

Information Sheet

John Brookes Drilling and Installation Environment Plan



Activity Overview

Santos is proposing to drill a development well at the existing John Brookes Wellhead Platform (WHP), which is in Commonwealth Waters approximately 131 km north of Onslow, Western Australia.

The proposed well, known as John Brookes-7, will supplement production from four existing wells at the John Brookes WHP, these being John Brookes-2, 3, 5 and 6 and the Spartan tieback.

The scope of the Drilling and Installation Environment Plan (EP) comprises drilling and installation activities. Commissioning and start-up of John Brookes-7 will be managed under a revision of the in-force Varanus Island (VI) Hub Operations EP (Commonwealth).

All hydrocarbons produced at the normally unmanned John Brookes WHP are transported through an existing pipeline network to Santos' Varanus Island (VI) Hub processing facilities. The VI Hub processing facilities are within State waters and are managed under separate approvals regulated by the Department of Mines, Petroleum and Exploration, and enable the supply of gas via an existing gas export pipeline for use in Western Australia, as well as condensate for export.

Location

The **operational area (OA)** is situated within permit area WA-29-L, with the nearest point being approximately 131 km from Onslow and 168 km from Karratha a (see **figure 2**).

Timing

The activity is planned to occur in Q3/Q4 2027 subject to obtaining all regulatory and business approvals. Timing may vary following acceptance of the EP to allow for operational flexibility.



Figure 1. Regional activity location map.

Duration

The total duration of the activity is expected to be up to approximately 120 days. This includes up to three geophysical site surveys of approximately 7-14 days duration per survey and approximately 35 days for planned drilling operations with up to 20-days contingency for general delays to drilling and completion activities. While not expected, an additional 20-days contingency well intervention operation may be undertaken which will include re-mobilisation of the drill rig.

The expected duration is a forecast and is subject to change based on drill rig availability, adverse weather conditions, standby periods, or technical/equipment issues that may arise during operations.

Consultation and feedback

All petroleum activities in Commonwealth waters must have an environment plan (EP) accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) before any activities can take place.

Under Commonwealth environment regulations, Santos is required to consult with relevant persons about proposed activities in the course of preparing an EP. Santos consults to further

ascertain, understand and assess potential environmental impacts and risks of a proposed activity and what, if any measures should be implemented to reduce these to 'as low as reasonably practicable' (ALARP) and to an acceptable level.

A relevant person includes Commonwealth and State agencies and authorities to which the proposed activity may be relevant, and persons or organisations whose functions, interests or activities may be affected by the proposed activity.

If you consider you may be a relevant person, please contact us as soon as possible to initiate consultation and so you can tell us how you would like to be consulted throughout the consultation process or if you need additional information.

The consultation period for this EP closes **19 August 2026**.

More details on consultation and providing feedback can be found in the consultation section of this Information Sheet.

