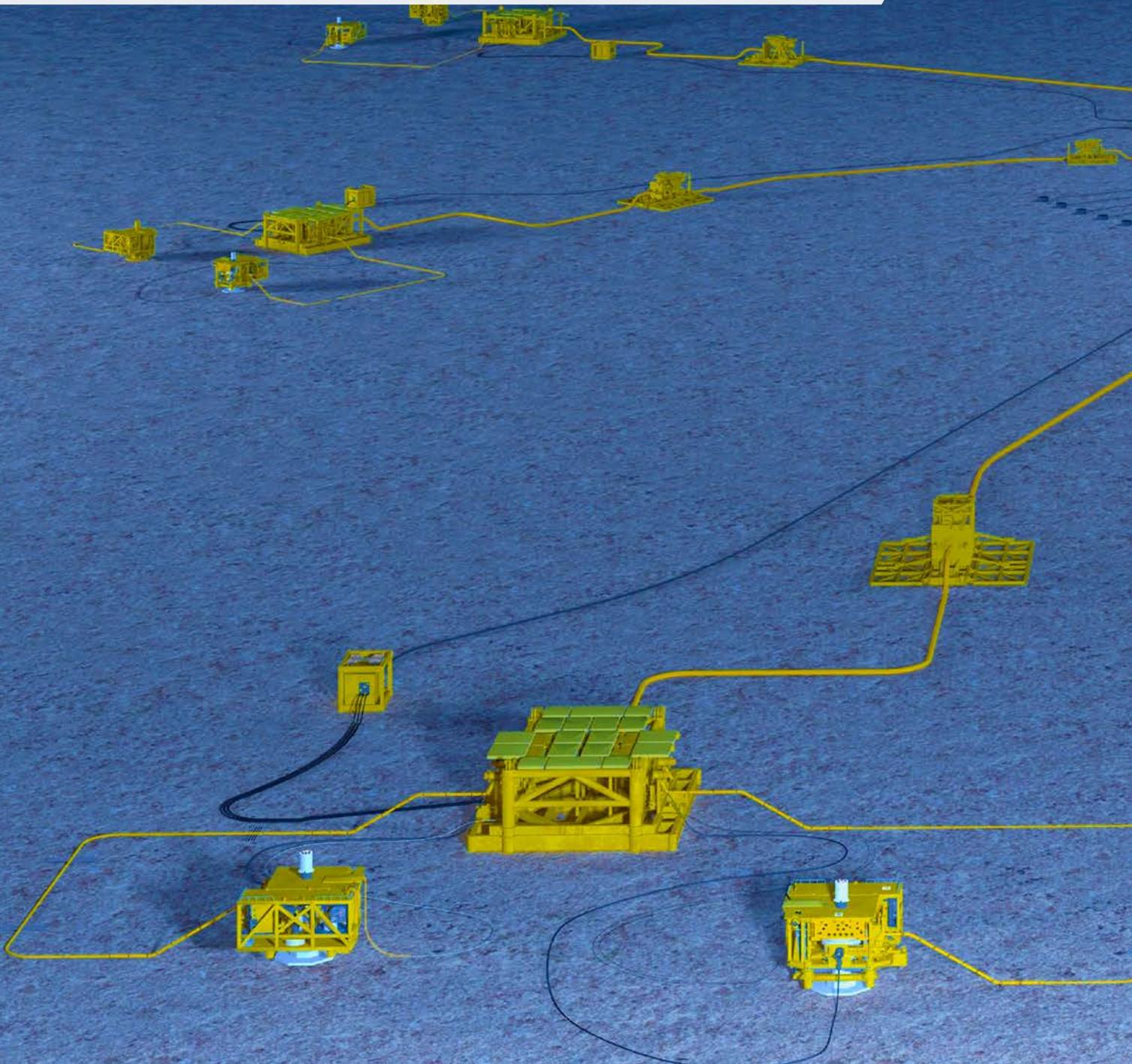


7 Environmental performance framework

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Section 7 summary

Purpose:

This section summarises the environmental performance outcomes (EPOs) that will be applied by ConocoPhillips to protect the environment while developing and operating the Barossa project. EPOs are designed to ensure the environmental risks and impacts are managed to an acceptable level.

This section also summarises ConocoPhillips' emergency response preparation and response measures for the unlikely event of an unplanned release of hydrocarbons, our environmental monitoring framework and concludes on project acceptability.

Section at a glance:

It is recognised that relevant regulations, codes, standards and guidelines may change over the life of the project. Any changes will be addressed through the development of the EPs at the time of the activity.

The development of appropriate EPOs is informed by ConocoPhillips' history of safe, reliable and environmentally responsible exploration and appraisal activities in the Timor Sea over the past decade and includes controls that are tailored to the management of key impacts and risks evaluated in **Section 6**. It is recognised that it is impossible to eliminate all risks. So, the aim becomes to ensure every activity is conducted in a manner that is safe, responsible and acceptable once all the impacts and risks have been properly and fully considered.

Implementation strategy

While a detailed implementation strategy will be presented in subsequent activity-specific EPs, a high-level outline of emergency preparedness measures, including operational and scientific monitoring plans, and environmental monitoring that will be applied to manage environmental impacts and risks associated with the project to assist achieving the EPOs, is provided.

Project acceptability

As a result of the risk-based assessment documented in the OPP, ConocoPhillips considers the project to be acceptable, given that:

- the remote project location of the Barossa offshore development area, which is predominantly located in deep, open offshore waters, means no facilities will be placed near any areas of regional environmental importance such as shoals, banks, coral reefs or biologically important areas for marine fauna

- planned operations have a relatively limited extent, with the impacts and risks considered low
- the risk of unplanned releases is medium, however the likelihood is remote given comprehensive management controls will be implemented
- the implementation of key management controls and clear definition of appropriate and measurable EPOs that will assist in managing all environmental aspects of the project
- the project will be undertaken in accordance with relevant legislation, standards and industry guidelines, consistent with the principles of ESD and ConocoPhillips expectations for responsible environmental management.

Consistency with the principles of ecologically sustainable development

ConocoPhillips considers the project to be consistent with the principles of ESD, as defined in the EPBC Act. Protection of the environment was a key consideration for the environmental impact and risk assessment process, as informed by a detailed understanding of the existing marine environment. Protection has been further provided for through definition of key management controls and EPOs for the project. The assessment presented within this OPP relates to the entire life-cycle of the project, and therefore takes into account both short-term and long-term considerations and potential impacts associated with the project. Within this context, a comprehensive management framework will be implemented, appropriate to the nature and scale of the project to achieve acceptable outcomes.

7 Environmental performance framework

7.1 Introduction

This section of the OPP defines project EPOs that will be applied to manage the environmental impacts and risks associated with the development (as discussed in **Section 6**) to an acceptable level. As defined by NOPSEMA (2016a), an EPO is 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.”

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 an 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.

The EPOs provided in **Table 7-1** are relevant to the environmental impacts and risks associated with the project and consistent with the ConocoPhillips HSE Policy, SD Position, HSEMS and CPMS (**Section 2**), principles of ESD and relevant legislative requirements, codes, standards and guidelines (**Section 3**).

It is recognised that relevant requirements, codes, standards and guidelines change over time, over the life of this OPP approval. While specific reference is made to some of these current requirements in this OPP, 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 **Table 7-1** provides a direct link to the outcomes of the risk-based impact assessment as concluded from **Section 6** of this OPP, and includes:

- key management controls: consistent with those controls described in **Section 6** 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.

This section aligns with the NOPSEMA OPP Content Requirements Guidance Note (NOPSEMA 2016a): “To provide appropriate environmental performance outcomes that are consistent with the principles of ecologically sustainable development; and demonstrate that the environmental impacts and risks of the project will be managed to an acceptable level.”

