Activities specified in Item 1.1(a) of this Annexure.

1.2 Licence Area:

The pipeline installation corridor consisting of an area designated by a line connecting the following coordinates:

Longitude	Latitude
130° 5' 59.9889"	-11° 0' 19.1548
130° 5' 44.8964"	-11° 0' 41.2944"
130° 5' 30.4414"	-11° 1' 3.4594"
130° 5' 16.2732"	-11° 1' 26.1877"
130° 5' 2.5790"	-11° 1' 49.1981"
130° 0' 3.3460"	-11° 10' 29.8114"
129° 59' 596.7837"	-11° 10' 41.8497"
129° 59' 590.6014"	-11° 10' 54.4453"
129° 59' 582.9030"	-11° 11' 12.4343"
129° 59' 576.3108"	-11° 11' 30.8467"
129° 59' 570.8485"	-11° 11' 49.6163"
129° 59' 566.5357"	-11° 12' 8.67548"
129° 59' 564.0652"	-11° 12' 23.1187"
129° 58' 536.7204"	-11° 15' 30.6456"

* Coordinates presented in degrees, minutes and seconds using geographic coordinate system GDA94

buffered by 2000 m on either side.

Part C – General terms and conditions

6. Definitions and interpretation

6.1 Definitions

In this Licence, except where the contrary intention is expressed, the following definitions are used:

s. 47G(1)(a); s. 45(1)

Annexure	means an annexure to this Licence.
Authorisation	means any consent, authorisation, registration, filing, recording, agreement, notarisation, certificate, permission, licence, approval, permit, authority or exemption from, by or with, a Government Agency or judicial body, including any Environment Plan and Safety Case.
Business Day	means, in relation to the taking of an action or the occurrence of an event in a place, a day other than a Saturday, Sunday or public holiday in that place.
Commencement Date	means the date specified in Item 2.4 of the Particulars.
Commonwealth	means the Commonwealth of Australia.
Commonwealth reserve	means an area proclaimed as a Commonwealth reserve under section 344 of the EPBC Act.

s. 47G(1)(a); s. 45(1)

Conflict of Interest	means any circumstance in which a Licensee or any of its Personnel has an interest (whether financial or non-financial) or an affiliation that is affecting, will affect, or could be perceived to affect: (a) the Licensee's ability to comply with its obligations under this Licence and undertake Licensed Activities within the Licence Area; or (b) the Director's ability to carry out its functions specified in section 514B of the EPBC Act, fairly and independently.

s. 47G(1)(a); s. 45(1)

Director	means the party specified in Item 2.2 of the Particulars, or any other Commonwealth department or agency that administers this Licence from time to time.
Director Material	means any Material provided to the Licensees by the Director, including any Third Party Material included or embodied in or attached to such Material.
Director Representative	means the person specified in Item 2.9 of the Particulars or otherwise as advised by the Director to the Licensees by notice from time to time.
Environment Plan	means the environment plan or plans (as the case may be) accepted and in force from time to time under the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth) in respect of the Licensed Activities, including any associated oil pollution emergency plans.
EPBC Act	means the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).
EPBC Regulations	means the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth).
GEP	means the gas export pipeline (including all associated equipment, facilities, structures, infrastructure, and appurtenances) to be constructed and maintained by the Licensees from the Barossa field located offshore, Northern Territory in the Timor Sea and interconnecting with the Bayu-Undan to Darwin gas export pipeline the subject of pipeline licence NT/PL1 granted under the OPGGS Act.
GEP Licence	means the pipeline licence or licences (as the case may be) granted to the Licensees under the OPGGS Act in respect of the GEP.
Government Agency	means any government, governmental or semi-government or judicial entity, any body politic, any ministry, department, commission, tribunal, agency, inspectorate, official, public or statutory person or other statutory, administrative, supervisory or regulatory entity, domestic or foreign, federal, state or local.
GST Act	means the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).
Intellectual Property Rights	means all intellectual property rights, including the following rights: (a) copyright, patents, rights in circuit layouts, trademarks, designs, trade secrets, know how, domain names and any right to have Confidential Information kept confidential; (b) any application or right to apply for registration of any of the rights referred to in paragraph (a); and (c) all rights of a similar nature to any of the rights in paragraphs (a) and (b) which may subsist in Australia or elsewhere,

	whether or not such rights are registered or capable of being registered.
Item	means an item in the Particulars or a Schedule (as the case may require).
Law	means any applicable statute, regulation, by-law, ordinance or subordinate legislation in force from time to time in Australia, whether made by a State, Territory, the Commonwealth, or a local government, and includes the EPBC Act, EPBC Regulations and any relevant Management Plan.
Licence	means this licence agreement and includes its Schedules, Annexures and any attachments.
Licence Area	means the area or areas where the Licensees are allowed to undertake the Licensed Activities, as described in Item 2.8 of the Particulars and more specifically detailed in the Annexure to Part B.