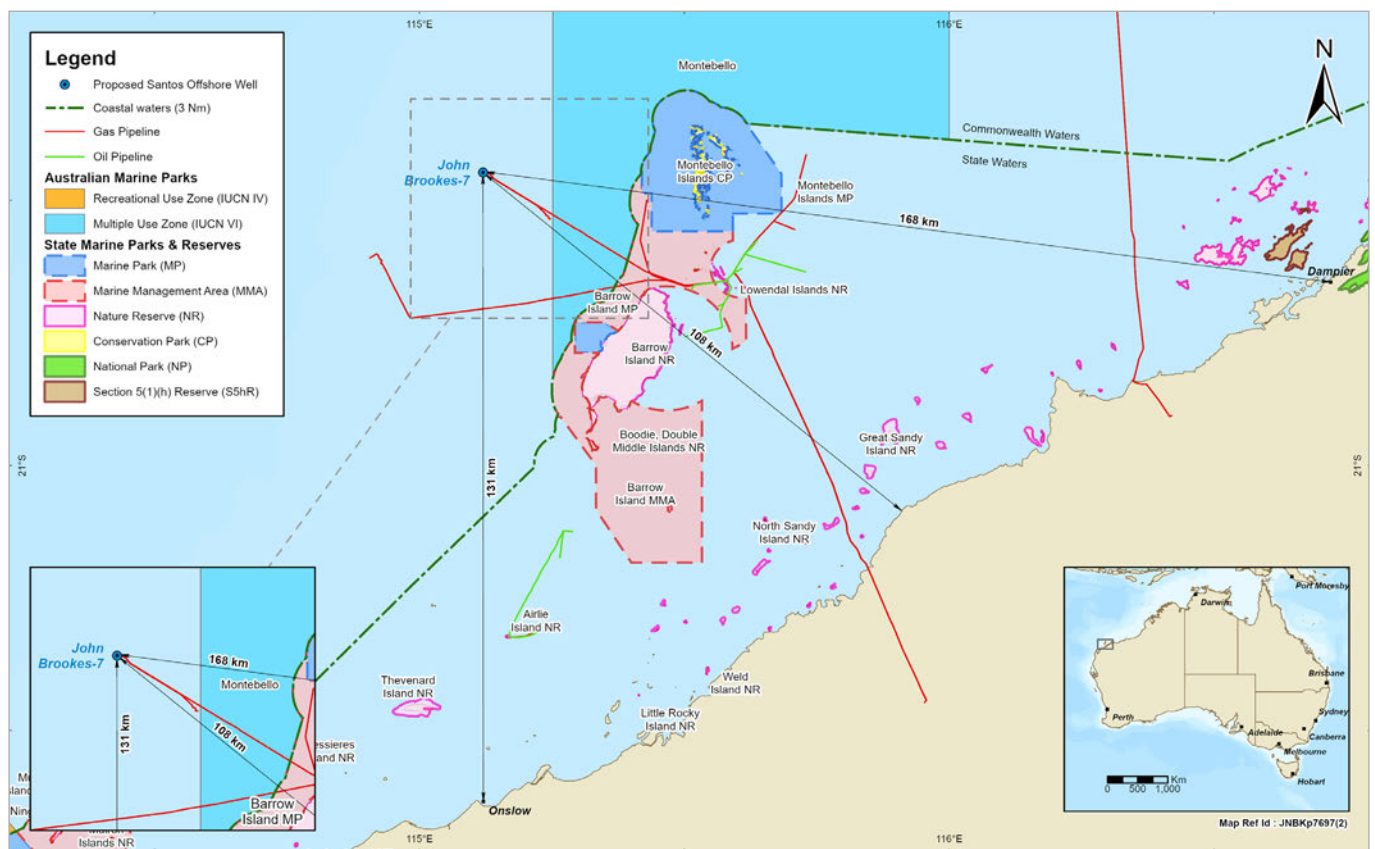


Figure 2. Proposed drilling activity in relation to existing offshore infrastructure. Map distances are approximate.

Table 1. Activity description

Activity details	
Proposed Activity	- Up to three geophysical site surveys will be undertaken prior to mobilisation of the drill rig. - Drilling will be undertaken using a jack-up Mobile Offshore Drilling Unit (MODU) ('drill rig') which will be positioned over the existing John Brookes Well Head Platform. - Key activities will include: - Drilling and casing of the John Brookes-7 well. - Wireline logging and well evaluation. - Well suspension and preparation for commissioning. - Contingency well intervention requiring remobilisation of the MODU.
Operational area	- The John Brookes-7 drilling activity is planned to occur within a defined Operational Area (OA). - This will be a 500 m radius around the John Brookes Well Head Platform, consistent with the OA defined in the in-force Varanus Island Hub Operations EP (Commonwealth).
Vessels, aircraft and other equipment	- The drill rig will be installed and supported by 3 Anchor Handling Tug vessels during MODU installation and support. - Helicopters will be used for crew changes, critical equipment supply and emergency response. - A Remote Operating Vehicle will be used to monitor drilling operations and conduct periodic visual surveys. - Vessels with equipment used to conduct geophysical site surveys and geotechnical surveys (side scan sonar, multibeam sonar, acoustic boomer/geophone tow-fish, cone penetrometer and seabed coring equipment).
Exclusion and cautionary zones	- A 500 m Petroleum Safety Zone (PSZ) will be in place around the John Brookes Wellhead Platform for the duration of the activity. - A 2.5 nautical mile cautionary zone will be in place during drill rig installation and critical operations.