Table 7-1: Barossa OPP EPOs

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
Physical presence of offshore facilities/ infrastructure, equipment and project related vessels – interactions with other marine users	Commercial fishing. Recreational fishing. Commercial shipping. Offshore petroleum exploration operations.	Interference with and/or exclusion of commercial/ recreational fishing vessels, commercial shipping or other marine users. Business interruption (abnormal) to the activities of other marine users due to damage to commercial vessels or fishing gear. Interaction with other petroleum titleholder operations or exploration activities.	<p>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 around the well, offshore structure or equipment which prohibits vessels entering or being present within the specified area without written consent.</p> <p>Accepted procedures will be implemented to meet the requirements of ConocoPhillips' Marine Operations Manual (IOSC/OPS/HBK/0003), which includes details of:</p> <ul style="list-style-type: none"> • 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. <p>The Stakeholder Engagement Plan will include consultation with commercial fisheries, shipping, AHO and other relevant stakeholders operating in the Barossa offshore development area and gas export pipeline to inform them of the proposed project. Ongoing consultation will also be undertaken throughout the life of the project.</p> <p>The FPSO facility will be located away from key commercial shipping channels.</p> <p>The location of the FPSO facility will be communicated to other ships through a Notice to Mariners from the AHO.</p> <p>Subsea infrastructure and pipelines will be clearly marked on Australian nautical charts published by the AHO.</p> <p>Project-vessels operating within the Barossa offshore development area and gas export pipeline corridor will comply with maritime standards such as COLREGS, Chapter V of SOLAS, Marine Order 21 (Safety of Navigational and Emergency Procedures) and Marine Order 30 (Prevention of collisions) (as appropriate to vessel class).</p>	<p>Fixed offshore facilities/ infrastructure and equipment in the Barossa offshore development area will not be located in key areas of importance for commercial fishing and other marine users.</p> <p>Fixed offshore facilities/ infrastructure and equipment in the Barossa offshore development area will not be located in key areas of importance for commercial fishing and other marine users.</p> <p>No vessel collisions or significant adverse interactions with other marine users.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
Physical presence of offshore facilities/ infrastructure, equipment 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.	<p>The project will be undertaken in accordance with ConocoPhillips' CPMS, which provides the framework to achieve acceptable health, safety and environment outcomes such as:</p> <ul style="list-style-type: none"> design planning throughout concept select phase to avoid placement of facilities/ infrastructure within the Barossa offshore development area in areas of regional environmental importance (e.g. shoals/banks, coral reefs, islands, and known regionally important feeding and breeding/nesting biologically important areas for marine mammals and marine reptiles). use of gas export pipeline selection route surveys to inform route optimisation and reduce environmental impact. <p>Screens will be installed on the FPSO facility cooling water intakes to minimise the potential risk of causing injury/mortality to marine fauna.</p> <p>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:</p> <ul style="list-style-type: none"> 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. <p>Vessel speed restrictions will be implemented within the defined operational area of the gas export 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.</p> <p>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.</p> <p>No pipeline installation activities will occur within the internesting BIA for olive ridley turtles at any time, including peak nesting and hatchling emergence periods.</p>	<p>Fixed offshore facilities/ infrastructure and equipment in the Barossa offshore development area will not be located in regionally important feeding and breeding/nesting biologically important areas for marine mammals or marine reptiles.</p> <p>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.</p> <p>Zero incidents of injury/mortality of cetaceans/marine reptiles from collision with project vessels operating within the project area.</p> <p>No significant impacts to turtle populations from installation of the gas export pipeline.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
			<p>Installation schedule of the gas export pipeline will take into consideration seasonal presence/ activity of marine turtles to prevent significant adverse impacts during peak seasonal internesting 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:</p> <ol style="list-style-type: none"> 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 internesting 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 this 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 this 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 this OPP. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in this OPP. 	
			<p>As part of the development and implementation of the gas export 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).</p>	

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
Seabed disturbance	<p>Physical environment – seabed features.</p> <p>Marine reptiles.</p> <p>Shoals and banks.</p> <p>AMPs – Oceanic Shoals.</p> <p>KEF – shelf break and slope of the Arafura</p> <p>Shelf, and the carbonate bank and terrace system of the Van Diemen Rise.</p>	<p>Direct loss or indirect disturbance of benthic habitat.</p> <p>Physical damage and/or disturbance to unique seafloor KEFs.</p> <p>Physical damage and/or disturbance to benthic habitat within the Oceanic Shoals marine park and to shoals/ banks.</p>	<p>The project will be undertaken in accordance with the ConocoPhillips' CPMS, which provides the framework to achieve acceptable health, safety and environment outcomes such as:</p> <ul style="list-style-type: none"> design planning throughout concept select phase to avoid placement of facilities/ infrastructure within the Barossa offshore development area in areas of regional environmental importance (e.g. shoals, banks, coral reefs, islands, and known regionally important feeding and breeding/nesting biologically important areas for marine mammals and marine reptiles use of export pipeline selection route surveys to inform route optimisation and reduce environmental impact. <p>The location of subsea infrastructure within the Barossa offshore development area will be informed by pre-installation surveys/studies that identify and avoid areas of seabed that are associated with the seafloor features/values of the shelf break and slope of the Arafura Shelf KEF (i.e. patch reefs and hard substrate pinnacles).</p> <p>Pre-lay surveys of the gas export 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.</p> <p>The MODU/FPSO facility mooring design analysis will include environmental sensitivity and seabed topography analysis to inform selection of mooring locations to avoid areas of seabed that are associated with the seafloor features/values of the shelf break and slope of the Arafura Shelf KEF (i.e. patch reefs and hard substrate pinnacles).</p> <p>Positioning of the MODU will be undertaken in accordance with the mooring design and analysis and the drilling contractors' rig move procedure, which includes procedures for the deployment and retrieval of anchors using support vessels to minimise seabed impacts.</p> <p>Shallow Hazards Study report will be completed prior to drilling of the development wells and include a review of seabed features to inform well location.</p> <p>A Vessel Anchoring Plan will be prepared which will take into consideration anchoring locations and will confirm no anchoring on shoals/banks.</p> <p>Heavy lifting operations between vessels and the MODU/drill ship or FPSO facility will be undertaken using competent personnel appropriate and certified lifting equipment and accessories to minimise the risk of dropped objects.</p>	<p>No permanent disturbance to benthic habitats beyond the physical footprint of offshore facilities/infrastructure within the Barossa offshore development area and gas export pipeline, as relevant to both direct and indirect sources of disturbance to seabed and associated benthic habitats.</p> <p>The FPSO facility and in-field subsea infrastructure will be located in the Barossa offshore development area and will not impact the nearest shoals/banks of Lynedoch Bank, Tassie Shoal or Evans Shoal (which are > 27 km away) and areas of seabed that are associated with the shelf break and slope of the Arafura Shelf KEF.</p> <p>No anchoring or mooring of the FPSO facility and MODU/vessels on shoals/banks, except in emergency conditions.</p> <p>Minimise disturbance beyond the physical footprint by preventing the loss of significant equipment/ cargo overboard from the MODU/ drill ship, FPSO facility or vessels.</p> <p>The gas export 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.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
			<p>No pipeline installation activities will occur within the internesting BIA for olive ridley turtles at any time, including peak nesting and hatchling emergence periods.</p> <p>Installation schedule of the gas export pipeline will take into consideration seasonal presence/activity of marine turtles to prevent significant adverse impacts during peak seasonal internesting 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:</p> <ol style="list-style-type: none"> 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 internesting 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 this 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 this 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 this OPP. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in this OPP. <p>Dredging activities/trenching activities for the gas export pipeline installation (if required) will occur outside the peak flatback (June to September) and olive ridley (April to August) turtle internesting period when within the internesting habitat critical to the survival of these species.</p> <p>As part of the development and implementation of the gas export 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).</p> <p>Further surveys within the pipeline corridor 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 portion of the gas export pipeline corridor that intersects the Oceanic Shoals marine park, with other areas of the marine park.</p>	<p>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.</p> <p>No significant impacts to turtle or dugong populations from impacts (direct or indirect) associated with installation of the gas export pipeline.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
			<p>If trenching/dredging activities for the gas export pipeline installation are required, i.e. if the pipeline has to remain outside the Oceanic Shoals marine park in the shallow water area of the pipeline corridor, they will occur outside the peak flatback (June to September) and olive ridley (April to August) turtle interesting period. The following process will be used to identify how the pipeline in the section to be trenched/dredged will be installed to reduce impacts and risks to ALARP and acceptable levels:</p> <ol style="list-style-type: none"> 1. undertake numerical modelling to predict the extent, intensity and persistence of sediment plumes arising from trenching/dredging activity 2. use the outputs of the numerical modelling to identify key environmental values/sensitivities at risk from trenching/dredging activities with consideration of background/baseline conditions and any seasonal presence 3. update of latest knowledge of how aspects arising from trenching/dredging activities can impact the marine environment, including marine turtles and benthic communities 4. undertake an additional impact assessment that builds on the assessment presented in this OPP and incorporates the information from items 1, 2 and 3 above with the understanding of the environment (e.g. benthic habitat maps) to evaluate the environmental impacts and risks and verify the impact assessment conclusions are consistent with those presented in this OPP, i.e. confirm impacts from trenching/dredging will be temporary and localised. Note: if required, additional controls and/ or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in this OPP. 5. develop a dredge management plan that: <ul style="list-style-type: none"> • details how trenching/dredging will be undertaken (which will be informed by the information derived from items 1-4 above) • identifies the control and mitigations measures, environmental performance outcomes, environmental performance standards and measurement criteria that demonstrate the environmental impacts and risks can be reduced to ALARP and acceptable levels • includes an adaptive management strategy for how trenching/dredging activity will be managed, including what information and/or data will be used to provide early warning of adverse trends and trigger adaptive management before environmental performance outcomes are compromised 	