s. 47G(1)(a); s. 45(1)

Licence Material	means any Material that is: (a) created by the Licensees for the purpose of, or as a result of, the Licensees' performance of their obligations under this Licence; and (b) provided by the Licensees to the Director under this Licence, including any Third Party Material included or embodied in or attached to such Material.
Licence Year	means a period of 12 consecutive months commencing on and from the Commencement Date or an anniversary of the Commencement Date.
Licensed Activities	means the activities specified in Item 2.6 of the Particulars, and more specifically detailed in the Annexure to Part B.

s. 47G(1)(a); s. 45(1)

Licensees	means the parties specified in Item 2.3 of the Particulars, and includes any assignee, transferee or novatee of such a party permitted under clause 23, and **Licensee** will be construed accordingly.
Licensees Representative	means the person specified in Item 2.10 of the Particulars or otherwise as advised by the Licensees to the Director by notice from time to time.
Management Plan	means a plan detailing management arrangements for the Park, in force and made under section 368 of the EPBC Act.
Material	means any software, firmware, documented methodology or process, documentation or other material in whatever form, and the subject matter of any category of Intellectual Property

Rights.

s. 47G(1)(a); s. 45(1)

New GEP Licensee	has the meaning given in clause 23(b)(i).
NOPSEMA	means the National Offshore Petroleum Safety and Environmental Management Authority established under Part 6.9 of the OPGGS Act, and any successor authority or body of it.
OPGGS Act	means the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (Cth).
Park	means the Commonwealth reserve(s) specified in Item 2.7 of the Particulars.
Particulars	means the particulars of this Licence, specified in the table at clause 2.
Personal Information	has the meaning given to that term in the *Privacy Act 1988* (Cth).
Personnel	means: (a) in the case of the Director, every person working for or on behalf of the Director, past or present, including employees, contractors, subcontractors, agents, representatives, advisors and volunteers of the Director and of the Commonwealth; and (b) in the case of a Licensee, every person who performs, or is otherwise involved in undertaking the Licensed Activities, or operation of the Licensee's organisation, including employees, contractors, subcontractors, agents, representatives, advisors and volunteers.
Related Body Corporate	has the meaning given in section 50 of the *Corporations Act 2001* (Cth), as at the date of this Licence.
Relevant Person	has the meaning given to that term in the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth).

s. 47G(1)(a); s. 45(1)

Safety Case	means the safety case or cases (as the case may be) accepted and in force from time to time under the *Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009* (Cth) in respect of the Licensed Activities.
Schedule	means a schedule to this Licence.
Term	means the period specified in Item 2.5 of the Particulars.
Third Party	means any person other than a party to this Licence.
Third Party Material	means any Material created by a Third Party.

s. 47G(1)(a); s. 45(1)

Transferring Licensee	has the meaning given in clause 23(b).

Warden	has the meaning given to that term in the EPBC Act.

6.2 **Interpretation**

In this Licence, except where the contrary intention is expressed:

(a) the singular includes the plural and vice versa, and a gender includes other genders;

(b) another grammatical form of a defined word or expression has a corresponding meaning;

(c) a reference to a document or instrument includes the document or instrument as novated, altered, supplemented or replaced from time to time;

(d) a reference to A$, AUD$, dollar or $ is to Australian currency;

(e) a reference to time is to the time in the place where the obligation is to be performed;

(f) a reference to a party is to a party to this Licence, and a reference to a party to a document includes the party's executors, administrators, successors and permitted assignees and substitutes;

(g) a reference to a person includes a natural person, partnership, body corporate, association, governmental or local authority or agency or other entity;

(h) if a Licensee is a trustee, the Licensee enters into this Licence personally and in its capacity as trustee and:

(i) any warranties given under this Licence are given in both capacities; and

(ii) warrants that it has the power to perform its obligations under this Licence;

(i) a reference to a statute, ordinance, code or other Law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;

(j) the meaning of general words is not limited by specific examples introduced by the terms 'including', 'such as', 'for example' or similar expressions;

(k) any agreement, representation, warranty or indemnity by two or more parties (including where two or more persons are included in the same defined term) binds them jointly and severally;

(l) any agreement, representation, warranty or indemnity in favour of two or more parties (including where two or more persons are included in the same defined term) is for the benefit of them jointly and severally;

(m) a rule of construction does not apply to the disadvantage of a party because the party was responsible for the preparation of this Licence or any part of it;

(n) if a day on or by which an obligation must be performed or an event must occur is not a Business Day, the obligation must be performed or the event must occur on or by the next Business Day; and

(o) headings are for ease of reference only and do not affect interpretation.

6.3 **Completion of Schedules**

To the extent that the parties have not completed Items in the Particulars, a Schedule or Annexure, unless otherwise stated, those Items will be taken to be 'not applicable' for the purposes of this Licence.

6.4 **Priority of Licence parts and documents**

If there is inconsistency between any of the parts or documents forming part of this Licence, those parts and documents will be interpreted in the following order of priority to the extent of any inconsistency:

(a) Part A – Brief Particulars of Licence;

(b) Part B – Park and Licensed Activities specific conditions;

(c) Part C – General terms and conditions;

(d) any Schedules and Annexures (in their order of appearance); and

(e) any documents incorporated by reference in this Licence.

7. Duration and activities prior to commencement

7.1 **Period of Licence**

(a) This Licence commences on the Commencement Date.

(b) Unless terminated earlier in accordance with clause 25, this Licence will remain in force for the Term.

(c) If the Licensees believe that the Licensed Activities will or may be undertaken in the Licence Area beyond the date on which the Term will end (other than due to the GEP Licence expiring, terminating, being revoked or otherwise ending), the Licensees may give notice to the Director of such belief and request negotiations with the Director in respect of an extension of the Term.

(d) The notice given by the Licensees under clause 7.1(c) must specify the extension of the Term sought by the Licensees, the Licensed Activities that will or may be undertaken in the Licence Area during the extended period, and any other relevant information.

(e) If the Licensees give the Director a notice under clause 7.1(c), the parties must meet within a reasonable period and negotiate in good faith to attempt to agree an extension of the Term having regard to:

(i) the existing terms and conditions of this Licence;

(ii) the matters and information specified by the Licensees in their notice; and

(iii) the commercial and regulatory environment prevailing at the time of those negotiations, including any then current Management Plan and Environment Plan, and the state of repair and predicted useful life of the GEP.

(f) Any agreement of the parties under clause 7.1(e) to extend the Term must be set out in a written agreement.

7.2 **Licensed Activities prior to Commencement Date**

Nothing in this Licence authorises the Licensees to conduct the Licensed Activities within the Licence Area prior to the Commencement Date.

8. Licence

8.1 **Grant of Licence**

The Director grants to the Licensees a licence to carry out the Licensed Activities within the Licence Area, provided that the Licensees comply with the terms and conditions of this Licence.

8.2 **Contractual nature of Licence**

This Licence is a contractual licence only and does not:

(a) give the Licensees a lease or any other interest or estate in the Licence Area or any other area; or

(b) confer any right of exclusive use or occupation of the Licence Area on the Licensees.

9. Conduct of Licensed Activities and use of Licence Area

9.1 **Use of Licence Area for Licensed Activities**

The Licensees must:

(a) use the Licence Area solely for the Licensed Activities and must not use, or cause or permit to be used by the Licensees' Personnel, the Licence Area for any other purpose; and

(b) not conduct the Licensed Activities anywhere in the Park outside the Licence Area,

unless authorised by another permit issued by, or licence entered into with, the Director.

9.2 **Compliance with Laws and Authorisations**

(a) In undertaking the Licensed Activities within the Licence Area and performing the Licensees' obligations under this Licence, the Licensees must comply with:

(i) all applicable Laws, including the EPBC Act, EPBC Regulations and any Management Plan;

(ii) all applicable Authorisations; and

(iii) any direction or determination issued by the Director or a Warden under Law about use of the Park or conduct of the Licensed Activities.