Table 2. Activity coordinates

Permit	Water depth	Latitude	Longitude
WA-29-L	50 - 60 m	20° 26' 50.445" S	115° 07' 12.624" E

Environment that May Be Affected

Activity impacts and risks

In preparing this EP, Santos considers the environment that may be affected (EMBA) by proposed activities, inclusive of expected impacts from planned activities and potential risks from unplanned events (see **Figure 4** for Activity OAs and EMBA location).

Our understanding of activity impacts and risks is informed by our experience over many years of managing offshore exploration, development, operations and decommissioning activities.

Expected impacts typically result in a disturbance to the environment, including social, economic and cultural aspects, from the presence of our vessels, rigs and facilities and related activities.

Table 3 of this information sheet provides a summary of key expected impacts.

Activity risks are adverse potential effects to the environment from unplanned events or accidents.

Table 4 of this information sheet provides a summary of key risks.

For both impacts and risks, Santos is required by law to reduce these to ALARP and to an acceptable level as judged by the relevant Regulator.

Spill prevention, preparedness and response

For offshore marine users, including the energy industry, a prime management focus is on the prevention of spills to the marine environment. We do this through the design of our equipment and facilities, rigorous inspection and maintenance programs, training of our people and adhering to the control measures described in **Table 3** and **Table 4**.

We will focus on preparedness and response to spills.

Preparedness planning begins with the identification of potential spill scenarios up to and including the worst case. Response planning involves developing strategies for management of each scenario, and supports rapid, effective and scalable response in the unlikely event of an incident.

To support our preparedness and response planning we use sophisticated computer modelling to simulate hypothetical spills and predict how a spill may behave and spread in the marine environment. These models start with a single hypothetical spill from a set release point, subject to a single set of wind and weather conditions, considering the hydrocarbon type and volume that may be lost to the environment.



Figure 3. Image of a jack up drill rig

Additional wind and weather conditions for different times of the year are then applied to the model drawing on historical data.

Considering all of these factors is important for our planning as different hydrocarbon types behave differently in the marine environment, considering the release location and wind and weather conditions at different times of the year.

By way of example, lighter hydrocarbons like condensate break down more quickly in the marine environment than heavier ones, particularly in offshore areas where the sea and air temperatures are warmer.

Santos considers hundreds of hypothetical spill models for each EP, which we combine into a single “worst case” map (see **Figure 4** for this EP) assuming no responses are implemented and to present all areas that could be affected.

By understanding this area, appropriate response strategies like those described in this EP to demonstrate response capability and capacity regardless of the spill location.

In the unlikely event of an actual spill new modelling would be undertaken to predict where the spill may go and how it may behave in the marine environment.

This helps us in conjunction with State, Territory or Commonwealth agencies (where appropriate) to prioritise environmental social, economic and cultural features for protection, as well as implement the most effective response strategy.

It should be noted that this predictive model of an actual spill would be significantly smaller than the map presented at **Figure 4**.

Please see the [**NOPSEMA Spill Modelling Video**](#) for more information on oil spill modelling and why it is required for the preparation of Environment Plans.