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
			<p>If use of an anchored pipelay vessel is required, i.e. it may only be required if the pipeline has to remain outside the Oceanic Shoals marine park in the shallow water area of the pipeline corridor, the following process will be used to identify how anchored pipelay installation will be undertaken to reduce impacts and risks to ALARP and acceptable levels:</p> <ol style="list-style-type: none"> 1. use the information and data derived from the pre-lay survey of the gas export pipeline installation route to update understanding of the existing environment along the gas export pipeline route 2. identify any anchor restrictions zones, i.e. areas where anchors cannot be placed, e.g. shoals, banks or coral outcrops 3. define how installation of the pipeline would be undertaken including start-up anchor pattern, operational anchor pattern and lay down (ending) anchor pattern, and predict the number of anchor drops required 4. undertake an additional impact assessment that builds on the assessment presented in this OPP and incorporates the information from 1, 2 and 3, with consideration of any seasonal presence, to evaluate the environmental impacts and risks and to verify the impact assessment conclusions are consistent with those presented in this OPP (Note: if required, additional controls and/or mitigation measures will be identified to be implemented to demonstrate consistency with the impact assessment presented in this OPP) 5. develop a pipeline lay anchoring management plan that: <ul style="list-style-type: none"> • identifies how pipelay installation would be undertaken using an anchored pipelay vessel • identifies the control and mitigations measures, environmental performance outcomes, environmental performance standards and measurement criteria that demonstrate the environmental impacts and risks can be reduced to ALARP and acceptable levels • includes an adaptive management strategy for how anchoring activity will be managed including what information and/or data will be used to provide early warning of adverse trends and trigger adaptive management before environmental performance outcomes are compromised. 	

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
IMS (biosecurity)	<p>Shoals and banks.</p> <p>KEFs – shelf break and slope of the Arafura Shelf, and the carbonate bank and terrace system of the Van Diemen Rise.</p>	<p>Displacement of native marine species.</p> <p>Reduction in species biodiversity and decline in ecosystem integrity, particularly of shoals/banks.</p>	<p>A Quarantine Management Plan will be developed and implemented, which will include as a minimum:</p> <ul style="list-style-type: none"> • 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. <p>Ballast water exchange operations will comply with the IMO International Convention for the Control and Management of Ships’ Ballast Water and Sediments</p> <p>2004 – MARPOL 73/78 (as appropriate to vessel class), Australian Ballast Water Management Requirements (DoAWR 2017) and Biosecurity Act 2015, including:</p> <ul style="list-style-type: none"> • 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. <p>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.</p> <p>The FPSO facility hull will be subject to an IMS inspection prior to entry into Australian waters.</p>	<p>Prevent the displacement of native marine species as a result of the introduction and establishment of IMS via project-related activities, facilities and vessels.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
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.	<p>The project will be undertaken in accordance with the ConocoPhillips' CPMS, which provides the framework to achieve acceptable health, safety and environment outcomes such as:</p> <ul style="list-style-type: none"> the design of offshore facilities/infrastructure to consider engineering measures to minimise operational noise emissions placement of project facilities/infrastructure within the Barossa offshore development area to avoid known regionally important feeding and breeding/nesting biologically important areas for marine mammals and marine reptiles or shoals/banks. <p>Key noise-generating equipment will be maintained in accordance with the manufacturer's specifications, facility planned maintenance system and/or regulatory requirements.</p> <p>Any VSP activities conducted at the development well will comply with 'Standard Management Procedures' set out in EPBC Act Policy Statement 2.1 – Interaction between Offshore Seismic Exploration and Whales: Industry Guidelines (DEWHA 2008d) (or the contemporary requirements at the time of the activity), specifically:</p> <ul style="list-style-type: none"> pre start-up visual observations. Visual observations for the presence of whales by a suitably trained crew member will be carried out at least 30 minutes before the commencement of VSP. start-up and normal operating procedures, including a process for delayed start-up, should whales be sighted. Visual observations by trained crew should be maintained continuously. night time and low visibility procedures. <p>If required, pile driving activities will align with the Department of Planning, Transport and Infrastructure (2012) 'Underwater Piling Noise Guidelines' which have been adapted from EPBC Act Policy Statement 2.1 (or the contemporary requirements at the time of the activity). The guidelines include:</p> <ul style="list-style-type: none"> safety zones – observation and shutdown zones standard management and mitigation procedures, e.g. pre-start, soft start, normal operation, stand-by and shut-down procedures consideration of additional management and mitigation measures, e.g. increased safety zones and marine mammal observers. <p>No pipeline installation activities will occur within the internesting BIA for olive ridley turtles at any time, including peak nesting and hatchling emergence periods.</p>	<p>The outer boundary of the planned operational noise footprint (approximately 12 km from source) within the Barossa offshore development area will not impact the nearest shoals/banks of Lynedoch Bank, Tassie Shoal or Evans Shoal (located > 27 km away).</p> <p>The use of FPSO facility thrusters will be limited to that required for safe operations and working requirements.</p> <p>No significant adverse impacts to marine fauna populations from VSP operations or pile driving activities.</p> <p>No significant impacts to turtle populations from noise generated during installation of the gas export pipeline.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
			<p>Installation schedule of the gas export pipeline will take into consideration seasonal presence/activity of marine turtles to prevent significant adverse impacts during peak seasonal internesting 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:</p> <ol style="list-style-type: none"> 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 internesting 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 this 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 this 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 this OPP. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in this OPP. <p>As part of the development and implementation of the gas export 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).</p>	