(b) The Licensees must hold all Authorisations required for the conduct of the Licensed Activities within the Licence Area.

10. Licensees' Personnel

10.1 **Requirements for Licensees' Personnel**

The Licensees must ensure that the Licensees' Personnel involved in undertaking the Licensed Activities within the Licence Area:

(a) have the relevant experience to undertake the Licensed Activities;

(b) hold all qualifications and Authorisations necessary to undertake the Licensed Activities; and

(c) understand and comply with the Licensees' obligations under this Licence.

10.2 **Exclusion of certain persons as Licensees' Personnel or from the Park**

(a) If a Licensee is a company or other incorporated body, the Licensee must not, without the approval of the Director, have as a director (or similar office holder) a person who has been convicted of an offence against the EPBC Act or EPBC Regulations within the previous ten years.

(b) If any of a Licensee's Personnel:

(i) contravene the provisions of the EPBC Act, EPBC Regulations or any Management Plan; or

(ii) cause or contribute to causing the Licensees to breach a provision of this Licence,

then the Director may, in addition to any other right or remedy available to the Director under this Licence, at Law or in equity:

(iii) notify the Licensees of the contravention or breach, providing reasonable details about the actions of the relevant Personnel member; and

(iv) direct the Licensees to cease using the services of that person within the Licence Area for a specified time and the Licensees must immediately comply with that direction.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

13. Taxes, duties and government charges

13.1 Interpretation

In this clause 13:

GST	has the meaning given to that term in the GST Act.
tax invoice	means a tax invoice meeting the requirements of the GST Act.
taxable supply	has the meaning given to that term in the GST Act.

13.2 Liability for taxes, duties and government charges

Subject to this clause 13, all taxes, duties and government charges imposed or levied in Australia or overseas in connection with this Licence or the Licensed Activities must be borne by the Licensees.

13.3 Payment of GST

(a) Unless otherwise stated, all amounts listed in this Licence are expressed as GST exclusive amounts.

(b) If GST applies to any taxable supply by the Director to the Licensees under this Licence, the Licensees must reimburse the Director for GST paid or payable by the Director, subject to the Director issuing the Licensees with a valid tax invoice.

(c) If GST applies to any taxable supply by the Licensees to the Director under this Licence, the Director must reimburse the Licensees for GST paid or payable by the Licensees, subject to the Licensees issuing the Director with a valid tax invoice.

(d) Nothing in this Licence obliges a party to reimburse the other party for GST paid or payable by the other party in respect of a taxable supply to the extent that the other party is entitled to claim an input tax credit.

14. Audit and access

14.1 Right to conduct audits

The Director or a representative may conduct audits relevant to the performance of the Licensees' obligations under this Licence. Audits may be conducted of:

(a) the Licensees' operational practices and procedures as they relate to undertaking the Licensed Activities within the Licence Area; and

(b) the Licensees' compliance with the terms and conditions of this Licence and the requirements of Law applicable to the Licensed Activities undertaken within the

Licence Area, including the EPBC Act, EPBC Regulations and any Management Plan.

14.2 **Access by the Director**

The Director may, at reasonable times and on giving reasonable notice to the Licensees:

(a) require the provision by the Licensees or their Personnel of records and information in a data format and storage medium accessible by the Director; and

(b) inspect and copy Material, however stored, in the custody or under the control of the Licensees or their Personnel,

for the purposes of ensuring the Licensees' compliance with the terms and conditions of this Licence.

14.3 **Conduct of audit and access**

The Director must use reasonable endeavours to ensure that:

(a) audits performed pursuant to clause 14.1; and

(b) the exercise of the general rights granted under clause 14.2 to the Director,

do not unreasonably delay or disrupt in any material respect the Licensees or their Personnel undertaking the Licensed Activities.

14.4 **Confidentiality**

Any Material or information obtained by the Director or any other person as a result of the exercise of the rights under clauses 14.1 or 14.2 will be deemed to be Confidential Information and subject to clause 18.

14.5 **Costs**

Each party must bear its own out-of-pocket costs of any record keeping, inspections, reviews, audits and inquiries conducted pursuant to this clause 14.

14.6 **Auditor-General, Ombudsman and Commissioners**

The rights of the Director under clauses 14.1 and 14.2 apply equally to the Commonwealth Auditor-General, Ombudsman, Information Commissioner, Privacy Commissioner and Freedom of Information Commissioner, or his or her delegate, for the purpose of performing their statutory functions or powers.