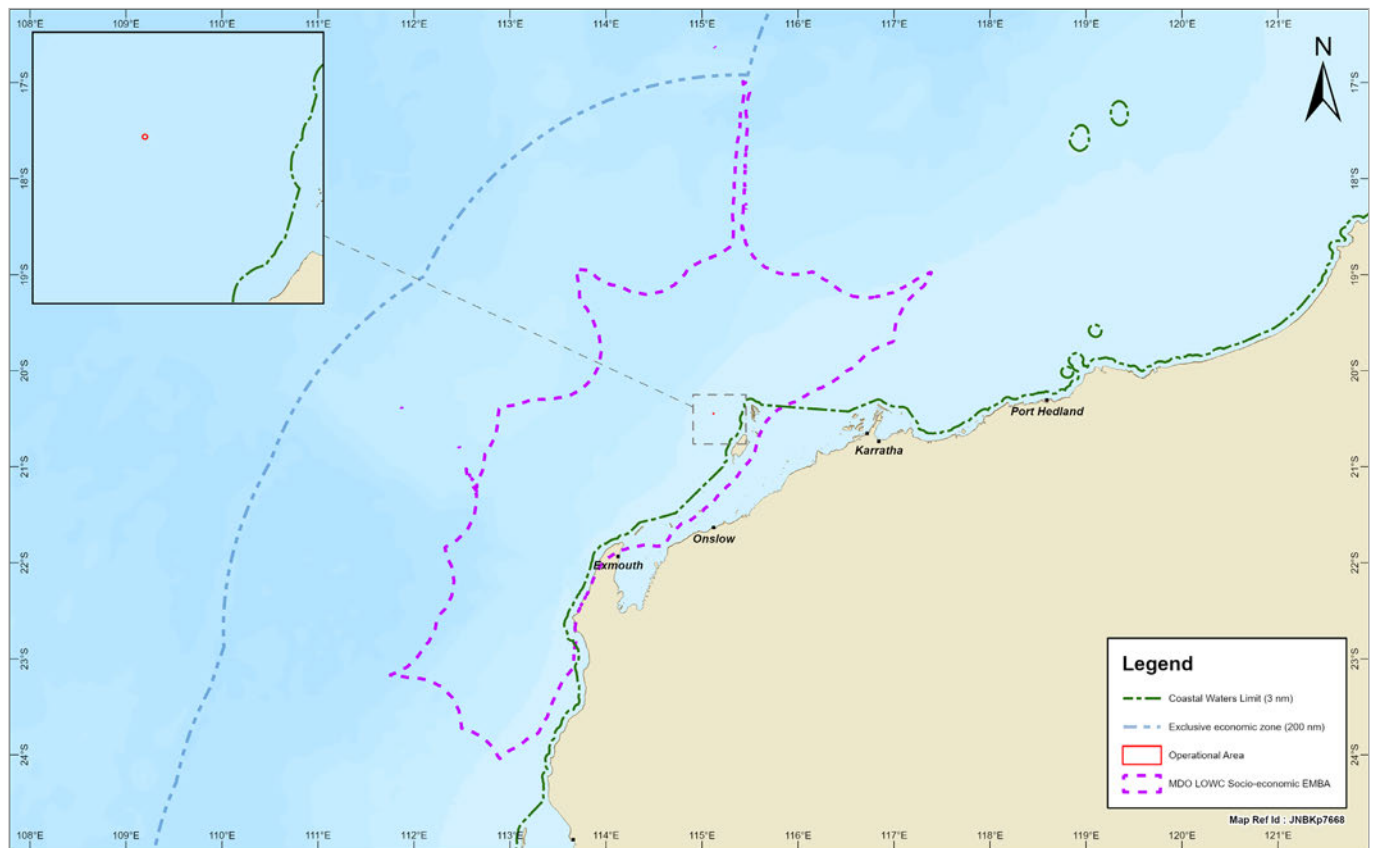


Figure 4. Activity OA and EMBA location.

Values and Sensitivities of the OA and EMBA

Santos has done an assessment to define environmental and socioeconomic values and sensitivities that may be affected by proposed activities. These values and sensitivities will be described in detail in the EP and are summarised below:

Environmental Values and Sensitivities

The operational area and EMBA are traversed by a range of listed and protected marine species that include seabirds, whales, turtles and sharks.