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
Atmospheric emissions	Physical environment – air quality	<p>Localised reduction in air quality.</p> <p>Contribution to the incremental build-up of GHG in the atmosphere.</p>	<p>All MODUs/drill ships and 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.</p> <p>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 SO_x and particulate matter emissions. Fuel gas will be used as the preferred fuel for FPSO processes during operations (instead of diesel or marine gas oil).</p> <p>Engineering design of the FPSO facility will seek to reduce atmospheric and GHG emissions through energy efficient design.</p> <p>ConocoPhillips will complete and submit annual NGER reports during the operations stage of the project for the Kyoto Protocol listed (or applicable post-Kyoto agreement at the time of operations) GHG emissions on a CO₂ equivalency basis for each facility (as defined in Section 9 of the <i>National Greenhouse and Energy Reporting Act 2007</i> and National Greenhouse and Energy Reporting Regulations 2008) by fuel type, and the relevant requirements of the <i>National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015</i>.</p> <p>GHG and NPI reporting records (or contemporary requirements at the time of the activities) will be complied with during the project for facilities where ConocoPhillips has operational control.</p> <p>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.</p> <p>The requirements of the <i>Ozone Protection and Synthetic Greenhouse Gas Management Act 1989</i> and Regulations 1995 will be met, specifically in relation to ODS.</p>	<p>Atmospheric emissions associated with the project will meet all regulatory source emission standards.</p> <p>Engineering design of the FPSO facility will seek to reduce atmospheric and GHG emissions through energy efficient design.</p> <p>Combustion engines and flaring equipment will be maintained according to vendor specifications to achieve optimal performance.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
Light emissions	Marine reptiles. Birds.	Change in fauna movements and/or behaviour, such as the attraction or disorientation of individuals.	<p>All vessels in Australian waters adhere to the navigation safety requirements contained within COLREGS, Chapter 5 of SOLAS, the <i>Navigation Act 2012</i> and subordinate Marine Order 30 (Prevention of Collisions) (as appropriate to vessel class) with respect to navigation and workplace safety equipment (including lighting).</p> <p>IALA Recommendation O-139 on The Marking of Man-Made Offshore Structures will be followed.</p> <p>External lighting on offshore facilities/infrastructure will be minimised to that required for navigation, safety and safety of deck operations, except in the case of an emergency.</p> <p>No pipeline installation activities will occur within the internesting BIA for olive ridley turtles at any time, including peak nesting and hatchling emergence periods.</p> <p>Installation schedule of the gas export pipeline will take into consideration seasonal presence/activity of marine turtles to prevent significant adverse impacts during peak seasonal internesting 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:</p> <ol style="list-style-type: none"> 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 internesting 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 this 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 this 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 this OPP. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in this OPP. <p>As part of the development and implementation of the gas export 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).</p>	<p>Light spill from the MODUs/drill ships, FPSO facility and project vessels will be limited to that required for safe operations and working requirements.</p> <p>No significant impacts to turtle populations from installation of the gas export pipeline.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
Planned discharges	<p>Physical environment</p> <ul style="list-style-type: none"> – water quality and sediment quality. Shoals and banks. KEFs – shelf break and slope of the Arafura Shelf. 	<p>Localised and temporary reduction in water quality associated with increased turbidity, water temperature or salinity leading to impacts to marine fauna.</p> <p>Localised displacement, smothering (mainly associated with discharge of drill fluids and cuttings) or toxicity of benthic habitats/communities that are regionally widespread.</p>	<p><i>General</i></p> <p>All planned discharges from vessels will comply with relevant MARPOL 73/78 and Australian Marine Order requirements (as appropriate for vessel classification).</p> <p>All planned operational discharges will be managed in accordance with a project Waste Management Plan (and as detailed in activity-specific EPs).</p> <p>Pre-installation surveys will be undertaken to confirm the FPSO facility is not located in the vicinity of areas of seabed that are associated with the seafloor features/values of the shelf break and slope of the Arafura Shelf KEF (i.e. patch reefs and hard substrate pinnacles) and nearby shoals and banks (including Lynedoch Bank, Tassie Shoal and Evans Shoal, all > 27 km away).</p> <p>A maintenance program will be developed and implemented for the FPSO facility which includes inspection and maintenance of treatment systems to confirm discharge limits are met.</p> <p>All chemicals (hazardous and non-hazardous) used on the FPSO facility will undergo a HSE assessment and be approved prior to use. The HSE assessment required by the procedure aims to identify and control health and environmental risks during transport, use and storage of the chemicals. The procedure includes:</p> <ul style="list-style-type: none"> • definition of key roles and responsibilities • the process for approvals and registration of chemicals • key requirements for safe transport, handling and storage. <p>ConocoPhillips will confirm that the selection of chemical products within the planned discharge streams that are discharged to the marine environment are subject to a chemical assessment process. Products that meet at least one of the following environmental criteria are considered suitable by ConocoPhillips for use and controlled discharge to the marine environment is permitted:</p> <ul style="list-style-type: none"> • rated as Gold or Silver under OCNS CHARM model • if not rated under the CHARM model, have an OCNS group rating of D or E (i.e. are considered inherently biodegradable and non-bioaccumulative). <p>The use of products that do not meet these criteria will only be considered following assessment and approval through a chemical assessment process, as outlined above. The assessment will also be informed by an environmental risk assessment which will help ensure that any potential environmental impacts resulting from chemical use and discharge are minimised.</p> <p><i>Drill fluids</i></p> <p>No planned discharge of whole SBM will occur overboard.</p> <p>When using SBM, the solids control equipment will reduce the residual base fluid on cuttings content prior to discharge overboard. Residual base fluid on cuttings will be less than 10% by weight (w/w), averaged over all well sections drilled with SBM.</p>	<p>All planned operational discharges from the FPSO facility:</p> <ul style="list-style-type: none"> • will not exceed the natural variation of existing baseline water quality conditions for temperature and hydrocarbons, and mercury or chlorine concentrations outside the Barossa offshore development area, and • will not impact areas of seabed that are associated with the seafloor features/values of KEFs or the nearest shoals/banks of Lynedoch Bank, Tassie Shoal or Evans Shoal (located > 27 km away from the Barossa offshore development area, which is beyond the outer boundary of planned operational discharges), and • meet relevant ANZECC/ ARMCANZ and/or natural variation in ambient baseline conditions (where determined to be more relevant to the site-specific context to derive reference values) beyond the predicted mixing zone(s). <p>Dewatering discharges will not extend beyond the Barossa offshore development area and will not impact areas of seabed that are associated with the seafloor features/values of KEFs or the nearest shoals/banks of Lynedoch Bank, Tassie Shoal or Evans Shoal.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
			<p><i>PW and cooling water</i></p> <p>An environmental monitoring program (Section 7.2.3) and adaptive management framework (Section 7.3) will be applied to manage PW and cooling water discharges.</p> <p>Mercury levels in PW discharge will be subject to monitoring during operations to confirm that concentrations remain within acceptable discharge limits.</p> <p>PW and cooling water will be discharged below the sea surface to maximise dispersion.</p> <p>Development of a predicted mixing zone(s) for PW and cooling water within the Operations EP, as informed by modelling and validation studies.</p> <p>During operations, verification monitoring and reporting of temperature and chlorine concentrations of the cooling water discharge stream and hydrocarbon concentrations of the PW discharge stream will be undertaken prior to discharge.</p> <p>Residual chlorine levels in the cooling water discharges will comply with a target of concentration of less than or equal to 3 ppm at the point of discharge to maintain safe operations.</p> <p>The temperature of the cooling water discharge plume from the FPSO will return to within 3 °C of the ambient temperature within 100 m of the discharge point.</p> <p>PW discharges will have a hydrocarbon content that is no greater than an average of 30 mg/L over any 24-hour period.</p> <p>The OIW concentration of PW will be continuously monitored by an installed OIW analyser which will be fitted with an alarm that activates if OIW concentration is > 30 mg/L.</p> <p>Baseline, periodic and 'for cause' (e.g. exceedance of contaminants) toxicity testing of PW discharges will be undertaken against the recognised ecotoxicity assessment methodology defined in ANZECC/ARMCANZ (2000).</p> <p><i>Dewatering of flooding fluid</i></p> <p>The location of the dewatering discharge will be selected to minimise impact on areas of regional environmental importance (e.g. shoals, banks, coral reefs, islands, etc.) to the extent practicable.</p> <p>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).</p> <p>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), discharge location and volumes, methodology and species thresholds.</p> <p><i>MEG stream</i></p> <p>The FPSO facility will have facilities that will regenerate and reclaim MEG for re-use or onshore disposal, if continuous MEG injection is used for flow assurance.</p>	<p>All discharges of SBM residual base fluid on cuttings from drilling activities will be below 10% w/w oil-on-cuttings averaged over all well sections drilled with SBM.</p> <p>Reduce impacts to the marine environment from planned discharges through the application of a chemical selection process, which includes an environment risk assessment.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
			<p><i>Wastewater and other planned discharges</i></p> <p>Oily bilge water from machinery space drainage is treated to a maximum concentration of 15 ppm OIW prior to discharge from vessels, as specified in MARPOL 73/78 (Annex I).</p> <p>Offshore discharge of sewage from vessels will be in accordance with MARPOL 73/78 (Annex IV) and Marine Order 96.</p> <p>Food wastes from vessels will be macerated to < 25 mm diameter prior to discharge, in accordance with MARPOL 73/78 (Annex V) and Marine Order 95.</p> <p>Detailed performance criteria for planned discharges will be defined in the activity-specific EPs.</p>	
Waste management	<p>Physical environment – water quality.</p> <p>Marine mammals.</p> <p>Marine reptiles.</p>	<p>Temporary and localised reduction in water quality, i.e. pollution or contamination of the marine environment.</p> <p>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.</p>	<p>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).</p> <p>A project Waste Management Plan will be developed and implemented, and will include details of:</p> <ul style="list-style-type: none"> 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. <p>Hydrocarbon and chemical storage and handling procedures will be implemented, including:</p> <ul style="list-style-type: none"> 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. <p>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.</p> <p>Heavy lifting operations between vessels and the MODU/drill ship or FPSO facility will be undertaken using competent personnel and certified lifting equipment and accessories to minimise the risk of dropped objects.</p>	<p>Zero unplanned discharge of hazardous and non-hazardous wastes into the marine environment as a result of project activities.</p> <p>Hazardous waste will be transported onshore for treatment and/or disposal at licenced treatment and disposal facilities.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
Unplanned discharges	<p>Physical environment—water quality and sediment quality.</p> <p>Shoals and banks.</p> <p>Tiwi Islands.</p> <p>Other offshore reefs and islands and NT/WA mainland coastline.</p> <p>Marine mammals.</p> <p>Marine reptiles.</p> <p>Birds.</p> <p>Fish.</p> <p>Sharks and rays.</p> <p>Commercial fishing.</p> <p>Recreational and traditional fishing (Tiwi Islands)</p>	<p>Hydrocarbon/chemical contact with shoals/ banks, reefs and islands at concentrations that result in adverse impacts.</p> <p>Alteration of biological communities as a result of the effects on key marine biota.</p> <p>Socio-economic impacts on commercial fishing, traditional fishing (Tiwi Islands) and tourism.</p>	<p><i>General</i></p> <p>The OPGGS Act 2006 – Section 616 (2) Petroleum safety zones will be complied with, including establishment and maintenance of a petroleum safety zone around the well, offshore structure or equipment which prohibits vessels entering or being present within the specified area without written consent.</p> <p>Bunkering procedures will be implemented, which include:</p> <ul style="list-style-type: none"> • 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. <p>Hydrocarbon and chemical storage and handling procedures appropriate to nature and scale of potential risk of accidental release will be implemented, which will include:</p> <ul style="list-style-type: none"> • 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. <p>An Inspection Monitoring and Maintenance Program will be developed for the gas export pipeline to assess structural integrity and for any potential leaks.</p> <p>A SIMOPS procedure will be implemented to control and manage any concurrent SIMOPS activities.</p>	<p>Zero unplanned discharge of hydrocarbons or chemicals to the marine environment as a result of project activities.</p> <p>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.</p> <p>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.</p>