14.7 **No reduction in responsibility**

The requirement for, and participation in, audits does not in any way reduce the Licensees' responsibility to perform their obligations in accordance with this Licence.

15. Treatment of intellectual property

15.1 **Vesting of Intellectual Property Rights**

(a) Subject to clause 15.1(b), all Intellectual Property Rights in the Licence Material will vest, upon creation, in the Licensees.

(b) This Licence does not affect the ownership of the Intellectual Property Rights in any Third Party Material.

15.2 **Licensing of Intellectual Property Rights**

(a) Despite any other provision of this Licence, the Licensees grant, or must procure for, the Director a perpetual, irrevocable, royalty-free, worldwide, non-exclusive licence (including a right of sub-license) to use, reproduce, communicate and modify the Licence Material for the purposes of managing and administering the

Park, and carrying out the Director's functions under section 514B of the EPBC Act.

(b) Intellectual Property Rights and title to Director Material remains vested at all times in the Director. The Director grants to each Licensee a perpetual, irrevocable, royalty-free, world-wide, non-exclusive licence (including a right to sub-license) to use, reproduce, communicate and modify the Director Material for the purposes of this Licence and undertaking the Licensed Activities, but subject to any conditions reasonably imposed by the Director on that use.

15.3 **Warranties about Intellectual Property Rights**

(a) The Licensees warrant that the Director or its sub-licensees will not, at any time, be infringing the Intellectual Property Rights of any person when using Licence Material in a manner consistent with clause 15.2(a) or otherwise for the purpose of the Director exercising its rights or performing its obligations under this Licence.

(b) The Director warrants that the Licensees or their sub-licensees will not, at any time, be infringing the Intellectual Property Rights of any person when using Director Material in a manner consistent with clause 15.2(b) or otherwise for the purpose of the Licensees exercising their rights or performing their obligations under this Licence.

15.4 **Making of scientific research and monitoring Material publically available**

The Director must use reasonable endeavours to ensure that any Material generated through scientific research and monitoring activities funded in whole or part from the Licensed Activities Fees paid by the Licensees is made available to the public:

(a) in the case of Material in which Intellectual Property Rights are owned by the Director, under licence terms no less permissive than a Creative Commons (Attribution) 4.0 International licence; and

(b) in the case of Material in which Intellectual Property Rights are owned by a Third Party, under the most permissive terms the Director is reasonably capable of negotiating licences and sublicences for at the time it enters into the arrangement with the Third Party for provision of that Material.

16. Publicity

16.1 **Restrictions on use of trademarks and logos**

(a) Except to the extent required by Law, no party will use the trademark(s) or logo of another party without its written consent.

(b) In no event will any party knowingly make any inaccurate or misleading statement concerning another party in relation to this Licence, or concerning this Licence, to a Third Party.

16.2 **Approving media releases and public announcements**

(a) Subject to clause 16.2(d), all media releases and public announcements relating to this Licence must be provided:

(i) where the Director is the proposing party, to the Licensees Representative; and

(ii) where a Licensee is the proposing party, to the Director Representative,

for review and approval prior to publication, release or disclosure.

(b) Upon receipt of a draft media release or public announcement under clause 16.2(a), the receiving party or parties must promptly review that material and, within 5 Business Days, respond to the proposing party either:

(i) approving publication, release or disclosure, including with reasonable amendments; or

(ii) withholding approval where it is reasonable to do so.

(c) For the purposes of clause 16.2(b):

(i) where the receiving party or parties fail(s) to respond within the timeframe specified in that clause, it will be deemed to have provided its approval to publication, release or disclosure of the material; and

(ii) it will be reasonable to withhold approval or require amendments to the material where publication, release or disclosure is likely to disclose Confidential Information, Personal Information or otherwise not be in the best interests of the receiving party or parties.

(d) Despite clause 16.2(a), any party may, without the approval of another party:

(i) publicise the existence and general subject matter of this Licence; and

(ii) publish, release or disclose a media release or public announcement relating to this Licence to the extent required to comply with applicable Laws or the requirements of a securities exchange on which the shares of the party or its Related Body Corporate are listed.

17. Protection of Personal Information

17.1 Interpretation and application of clause

(a) In this clause 17, 'Australian Privacy Principle' has the same meaning as it has in the *Privacy Act 1988* (Cth).