No protected areas, including World Heritage Areas (WHAs), Commonwealth Heritage Listed (CHLs) and National Heritage Listed (NHLs) intercept the OA. The nearest protected area in the EMBA is the Ningaloo Coast WHA/NHL located approximately 147 km from the OA.

No Australian Marine Parks (AMPs) intercept the OA. The nearest AMP to the operational area is the Montebello AMP located within the EMBA and about 13 km from the OA.

There are no Western Australian Marine Parks or Marine Management Areas located within the operational area. Barrow Island Marine Park is the closest WA state protected area located within the EMBA and about 36 km away from the operational area.

There are no Wetlands of International or National importance located within the OA or EMBA.

The OA and EMBA overlap the following Biologically Important Areas (BIAs):

- Whale shark feeding BIA
- Humpback whale migration BIA
- Flatback turtle reproduction BIA
- Wedge-tailed shearwater reproduction BIA

No Key Ecological Features (KEFs) intercept the OA but they do intercept the EMBA. The nearest KEF is the Ancient Coastline at 125 m depth contour located about 19 km from the OA.

Socio-Economic Values and Sensitivities

Five Commonwealth managed fisheries overlap the EMBA, of which three overlap the OA. None of these fisheries had any recent activity within the OA as per available government data.

Eleven Western Australian managed fisheries overlap the OA and EMBA, three of which have had activity within the OA as per available government data:

- Mackerel Managed Fishery (Area 2).
- Pilbara Fish Trawl Interim Managed Fishery.
- Pilbara Trap Limited Fishery.

The EMBA overlaps multiple shipping fairways servicing Pilbara ports, none of which intersect the OA. The OA does not intersect any port authority areas.

Defence activities may occur within the OA and EMBA due to overlap with airspace associated with the Learmonth RAAF Base.

Multiple local government areas intersect the EMBA, none of which intersect the OA. The Shire of Ashburton - responsible for Varanus Island - is located within the EMBA and is closest to the OA.

There are multiple petroleum permits, three greenhouse gas permits, and other oil and gas activities within the EMBA, none of which intersect the OA.

The OA and EMBA do not intersect any offshore energy infrastructure licences for proposed offshore renewables activities or any port authority boundaries.

Marine tourism activities are not known to occur in the OA but are known to occur in the EMBA. Similarly, recreational fishing is unlikely to occur within the OA but is known to occur within the EMBA.

The EMBA overlaps the Darwin-Jakarta Singapore subsea telecommunication cables. However this cable is located more than 100 km from the OA.

Cultural Values and Sensitivities

There are no registered Aboriginal Heritage Sites, Indigenous Land Use Agreements, Pending and Registered Native Title Claim Areas or Native Title Determined Areas within the OA. However, they are present within the wider EMBA. No Indigenous Protected Areas are known to exist within the OA.

Traditional Indigenous fishing in WA waters predominately occurs within inshore tidal waters and is not expected in the OA but may occur within the EMBA.

There are no registered cultural sites or recorded shipwrecks within or in the vicinity of the OA. There are shipwrecks within the EMBA. There are no recorded shipwrecks within the vicinity of the OA. The closest known site is the Trial shipwreck located approximately 31 km from the OA.

Consultation

Consultation is an important part of EP development as it allows Santos to receive feedback from relevant authorities, persons and organisations whose functions, interests or activities may be affected by proposed petroleum activities.

This feedback may help Santos to refine or change the management measures we are proposing to address activity impacts and risks.

Santos will assess the merits of any objection or claim about the adverse impact of the activities proposed provided through the consultation process, with any responses summarised and included in the EP submitted to the Regulator for assessment.

Under government environment regulations Santos is required to provide relevant persons with:

- **sufficient information** to allow them to make an informed assessment of the possible consequences of the activity on their functions, interests or activities, and
- a **reasonable period** for the consultation.