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
			<p><i>Long-term well blowout prevention</i></p> <p>All well design and control activities will be undertaken in accordance with a NOPSEMA approved WOMP and as detailed in activity-specific EPs.</p> <p>All drilling activities will be undertaken in accordance with accepted procedures that meet the requirements of the:</p> <ul style="list-style-type: none"> • ConocoPhillips Well Construction and Intervention standard, which outlines minimum requirements (including testing and maintenance) for well control equipment (e.g. blowout preventer, casings/tubings and drilling mud systems) • ConocoPhillips Well Design and Delivery Process documentation including Well Engineering Basis of Design, Critical Well Review and Shallow Hazard Study • ConocoPhillips Wells Management System, which includes the requirement for a minimum of two barriers that are tested and maintained during all well operations. <p>A MODU/drill ship Safety Case Revision will be developed and implemented, which describes the ConocoPhillips and MODU Operators agreed well control interface.</p> <p><i>Vessels/facilities</i></p> <p>The FPSO facility will be designed so that the hull shall be double-walled or double sided and compartmentalised condensate storage tanks.</p> <p>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.</p> <p>Vessel movements will comply with maritime standards such as COLREGS and Chapter V of SOLAS.</p> <p>Offtake vessels will be piloted during berthing and offloading operations.</p> <p>Visual monitoring of the offloading manifold and hose will be maintained during offtake operations to allow for rapid emergency shut down.</p> <p>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.</p> <p>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.</p> <p>All vessels involved in the project will have a valid SOPEP or SMPEP (as appropriate for vessel classification).</p>	

Aspect	Key factors	Potential impact for key factors	Key management controls	Environmental performance outcome
			<p><i>Response measures</i> (refer to Section 7.2.2 for further discussion of emergency preparedness and response)</p> <p>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.</p> <p>A CMP will be implemented in the event of a spill, which includes:</p> <ul style="list-style-type: none"> • emergency response planning • emergency management structure • incident notification • emergency response responsibilities and support providers. <p>An 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.</p> <p>ConocoPhillips will have additional contingency plans in place in the event of a well blowout, including side track relief well drilling, well capping and existing contracts with spill response agencies to facilitate efficient implementation of appropriate spill response measures.</p>	
Decommissioning	Physical environment (seabed features and, 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.	<p>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). 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.</p> <p>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.</p>	<p>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.</p> <p>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.</p>

7.2 Implementation strategy

While a detailed outline of the implementation strategy is not required for an OPP, as this will be provided in subsequent activity-specific EPs, the following sections outline emergency preparedness and environmental monitoring that will be applied to manage environmental impacts and risks associated with the project, and assist in achieving the overarching project EPOs.

ConocoPhillips appreciates that, while a very low probability scenario, the effective planning and implementation in the event of a spill is taken seriously, and this firm commitment is reflected in this section.

7.2.1 Marine contract management

All marine contracted vessels will undergo the ConocoPhillips Global Marine vetting process prior to working on the project. The vetting process confirms that vessels meet or exceed the standards and criteria set by standard industry practice, international regulations, and relevant authorities such as NOPSEMA and AMSA. These requirements for vessel acceptance criteria include technical, personnel (e.g. crew competencies) and operational requirements for marine vessels engaged by ConocoPhillips.

Specific requirements of the vessel vetting process include:

- ConocoPhillips global standard that requires all vessels (including MODUs) used by ConocoPhillips to be vetted
- the vetting process is based on industry standards and best practices along with considerations of guidelines and recommendations from recognised industry organisations such as Oil Companies International Marine Forum and International Maritime Contractors Association, and international regulatory agencies like the International Maritime Organization and vessel Classification Societies
- requires a valid Offshore Vessel Inspection Database (OVID) report or Common Marine Inspection Document (CMID) report as required for vessel operation types
- for vessels where the OVID and/or CMID are not valid or available, a ConocoPhillips Approved Inspection Report is required.

The ConocoPhillips marine contracting strategy also implements the independent verification of the contractor's management system, leveraging the Oil Companies International Marine Forum's Offshore Vessel Management Self-Assessment program. This is key to ensuring that the contractor's safety management systems are implemented on their vessels and the crews are aware of their responsibilities and accountabilities.

The ConocoPhillips Marine function will maintain relationships with vessel owners and masters, and undertake quarterly face-to-face reviews for term contracts. The quarterly review topics will be safety, environmental, training schemes, the specific vessel performance, and the current/future scope of work.

7.2.2 Emergency preparedness and response

7.2.2.1 ConocoPhillips Crisis Management Plan

The CMP and OPEP will describe arrangements and reporting relationships for command, control and communications, together with interfaces to specialist response groups, statutory authorities and other external bodies.

The purpose of the ConocoPhillips CMP is to clearly define the framework and tools, such as the Incident Command System (ICS), that will facilitate the ability of organisations within the business unit to effectively respond to all incidents and interface with Government groups.

ConocoPhillips utilises the ICS as the system for emergency and crisis management. Team members are trained in specific roles and responsibilities and the processes and procedures of the ICS under the CMP guidelines. The development of an Incident Action Plan supports and guides the response actions for all emergency response events.

ConocoPhillips maintains a comprehensive Crisis and Emergency Management structure that is dependent on the nature and scale of the event that will be updated throughout the project life-cycle as appropriate, including the following:

- Crisis Management Team (CMT) – under the leadership of a Crisis Manager (CM). The CMT is responsible for the overall management of the incident from a strategic, legal, ethical and public image perspective.
- Incident Management Team (IMT) – under the leadership of an Incident Commander (IC). The IMT supports on-site operations, or in case of larger responses, assumes control of the response.
- Emergency Response Team (ERT) – onsite response teams under the control of the Emergency Commander (EC). The ERT is responsible for physically responding to and controlling emergency situations.

ConocoPhillips has a strategic approach to emergency response, providing a tiered structure of response that aligns with the levels of response outlined in the AMSA National Plan (2014). This tiered structure allows the IC to assess a situation and mobilise the appropriate level of response. Ongoing appraisal of the situation by the offshore and onshore emergency response team leaders allows the level of response to be upgraded or reduced in a controlled and effective manner.

The emergency response objectives are prioritised to manage:

- People: ensure the safety of all personnel
- Environment: protect the environment
- Asset: minimise the impact of damage to equipment and assets and provide technical support in the event of an emergency
- Reputation: management of legal and public image aspects including liaison with external agencies and authorities
- Livelihood: minimise disruption to workplace activities.