(b) This clause applies only where the Licensees deal with Personal Information when, and for the purposes of, complying with their obligations under this Licence or undertaking the Licensed Activities within the Licence Area.

17.2 Obligations in relation to Personal Information

(a) The Licensees agree, in complying with their obligations under this Licence and in conducting the Licensed Activities within the Licence Area, to:

(i) not to do any act or engage in any practice that may breach an Australian Privacy Principle; and

(ii) comply with any directions, guidelines, determinations or recommendations of the Director, to the extent that they are consistent with the Australian Privacy Principles.

(b) The Licensees agree to notify the Director immediately if they become aware of a breach or possible breach of any of their obligations under this clause 17.

18. Protection of Confidential Information

18.1 Confidential Information not to be disclosed

Subject to clause 18.2, a party must not, without the prior written consent of the other parties, disclose any Confidential Information of another party to a Third Party.

18.2 **Exceptions to obligations**

(a) The obligations on the parties under clause 18.1 will not be breached to the extent that Confidential Information:

(i) is disclosed by a party to its Personnel solely in order to comply with obligations, or to exercise or enforce rights, under this Licence;

(ii) is disclosed to a party's internal management Personnel, solely to enable effective management or auditing of this Licence and undertaking the Licensed Activities;

(iii) is disclosed by a Licensee to its Related Body Corporate or the Personnel of its Related Body Corporate for legitimate purposes;

(iv) is disclosed by a Licensee to a bona fide proposed or prospective purchaser or assignee of the Licensee's interest in the GEP Licence or the shares of the Licensee or its Related Body Corporate;

(v) is disclosed by the Director to the responsible Minister;

(vi) is disclosed by the Director, in response to a request by a House or a Committee of the Parliament of the Commonwealth;

(vii) is shared by the Director within the Director's organisation, or with another agency, where this serves the Director's or the Commonwealth's legitimate interests; or

(viii) is authorised or required by Law, or the requirements of a securities exchange on which the shares of the party or its Related Body Corporate are listed, to be disclosed.

(b) Where a party discloses Confidential Information to another person pursuant to clauses 18.2(a)(i) to 18.2(a)(vii) (inclusive), the disclosing party must notify the receiving person that the information is confidential.

(c) In the circumstances referred to in clauses 18.2(a)(i), 18.2(a)(ii), 18.2(a)(iii), 18.2(a)(iv) and 18.2(a)(vii), the disclosing party agrees not to provide the information unless the receiving person agrees to keep the information confidential on terms no less stringent than contained in this clause 18.

18.3 **Freedom of Information Act**

In the event of a request under the *Freedom of Information Act 1982* (Cth) for any document that constitutes or contains Confidential Information, the Director must:

(a) promptly notify the Licensees of the request and the general scope of the request;

(b) subject to the constraints and timeframes for decision-making under that Act, use all reasonable endeavours to give the Licensees the opportunity to provide their views to the Director as to whether any exemptions under that Act may apply to the relevant document prior to any decision being made as to the release of the document; and

(c) claim any reasonably available exemptions under that Act applicable to the document.

18.4 **No reduction in privacy obligations**

This clause 18 does not detract from any of the Licensees' obligations under the *Privacy Act 1988* (Cth) or under clause 17 in relation to the protection of Personal Information.

19. Conflicts of Interest

(a) Each Licensee warrants in respect of itself that, to the best of its knowledge at the date of this Licence, no Conflict of Interest exists or is likely to arise in the performance of its obligations under this Licence.

(b) If during the Term, a Conflict of Interest arises, or appears likely to arise, in respect of a Licensee, that Licensee must:

(i) immediately notify the Director and the other Licensees of the Conflict of Interest making a full disclosure of all relevant information relating to the Conflict of Interest and setting out the steps the Licensee proposes to take to resolve or otherwise deal with the Conflict of Interest; and

(ii) take such steps as the Director may reasonably require to resolve or otherwise deal with that Conflict of Interest.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

22. Allowance for Park management actions

22.1 **Management actions by the Director**

(a) The Licensees acknowledge that the Director is responsible for the administration, management and control of Commonwealth reserves (such as the Park) in accordance with the EPBC Act, EPBC Regulations and any Management Plan.