More information

More information about how community members can participate in environmental approvals for activities proposed in Commonwealth waters has been published in a [brochure](#) issued by NOPSEMA.

Contact us

Engaging with this consultation will help Santos better understand the values and sensitivities of the environment and inform evaluation of the potential impacts and risks associated with the activity, and how to manage them properly.

To engage with our consultation process or request for further information, please contact Santos on details provided below.

You may request that particular information you provide during consultation not be published. If you choose to do so, Santos will ensure that it is included in a separate report which is not published on NOPSEMA's website. Please let us know if you would like your personal/organisation details or, any information you provide not to be published. Please refer to below links on privacy.

[Santos' Privacy Statement](#)

[NOPSEMA Privacy Policy](#)

Consultation dates for proposed activities are published on Santos' Consultation Hub website.

Consultation on this EP closes **19 August 2026**.

Our contact and Hub details are

E: offshore.consultation@santos.com

T: 1800 267 600

W: santos.com/offshoreconsultation



Activity impacts/risks and management measures

In preparing the EP, Santos' objective is to carry out the proposed activities in a manner by which the environmental impacts and risks of the activity will be reduced to a level that is As Low As Reasonably Practicable (ALARP) and acceptable.

Aspects of the proposed activities will be risk-assessed within the EP on a case-by-case basis to ensure that environmental consequences are reduced to ALARP.

Table 3 and **Table 4** summarise the potential environmental impacts, risks and associated mitigation and/or control measures for the proposed Activity.

Table 3. Potential Impacts of Planned Activities

Aspect	Description of Impact	Proposed mitigation and/or control measures
Interaction with other marine users	Physical presence of MODU, vessels, support vessels, helicopter, ROV and survey activities (presence) could potentially inhibit or be an inconvenience to marine user groups.	• Petroleum Safety Zone (PSZ) (500 m) and Cautionary Zone (2.5 nm) established. • Support Vessel (fitted with Automatic Identification System and radar). • Maritime Notices. • MODU identification system. • No fishing from MODU or support vessels. • Seafarer certification. • Constant bridge watch on support vessels. • Santos relevant persons consultation strategy. • Lighting will be used as required for safe work conditions and navigational purposes. • Marine assurance standard.

Table 3. Potential Impacts for Planned Activities ... continued

Aspect	Description of Impact	Proposed mitigation and/or control measures
Seabed and Benthic Habitat Disturbance	Potential seabed disturbance in the operational area may occur from the following sources: • Jack-up MODU positioning (MODU spud placement and jetting to release legs during demobilisation). • ROV activities (placement of the ROV and tooling on the seabed) • survey (geotechnical works such as coring, grab samples and cone penetrator testing). Activities may disturb the seabed and benthic habitats through direct physical disturbance and associated disturbance to habitats and biota (from positioning infrastructure on the seabed), as well as through indirect impacts on benthic habitats and marine fauna (from increases in turbidity and sedimentation as a result of sediment disturbance).	• MODU move procedure. • Site surveys. • Recovery of all deployed equipment. • No planned anchoring of support vessels • Cultural Heritage Management – Unexpected finds protocol.
Light Emissions	During the activity, safety and navigational lighting on vessels will generate light emissions that may potentially affect marine fauna behaviour.	• Lighting will be used only as required for safe work conditions and navigational purposes.
Noise Emissions	Potential impacts from noise emission may occur during the activities. Noise emission in the operational area during the activity will be produced from the following sources: • MODU activities (e.g. drilling, machinery and engines, flaring (if required)). • Support vessel activities (e.g. vessel engines, thrusters and other machinery). • ROV activities. • Helicopter activities. • Survey equipment (e.g. MBES, SBES, SSS and SBP). Impacts from potential noise sources will only occur during the activities and will be concentrated around the above-mentioned sources.	• Santos Protected Marine Fauna Interaction and Sighting Procedure. • MODU planned maintenance system (PMS). • Vessel PMS to maintain vessel DP, engines and machinery. • Vessel bridge crew receive induction in marine fauna observations and marine fauna interaction requirements.