Contractors must, where required, comply with ConocoPhillips' Emergency Response Plans and Procedures. For this project context, Emergency Response Plans for any MODU/drill ship or vessel contractors will be updated to align with the company requirements, outlining the agreed interfaces between ConocoPhillips and the contractor. In the event of impending adverse weather or other conditions, the contractor must have a procedure in place to implement, in consultation with ConocoPhillips, the appropriate precautionary measures to safeguard personnel, property and environment.

7.2.2.2 Oil pollution emergencies

First Strike Plan and OPEP

In the unlikely event that there is a significant hydrocarbon release associated with the project, a First Strike Plan will be implemented. The First Strike Plan will be incorporated into the OPEP and provides guidance on the immediate actions required to commence a response. The MODU/drill ship, FPSO facility and support vessels will have SOPEPs and SMPEPs in accordance with the requirements of MARPOL 73/78 Annex I (as appropriate to vessel class). These plans outline responsibilities, specify procedures and identify resources available in the event of a hydrocarbon or chemical spill from vessel activities. The First Strike Plan is intended to work in conjunction with the SOPEPs/SMPEPs, if hydrocarbons are released to the marine environment from a vessel.

The OPEP provides the framework and information required for an effective response in the unlikely event of an unplanned release of hydrocarbon from project activities. The OPEP details actions to be taken in response to the incident, describes arrangements and reporting relationships for command, control and communication, and provides interfaces to emergency specialist response groups, statutory authorities and other external bodies. Proactive and early engagement with each company or agency that may be involved in the response activities will be undertaken to ensure that the role of each agency is agreed and clearly defined in the OPEP.

ConocoPhillips' response objectives are to develop and implement appropriate and effective response strategies commensurate to the scale, nature and risk of the spill. The OPEP will include detailed response strategies and hydrocarbon pollution emergency response arrangements, as informed by the maximum credible hydrocarbon spill scenarios identified for the specific activity. The response strategies that may be implemented include monitor and evaluate, wildlife response (e.g. hazing, pre-emptive capture, post-contact responses), physical dispersion, chemical dispersion, containment and recovery, protection and deflection, and shoreline clean-up. The suitability of the response strategies will be evaluated in the OPEP and include a net environmental benefit impact assessment (NEBA) and ALARP assessment. The objective of the NEBA process is to identify the potential net environmental benefit (positive impacts) or net environmental detriment (negative impacts) to key sensitive receptors associated with the implementation of particular spill response strategies. The process allows direct comparison of response strategies, and identifies potential impacts of these relative to the unmitigated impacts of the spill on sensitive receptors. It also allows assessment of the value of implementing multiple response strategies.

Through development of the Barossa appraisal drilling EP in 2016/2017, ConocoPhillips has defined a robust and tailored spill response strategy in the unlikely event of a large-scale hydrocarbon release. The response strategy was informed by the following process:

- an activity-specific spill response workshop – attended by a specialist team of marine and environmental scientists together with senior ConocoPhillips spill response personnel and Australian Marine Oil Spill Centre (AMOSOC) personnel
- a pre-spill NEBA – identification of sensitive receptors that may be affected (as informed by stochastic modelling) and assessment of response options available
- an ALARP assessment – evaluation of ALARP considerations such as health and safety, practicability, feasibility, flexibility. For example: safe operation of response vessels in areas where there may be gas plumes; limited effectiveness of techniques for highly volatile, rapidly evaporating spills; time required to mobilise the response; application of chemical dispersants increasing entrained and dissolved hydrocarbons where it could impact on submerged sensitive receptors and weather slower; and logistical challenges such as flight times and refuelling requirements
- geographic/environmental conditions – remote, offshore environment, wave heights, wind etc
- fate and weathering characteristics of the spill, e.g. highly, volatile marine diesel or condensate versus persistent HFO or IFO-180 (**Section 6.4.10.4**)
- assessment of the potential impacts and risks to the environment from the implementation of the response strategy in the context of whether it will realise a net environmental benefit.

Applying this process facilitates the implementation of tailored spill response strategies that are appropriate and suitable to the nature and scale of the spill (e.g. volume released, hydrocarbon type etc.). In general, the monitor and evaluate response strategy would likely be initiated in the event of a large-scale release. This strategy provides situational awareness which is critical to the implementation of a coordinated, focused and effective spill response. A range of additional response strategies, such as physical dispersion, chemical dispersion, containment and recovery, protection and deflection, wildlife response and shoreline clean-up, may also be implemented under specific circumstances, if determined to be suitable (e.g. pass the pre-spill NEBA, ALARP and acceptability assessments).

During the development of activity-specific EPs, a similar process to that outlined above will be followed to identify and evaluate the spill response strategies relevant to the spill scenarios for each activity. This will subsequently inform the content of the activity-specific EPs, OPEPs and First Strike Plans, including the evaluation of impacts and risks from implementing the different response strategies.

OSMP

The ConocoPhillips OSMP will include a number of operational monitoring plans and scientific monitoring plans for implementation following a large-scale hydrocarbon spill incident, used to guide the spill response and assess potential environmental impacts. The OSMP will include an implementation plan together with individual operational and scientific monitoring plans.

The overarching objective of the OSMP is to provide monitoring plans that:

- provide the overarching structure for operational monitoring to support situational awareness, to define the adverse exposure zone and inform spill response strategies to reduce risks of the spill to ALARP
- inform a practical scientific monitoring process that can be implemented in the event of a spill to allow scientifically robust investigation of the extent and impacts of the spill over the short and long-term.

ConocoPhillips has a number of existing contracts, master service agreements, and business support relationships and alliances with service providers in place to provide support in the event of a spill. These will be reviewed, updated and revised to ensure they enable delivery of the OSMP for the duration of the project.

7.2.2.3 Emergency and spill response drills, exercises and audits

As required by Regulation 14 (8A) of the OPGGS (E) Regulations, ConocoPhillips will test the activity-specific OPEPs in order to confirm response readiness. OPEPs will be developed in line with the overarching ConocoPhillips documentation and plans, with testing of the OPEP including either desktop and/or field-based spill response drills, exercises and audits.

7.2.3 Environmental monitoring

This section provides an outline of the environmental monitoring framework for the project. This framework will be further developed prior to initiation of the key development phases as part of activity-specific EPs, and will be updated throughout the project life-cycle as appropriate.

As described previously in **Section 2**, the HSEMS provides the framework that ConocoPhillips uses to integrate commitments into its daily business and operations and upon which environmental performance outcomes (EPOs) are based. All elements of the HSEMS are integrated into this OPP to support environmental management throughout the project.

Monitoring will be implemented in order to demonstrate compliance with regulatory limits and ConocoPhillips' project requirements established in this OPP. Monitoring will also provide verification of the overall design and effectiveness of the implemented control measures. The key objectives of the proposed monitoring activities are as follows:

- to monitor discharges and emissions to ensure compliance with relevant legislation, standards and ConocoPhillips' environmental objectives for the project
- to determine whether environmental changes are attributable to the project activities, other activities or as a result of natural variation
- to enable reliable data to inform an appropriate corrective course of action if required
- to provide a basis for continuous review and improvement to the management and monitoring arrangements over the project life-cycle, and adaptive management as appropriate.

Forward management and monitoring framework in activity-specific EPs

While this outline framework is presented at this early stage OPP, there is a clear forward process where specific details will be subject to review and approval, under activity-specific EPs. It is at that stage where final details of specific activities, and an appropriate management, monitoring and reporting program, is tailored to meet ALARP and acceptable outcomes specific to that stage of development at the time. The legislative framework for this forward process is described further below.

Under the OPGGS (E) Regulations, it is a legislative requirement for a titleholder to submit an EP before commencing an activity and the activity cannot take place until the regulator accepts the EP. The EP must be appropriate for the nature and scale of the activity and describe the activity, the existing environment, details of environmental impacts and risks and the control measures for the activity. In addition, the EP must include an implementation strategy to demonstrate that the impacts and risks will be acceptable and reduced to ALARP, and to describe how appropriate EPOs, standards and measurement criteria outlined in the EP will be met.

Subsequent to this OPP, a series of EPs will be developed to cover the project activities at the following key stages of the project (including development drilling, subsea structure installation (including gas export pipeline installation); tow-out and hook up of the FPSO facility; gas export pipeline installation; pre-commissioning; commissioning; operations; decommissioning). Each EP will outline specific strategies to avoid, mitigate or reduce potential environmental impacts. The EPs will be used to inform personnel of the monitoring, auditing, reporting and corrective action requirements. The EPs will also identify the roles and responsibilities of key individuals/positions to implement the commitments for environmental management and monitoring.