(b) Despite any other clause of this Licence, the Licensees agree that the Director may, subject to clause 22.2, exercise all rights and powers of the Director under the EPBC Act, EPBC Regulations and otherwise at Law to:

(i) implement any Management Plan for the Park;

(ii) conserve the environment and heritage in the Park;

(iii) preserve or promote the safety of persons in the Park, including in response to emergencies; and

(iv) preserve or promote the efficient use and enjoyment of the Park by Third Parties.

22.2 **Consultation and variation of the Licence Area**

(a) Where any proposed action by the Director referred to under clause 22.1(b) will materially impact the rights, benefits or interests granted to the Licensees under this Licence but subject to clause 22.2(b), the Director must notify the Licensees of such proposed action prior to undertaking the action and allow a reasonable period, and in any event not less than 20 Business Days, for the Licensees to provide written submissions to the Director in respect of such proposed action. The Director must consider and have regard to any submissions provided by the Licensees under this clause 22.2(a) in determining whether to take the relevant action.

(b) Where the Director reasonably believes:

(i) that an action referred to under clause 22.1(b) is required in order to respond to an emergency or other situation likely to cause imminent harm to persons, property or the environment in the Park; and

(ii) that seeking and considering submissions from the Licensees in accordance with clause 22.2(a) would not be practical in order to avoid or mitigate that harm,

then the Director:

(iii) may take the proposed action without complying with clause 22.2(a); and

(iv) must use reasonable endeavours to notify the Licensees prior to taking the proposed action but in any event must provide them with notice of having taken the action as soon as is practicable thereafter.

(c) Provided the Director complies with this clause 22.2, the Director will not be required to compensate the Licensees for any increased costs, losses or expenses suffered by the Licensees as a result of the Director's actions under clause 22.1(b).

(d) The Director acknowledges that once constructed the GEP will be a fixed structure and as such agrees that the Licence Area must not be altered, amended or varied in any way whatsoever by the Director during the Term, except in accordance with clause 27.9.

23. Assignment, sub-licensing and novation

(a) Subject to this clause 23, a Licensee must not assign, novate, transfer or sub-license its rights or obligations, in whole or part, under this Licence without the prior written approval of the Director.

(b) If a Licensee (**Transferring Licensee**) transfers:

(i) the whole or part of its interest in the GEP Licence to a Third Party (**New GEP Licensee**), then the Transferring Licensee, the New GEP Licensee

and the other parties to this Licence must, subject to clause 23(d), execute an agreement or deed under which:

(A) the New GEP Licensee obtains the rights, benefits and obligations under, and becomes bound by the provisions of, this Licence as if it were named as a Licensee in this Licence;

(B) the parties to this Licence agree that the New GEP Licensee will have the rights, benefits and obligations under this Licence as if it were named as a Licensee in this Licence; and

(C) where the whole of the Transferring Licensee's interest in the GEP Licence is transferred to the New GEP Licensee, the Transferring Licensee is relieved and released from all of its liabilities and obligations under this Licence; or

(ii) the whole of its interest in the GEP Licence to another party to this Licence, the Transferring Licensee and the other parties to this Licence must, subject to clause 23(d), execute an agreement or deed under which the other parties relieve and release the Transferring Licensee from all of its liabilities and obligations under this Licence.

(c) The Transferring Licensee must:

(i) provide to the Director a copy of the agreement or deed referred to under clause 23(b)(i) or 23(b)(ii) signed by the Transferring Licensee, the other Licensees, and, where applicable, the New GEP Licensee; and

(ii) notify the Director once the transfer of its interest in the GEP Licence to the New GEP Licensee or the party to this Licence (as applicable) has been registered in accordance with the OPGGS Act.

(d) The Director acknowledges and agrees that:

(i) provided:

s. 47G(1)(a); s. 45(1)

(B) the transfer of the Transferring Licensee's interest in the GEP Licence to the New GEP Licensee or the party to this Licence (as applicable) has been registered in accordance with the OPGGS Act,

the Director must not withhold its consent or approval to:

(C) the transfer of this Licence to the New GEP Licensee and, where applicable, the release of the Transferring Licensee, as contemplated under clause 23(b)(i); or

(D) the release of the Transferring Licensee as contemplated under clause 23(b)(ii); and

(ii) promptly after receiving the Transferring Licensee's notice under clause 23(c)(ii), it will execute the copy of the agreement or deed provided to it under clause 23(c)(i) and return such executed copy of the document to the Transferring Licensee.