Table 3. Potential Impacts for Planned Activities ... continued

Aspect	Description of Impact	Proposed mitigation and/or control measures
Atmospheric Emissions	During the activity, localised and temporary impacts to air quality will occur.	• MODU planned maintenance system. • Fuel oil quality. • Vessel planned maintenance system. • International air pollution prevention (IAPP) certification. • Ozone-depleting substance handling procedures. • Well test procedures. • Marine assurance standard. • Waste incineration procedures. • Monitoring of support vessel(s) fuel consumption.
Operational discharges	Small volumes discharged may cause localised nutrient enrichment, organic and particulate loading, toxic impacts to marine fauna, thermal impacts and increased salinity.	• Waste (garbage) management procedure. • Deck cleaning product selection. • General chemical management procedures. • Marine assurance standard. • Chemical selection procedure. • Sewage treatment system. • Oily water treatment system.
Drilling Discharges	Planned drilling discharges, including drilling fluids, cuttings and cement, will result in short-term and localised changes to water quality. In the offshore environment, these materials will rapidly dilute and disperse, with heavier particles settling close to the discharge point. Impacts are expected to be confined to a small area and temporary, with natural recovery occurring once discharges cease.	• Chemical selection procedure. • Cuttings management system. • Quality control limits for barite. • Decision list for managing bulk powders remaining on the MODU at the end of the drilling campaign. • General (drilling) chemical management procedure • Inventory control procedure. • Well test procedures. • No disposal of bulk of barite at the end of the drilling campaign. • Cuttings re-injection (centrifuge underflow). • NAF (if used) on cuttings 7% or less prior to NAF cuttings discharge.

Table 4. Potential Risks of Unplanned Events

Aspect	Description of Impact	Proposed mitigation and/or control measures
Release of Solid Objects	Non-hazardous solid wastes (including paper, plastics and packaging) and hazardous solid wastes (such as batteries, fluorescent tubes, medical wastes, and aerosol cans) may be dropped unintentionally to the marine environment, potentially impacting on sensitive receptors. Localised as all non-buoyant waste material or dropped objects are expected to remain within the operational area. Buoyant waste material or dropped objects could potentially move beyond the operational area under wave action.	• Dropped object prevention procedures. • Waste (garbage) management procedures. • Hazardous chemical management procedures. • International Maritime Dangerous Goods Code. • Chemical selection procedure. • General chemical management procedures.
Introduction of Invasive Marine Species	Introduction of invasive marine species (IMS) may occur due to: • biofouling on MODU or project vessels and external/ internal (e.g., sea chests, seawater systems) niches. • biofouling on equipment that is routinely submerged in water (e.g., ROVs). • discharge of ballast water. • cross contamination between vessels.	• Implementation of the management controls in the Santos Invasive Marine Species Management Plan (IMSMP). • Current anti-foulant system. • Marine assurance standard.
Marine Fauna Interaction	There is the potential for vessels or equipment from the vessels involved in operational activities to interact with marine fauna, including potential strike or collision, potentially resulting in severe injury or mortality. Fauna strike may also occur from helicopter, UAV or drone collision during take-off and landing.	• Santos Protected Marine Fauna Interaction and Sighting Procedure). • Vessel bridge crew receive induction in marine fauna observations and marine fauna interaction requirements. • Constant bridge watch on support vessels.