The results of the comprehensive baseline monitoring program undertaken for the project, as summarised in **Section 5**, will provide a reference for subsequent environmental monitoring.

While specific environmental monitoring commitments are yet to be fully defined at this early stage of OPP assessment, a summary of key considerations for key discharges is provided further in the following sub-sections.

Planned marine discharges

Considering the nature and scale of the planned marine discharges during operations, the PW and cooling water discharges from the FPSO facility will provide the primary focus of the monitoring framework during operations.

The framework will ensure the nature, extent, and potential effect of planned discharges are assessed, and help determine changes to water quality, sediment quality and benthic habitats over time.

In summary, the monitoring program would comprise:

- in-line monitoring of discharges from the FPSO facility
- monitoring of the environment, including receiving waters, sediment quality sampling and assessment of benthic habitats, that may be influenced by project activities
- a sampling frequency at an appropriate time scale (to be determined during EP development) for comprehensive survey of the environment in the Barossa offshore development area that may be influenced by project activities
- Whole-of-effluent toxicity (WET) testing to inform Direct Toxicity Assessment (DTA) of the PW
- ongoing monitoring of in-line PW and cooling water and verification against dispersion models.

The framework for planned marine discharges is outlined further in **Table 7-2** below. Trigger actions will be developed to support implementation of the monitoring framework and used to inform and refine the monitoring parameters.

Environmental monitoring that would be triggered in the unlikely scenario of an unplanned discharge as previously outlined in **Section 7.2.2**.

Table 7-2: Summary of planned discharge monitoring framework

Monitoring program	Objectives	Indicative frequency
FPSO facility monitoring	<ul style="list-style-type: none"> • To monitor discharges of PW and cooling water from the FPSO facility, combined with modelling, to verify that concentrations meet relevant ANZECC/ARMCANZ guidelines and/or natural variation in ambient baseline conditions (where determined to be more relevant to the site-specific context to derive reference values) beyond the predicted mixing zone(s). 	<ul style="list-style-type: none"> • Continuous: <ul style="list-style-type: none"> • PW and cooling water – discharge volume (online flow meter) • TPH (online OIW analyser). • Daily: <ul style="list-style-type: none"> • PW – TPH, discharge volumes. • Annually <ul style="list-style-type: none"> • PW – characterisation (samples collected on FPSO facility and analysed) • Cooling water – chlorine concentration and temperature. • Additional monitoring as a result of trigger actions.
Environment monitoring (water quality, sediment and benthic habitats)	<ul style="list-style-type: none"> • To establish baseline levels of contaminants and conditions in the Barossa offshore development area for future comparisons during operations and decommissioning. • To monitor the environment in the area influenced by project activities (as informed by modelling and FPSO monitoring) and equipment/ infrastructure in the Barossa offshore development area. 	<ul style="list-style-type: none"> • Baseline (prior to activity) – will include impact and reference sites. • Periodic environment monitoring program in the Barossa offshore development area (as informed by the FPSO facility monitoring). • Additional field sampling as a result of trigger actions or water quality and/or sediment assessments.

Monitoring program	Objectives	Frequency
WET testing	<ul style="list-style-type: none"> To characterise operational PW discharges and inform triggers that are appropriate for the sensitivity of local organisms. 	<ul style="list-style-type: none"> Post start up (once conditions are stable, expected approximately 3 to 6 months from start-up) (multi species test, indicatively eight species). Nominally quarterly monitoring of in-line discharge stream for the first two years of operations (indicatively three species surrogate WET test). Nominally five yearly after the first two years of operations (multi species test, indicatively eight species), subject to review of changes in the nature of discharge over time. Additional WET testing as a result of trigger actions or chemical changes.

Atmospheric emissions

Atmospheric emissions will be monitored and reported for the project, in accordance with the contemporary policy position and regulatory requirements at the time. The framework is outlined further in **Table 7-3** below.

Table 7-3: Summary of air emissions monitoring framework

Monitoring program	Objectives	Frequency
GHG emissions (e.g. from flaring, venting, fuel gas and diesel combustion, acid gas removal and fugitive emissions)	<ul style="list-style-type: none"> Recording and reporting of emissions as required by the <i>National Greenhouse and Energy Reporting Act 2007</i> and the Safeguard Mechanism (or contemporary requirements at the time). 	<ul style="list-style-type: none"> Ongoing
Criteria pollutant emissions (e.g. from flaring, fuel gas and diesel combustion, acid gas removal and fugitive emissions)	<ul style="list-style-type: none"> Recording and reporting of emissions as required by the National Pollutant Inventory (or contemporary requirements at the time). 	<ul style="list-style-type: none"> Ongoing

Gas export pipeline

The results of the preliminary pipeline survey effort have been used to characterise the gas export pipeline corridor as summarised in this OPP.

ConocoPhillips will undertake a further pipeline route survey effort to inform route optimisation and reduce environmental impact. It is expected that targeted studies will include a characterisation of the baseline conditions for sediment and water quality and benthic habitats along the selected pipeline route, with particular focus on nearby shoals/banks or subtidal features.

Installation schedule of the gas export pipeline will take into consideration seasonal presence/activity of marine turtles to prevent significant adverse impacts during peak seasonal interbreeding 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:

- 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
- update of latest knowledge on marine turtle density and seasonal movements within the interbreeding 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 this OPP
- combine the outputs from items 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
- undertake an additional impact assessment that builds on the assessment presented in this OPP and incorporates the information from items above to evaluate the environmental impacts and risks and verify the impact assessment conclusions are consistent with those presented in this OPP. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in this OPP.

If trenching/dredging activities for the gas export pipeline installation are required, i.e. if the pipeline has to remain outside the Oceanic Shoals marine park in the shallow water area of the pipeline corridor, they will occur outside the peak flatback (June to September) and olive ridley (April to August) turtle interbreeding period. The following process will be used to identify how the pipeline in the section to be trenching/dredged will be installed to reduce impacts and risks to ALARP and acceptable levels:

- undertake numerical modelling to predict the extent, intensity and persistence of sediment plumes arising from trenching/dredging activity
- use the outputs of the numerical modelling to identify key environmental values/sensitivities at risk from trenching/dredging activities with consideration of background/baseline conditions and any seasonal presence
- update of latest knowledge of how aspects arising from trenching/dredging activities can impact the marine environment, including marine turtles and benthic communities
- undertake an additional impact assessment that builds on the assessment presented in this OPP and incorporates the information from the items above with the understanding of the environment (e.g. benthic habitat maps) to evaluate the environmental impacts and risks and verify the impact assessment conclusions are consistent with those presented in this OPP, i.e. confirm impacts from trenching/dredging will be temporary and localised. Note: if required, additional controls and/or mitigation measures will be identified to demonstrate consistency with the impact assessment presented in this OPP.
- develop a dredge management plan that:
 - details how trenching/dredging will be undertaken (which will be informed by the information derived from items above)
 - identifies the control and mitigations measures, environmental performance outcomes, environmental performance standards and measurement criteria that demonstrate the environmental impacts and risks can be reduced to ALARP and acceptable levels
 - includes an adaptive management strategy for how trenching/dredging activity will be managed, including what information and/or data will be used to provide early warning of adverse trends and trigger adaptive management before environmental performance outcomes are compromised

If use of an anchored pipelay vessel is required, i.e. it may only be required if the pipeline has to remain outside the Oceanic Shoals marine park in the shallow water area of the pipeline corridor, the following process will be used to identify how anchored pipelay installation will be undertaken to reduce impacts and risks to ALARP and acceptable levels:

- use the information and data derived from the pre-lay survey of the gas export pipeline installation route to update understanding of the existing environment along the gas export pipeline route
- identify any anchor restrictions zones, i.e. areas where anchors cannot be placed, e.g. shoals, banks or coral outcrops
- define how installation of the pipeline would be undertaken including start-up anchor pattern, operational anchor pattern and lay down (ending) anchor pattern, and predict the number of anchor drops required
- undertake an additional impact assessment that builds on the assessment presented in this OPP and incorporates the information from the items above, with consideration of any seasonal presence, to evaluate the environmental impacts and risks and to verify the impact assessment conclusions are consistent with those presented in this OPP (Note: if required, additional controls and/or mitigation measures will be identified to be implemented to demonstrate consistency with the impact assessment presented in this OPP)
- develop a pipeline lay anchoring management plan that:
 - identifies how pipelay installation would be undertaken using an anchored pipelay vessel
 - identifies the control and mitigations measures, environmental performance outcomes, environmental performance standards and measurement criteria that demonstrate the environmental impacts and risks can be reduced to ALARP and acceptable levels
 - includes an adaptive management strategy for how anchoring activity will be managed including what information and/or data will be used to provide early warning of adverse trends and trigger adaptive management before environmental performance outcomes are compromised.