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

s. 47G(1)(a); s. 45(1)

26. Notices

26.1 Providing of notices

(a) A notice under this Licence is only effective if it is in writing, and dealt with as follows:

(i) *if given by the Licensees to the Director* – addressed to the Director Representative as specified in Item 2.9 of the Particulars, or as otherwise notified by the Director from time to time; or

(ii) *if given by the Director to the Licensees* – addressed to the Licensees Representative as specified in Item 2.10 of the Particulars, or as otherwise notified by the Licensees from time to time.

(b) A notice is to be:

(i) signed by the person giving the notice and delivered by hand;

(ii) signed by the person giving the notice and sent by pre-paid post; or

(iii) transmitted electronically by the person giving the notice by electronic mail.

26.2 Receipt of notices

(a) Subject to clause 26.2(b), a notice is deemed to be effected:

(i) *if delivered by hand* – upon delivery to the relevant address;

(ii) *if sent by post* – upon delivery to the relevant address; or

(iii) *if transmitted electronically by electronic mail* – at the time the notice would be taken to be delivered under the *Electronic Transactions Act 1999* (Cth).

(b) A notice received after 5.00pm, or on a day that is not a Business Day in the place of receipt, is deemed to be effected on the next Business Day in that place.

27. General provisions

27.1 Relationship of the parties

(a) The Licensees must not represent themselves, and must ensure that their officers, employees, agents and subcontractors do not represent themselves as being an officer, employee, partner or agent of the Director, or as otherwise able to bind or represent the Director.

(b) The Director must not represent itself, and must ensure that its officers, employees, agents and subcontractors do not represent themselves as being an officer, employee, partner or agent of the Licensees, or as otherwise able to bind or represent the Licensees.

(c) Nothing in this Licence is to be considered or construed as creating the relationship of partners in a joint venture, partnership, principal and agent, lessor and lessee, or of employer and employee between the Director and the Licensees.

(d) Unless and until all the Licensees give notice to the Director to the contrary, the Licensees Representative is entitled to:

(i) deal with the Director as agent for and on behalf of all Licensees, including give and receive notices on behalf of all Licensees; and

(ii) exercise the rights and perform the obligations of the Licensees under this Licence as agent for and on behalf of the Licensees.

27.2 **Counterparts**

This Licence may be executed in counterparts. All executed counterparts constitute one validly executed agreement.

27.3 **Severability**

If any provision of this Licence is held invalid, unenforceable or illegal for any reason, this Licence will remain otherwise in full force apart from such provision which will be deemed deleted.

27.4 **Entire agreement**

This Licence constitutes the entire agreement between the parties in relation to its subject matter, and supersedes all prior representations, agreements, statements and understandings, whether oral or in writing.

27.5 **Costs**

Each party must bear its own costs arising out of:

(a) the negotiation, preparation and execution of this Licence; and

(b) unless expressly stated otherwise, any transaction contemplated by this Licence.

27.6 **Further action**

Each party must do, at its own expense, everything reasonably necessary (including executing documents) to give full effect to this Licence and any transaction contemplated by it.

27.7 **No merger**

The rights and obligations of the parties under this Licence do not merge on completion of any transaction contemplated by this Licence.

27.8 **Waiver**

(a) A failure or delay by a party to exercise any right or remedy it holds under this Licence, at Law or in equity does not operate as a waiver of that right.

(b) A single or partial exercise by a party of any right or remedy it holds under this Licence, at Law or in equity does not prevent the party from exercising the right again or to the extent it has not fully exercised the right.

27.9 **Variation**

No variation of this Licence is binding unless it is agreed in writing and signed by all of the parties.

27.10 **Consent or approval**

Unless otherwise stated, if a party's consent or approval is required under this Licence:

(a) the requested party must consider and respond to the request promptly;

(b) consent or approval must not be unreasonably withheld;

(c) the requested party may require the requesting party to comply with reasonable conditions before giving its consent or approval; and

(d) consent or approval is not effective unless in writing.

27.11 **Governing law**

(a) This Licence is to be construed in accordance with, and any matter related to it is to be governed by, the law of the Australian Capital Territory.

(b) The parties submit to the jurisdiction of the courts of the Australian Capital Territory.