Table 4. Potential Risks of Unplanned Events ... continued

Aspect	Description of Impact	Proposed mitigation and/or control measures
Non-hydrocarbon and Chemical Releases	An accidental release of chemicals and other non-hydrocarbon liquids into the marine environment has the potential to occur from: • MODU (including drilling fluids) and support vessel operations. • transferring, storing or using bulk products (e.g. wet/mixed cement). • mechanical failure of equipment. • handling and storage spills and leaks. • hose or hose connection failure or leak and • lifting – dropped objects damaging liquid vessels (containers).	• Dropped object prevention procedures. • Hazardous chemical management procedures. • General chemical management procedure. • International Maritime Dangerous Goods Code. • MODU and support vessel spill response plans. • Chemical selection procedure. • Vessel planned maintenance system. • MODU planned maintenance system. • Bulk solid transfer procedure. • Bulk liquid transfer procedure.
Hydrocarbon Spill-Loss of Well Control	In the event of a LOWC, condensate and associated gas may be released directly to the sea surface. The environmental consequences of a LOWC are highly variable, dependent on the characteristics of the hydrocarbon released, the dynamics of the receiving environment and the proximity of the release point to sensitive environmental receptors. (The following worst-case credible LOWC oil spill scenario was assessed: 78,387 bbl (~12,463 m³) surface release of condensate over 91 days (~861 bbl/day).	• Drilling and completions management process. • MODU and support vessel spill response plans. • Accepted OPEP. • Marine assurance standard. • MODU planned maintenance system (PMS). • Predrilling source control plan. • Well control bridging document. • Well control certification.

Table 4. Potential Risks of Unplanned Events ... continued

Aspect	Description of Impact	Proposed mitigation and/or control measures
Hydrocarbon Spill - Marine Diesel Oil	A release of MDO to the marine environment could occur from a collision between the activity vessels and an errant third-party vessel due to factors such as human error, poor navigation, vessel equipment failure or poor weather. For the purpose of the EP the impacts of a MDO spill of 325 m3 was assessed as this is the largest credible MDO spill associated with the activity.	• Bulk liquid transfer procedure. • MODU and support vessel spill response plans. • Maritime Notices. • Support vessel presence. • Accepted OPEP. • MODU identification system. • Lighting will be used as required for safe work conditions and navigational purposes. • Seafarer Certification. • Fuel oil quality. • Marine Assurance Standard. • PSZ (500 m) and Cautionary Zone (2.5 nm) established. • MODU planned maintenance system. • Vessel PMS to maintain vessel DP, engines and machinery. • Santos' Relevant Persons consultation Strategy.

Table 4. Potential Risks of Unplanned Events ... continued

Aspect	Description of Impact	Proposed mitigation and/or control measures
Minor Hydrocarbon Releases	Causes for accident hydrocarbon releases (other than diesel release from a vessel collision or bunkering, and LOWC) include: • hydraulic fluids, lubricant oils and (stored) waste oils. • ROV failure (including oil seal, hydraulic system hose and quick disconnect system failures). • loss of primary containment (drums, tanks, intermediate bulk containers [IBCs], etc) due to handling, storage and dropped objects (e.g., swinging load during lifting activities). • vessel or MODU pipework failure or rupture, hydraulic hose failure, inadequate bunding. • lifting – dropped objects damaging diesel infrastructure (hoses, pipes, tanks, etc). • loss of base oil storage containment on MODU. Minor accidental loss of other hydrocarbon-based liquids (e.g., used lubricating oils, cooking oil, and hydraulic oil) to the marine environment could also occur via tank pipework failure or rupture, hydraulic hose failure, inadequate bunding and/or storage, insufficient fastening or inadequate handling which could result in impacts to water quality and hence sensitive environmental receptors.	• Dropped object prevention procedure. • Hazardous chemical management procedures. • International Maritime Dangerous Goods Code. • MODU and support vessel spill response plans. • Remotely operated vehicle (ROV) inspection and maintenance procedures. • MODU Planned Maintenance System. • Vessel Planned Maintenance System to maintain vessel DP, engines and machinery. • Bulk liquid transfer procedure. • Well test procedures. • Chemical selection procedure.
Spill response operations	In the event of a spill, response strategies will be implemented to reduce environmental impacts to ALARP.	• Oil Pollution Emergency Plan (OPEP) Spill response activities selected on basis of a Net Environmental Benefit Analysis (NEBA).