During operation of the pipeline, an Inspection Monitoring and Maintenance Program will be developed and implemented for the gas export pipeline. As part of this program, visual inspection of benthic habitats in the immediate vicinity of the pipeline may be undertaken, should the final selected easement be close to relevant shoals/banks of interest.

Decommissioning

Considering that the project is in the early design phase, and given the expected operating life of the project is approximately 25 years, the 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 monitoring framework will be tailored to the decommissioning strategy to be implemented at the time, and expected to include a program of monitoring seabed sediment quality, water quality and benthic habitats pre-and post-decommissioning.

7.3 Adaptive environmental management

An adaptive environmental management framework will be implemented throughout the life of the project and tailored as the project 'life-cycle' progresses (**Figure 7-1**). The environmental management framework will provide overarching governance for the measurement, monitoring and response to environmental aspects associated with the project. The ConocoPhillips HSEMS, particularly Elements 13 to 15, provides the basis to achieve effective implementation and integration of the adaptive management framework. The framework will also align with the principles of ESD and provide a mechanism for adaptive management over time.

Adaptive management is a circular or iterative process that allows past information to feed back into and improve management responses and strategies. This continual monitoring and evaluation process assists in the active adaptation of management and improvement through a learning process. It requires transparent planning systems and implementation strategies, and a strong emphasis on monitoring and reviewing to ensure emerging information is reflected in future planning.

The adaptive management framework will be suitable to the nature and scale of the project, as addressed in the activity-specific EPs, and reflect the key regionally important environmental values. Implementation of an adaptive management framework will determine whether the management measures applied are relevant and effective on a continuous basis. The framework will provide an appropriate means to confirm that project-related effects on environmental values and sensitivities are managed to an acceptable level and that environmental performance outcomes are being achieved.

The framework will inform management decisions and enable flexibility to adapt the approach over time to take into consideration any changes to the existing marine environment or environmental legislation (e.g. listing of new EPBC species, finalisation of the AMP management plans), new technologies and new information (e.g. scientific understanding or engineering).

ConocoPhillips' adaptive management framework consists of the following key steps:

- *Assess and define*: assess the context of the project and define management measures to ensure that impacts will be managed to an acceptable level
- *Plan*: develop a monitoring plan/strategy which defines appropriate outcomes and performance indicators (e.g. targets and triggers)
- *Implement and monitor*: implement the monitoring plan/strategy and monitor performance against the outcomes and performance indicators
- *Evaluate*: review monitoring results to understand the effectiveness of the management measures and determine if improvements can be made. Key findings from the evaluation process will be reported and recommendations made. Audits undertaken during the project will also feed into this step
- *Adjust and adapt*: feed any recommendations and key learnings back into the monitoring plan/strategy (Step 3) to allow tailoring of the approach and facilitate continuous improvement. The overall adaptive management framework will be periodically reviewed.

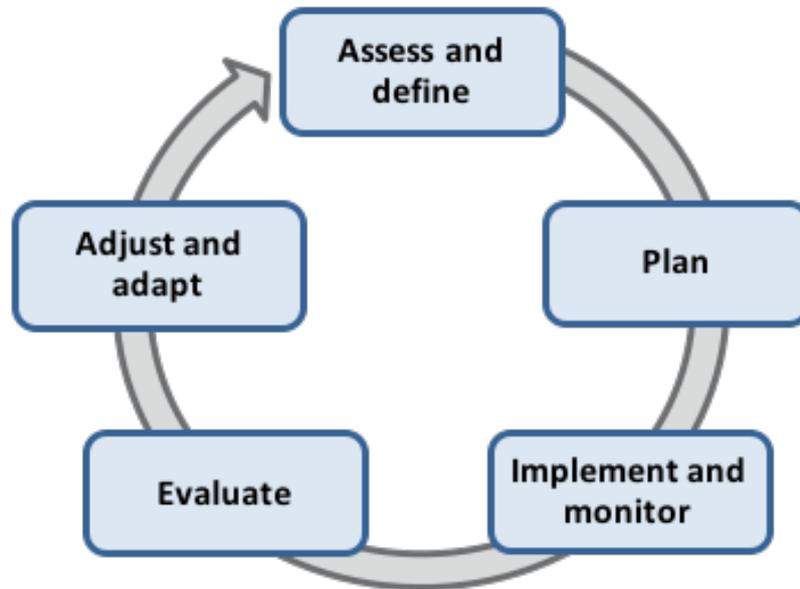


Figure 7-1: Adaptive management framework

7.4 Overall statement of acceptability

Overall, ConocoPhillips considers the project to be acceptable, as informed by a risk-based assessment, taking into account that:

- the remote project location of the Barossa offshore development area, which is predominantly located in deep, open offshore waters, means no facilities will be placed near any areas of regional environmental importance such as shoals, banks, coral reefs or biologically important areas for marine fauna (**Section 4**)
- planned operations have a relatively limited extent (**Section 4**), with the impacts and risks considered low (**Section 6**)
- the risks of unplanned releases is medium, however the likelihood is remote given comprehensive management controls will be implemented (**Section 6**)
- the implementation of key management controls and clear definition of appropriate and measurable EPOs that will assist in managing all environmental aspects of the project (**Section 7**)
- the project will be undertaken in accordance with relevant legislation, standards and industry guidelines, consistent with the principles of ESD (**Section 7.5**) and ConocoPhillips expectations for responsible environmental management (**Section 2** and **Section 3**).

7.5 Overall statement of consistency with principles of ecologically sustainable development

ConocoPhillips considers the project to be consistent with the principles of ESD, as summarised in **Table 7-4**.

Table 7-4: Summary of project alignment with the principles of ESD

Principles of ESD (as defined in Section 3A of the EPBC Act)	Project alignment
Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations.	<p>The assessment presented within this OPP relates to the entire life-cycle of the project, and therefore takes into account both short-term and long-term considerations and potential impacts associated with the project.</p> <p>Specifically, alignment of the project with this principle is shown through the following:</p> <ul style="list-style-type: none"> • The ConocoPhillips Sustainable Development Risk Management Practice and the ConocoPhillips HSE and Social Issues Due Diligence Standard provide an integrated evaluation of environmental, social and economic issues to be carried into project reviews, design, execution and operation. • The end product of this project (including high quality, clean natural gas with lower net emissions than other fossil fuels) is a transitional fuel to meet regional and global demand for energy in a sustainable framework, with significant contribution to Government taxation revenue, creation of employment opportunities and economic growth.
If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (i.e. the precautionary principle).	<p>A comprehensive environmental risk assessment of all impacts and risks associated with the project has been undertaken within this OPP (Section 6) and key management controls defined as relevant to the nature and scale of the potential impacts/risks. The assessment has acknowledged any specific areas where there may be some level of uncertainty (i.e. confidence), and this has been taken into account when defining the potential impacts and risks and residual risk rating.</p> <p>The assessment has been informed by an extensive scientifically robust marine baseline studies program and understanding of the marine environment within the project's area of influence (Section 5). ConocoPhillips' commitment to comprehensive environmental studies has also contributed substantially to the scientific fabric of the region, providing wider benefits in increasing the knowledge base of the area.</p> <p>The assessment has also been informed by modelling, which has a number of levels of conservatism built in to take into account uncertainty in final project design.</p>
The principle of inter generational equity: that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.	The key management controls and EPOs, as presented in Table 7-1 , have been defined with consideration of this principle.
The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.	<p>The conservation of biological diversity and overall ecosystem integrity has been considered in the environmental risk assessment (Section 6), and has been informed by a detailed understanding of the existing marine environment (Section 5) within the project area.</p> <p>The key management controls and EPOs (Table 7-1) have also been defined with consideration of this principle.</p>
Improved valuation, pricing and incentive mechanisms should be promoted.	The key management controls, including the overarching ConocoPhillips HSEMS and CPMS, (Table 7-1) seek to align with this principle, where practicable.