Information for relevant authorities and organisations

Santos

Varanus Island State Waters Plug & Abandonment Environment Plan

Activity Overview

Santos is preparing for the next phase of its ongoing decommissioning of the assets no longer required to support production at the Varanus Island (VI) Hub on the North West Shelf, Western Australia (WA).

The next phase will comprise the permanent plug and abandonment (P&A) of multiple wells located in Western Australia State waters around VI.

The activity involves the use of a jack-up Mobile Offshore Drilling Unit (MODU) positioned above the offshore platforms and associated platform wells for the:

- P&A of ~24 platform wells at six platforms (Agincourt, Double Island, Victoria, Wonnich, Linda and Harriet Bravo).
- Removal of production trees, completion tubing, casing, conductors and wellheads where possible at the above-mentioned platforms, as well as the conductors at Harriet Charlie platform, which has four wells that have already been plugged.

All wells are located in WA State waters around VI with proposed activities to be managed under a WA State Environment Plan (EP). **Figure 1** provides a description of activities and shows the location of proposed activities, while **Table 2** provides more detail about the location and number of wells at each platform.

Consultation and Feedback

Providing Feedback

This fact sheet has been prepared to support consultation for the Varanus Island State Waters Plug & Abandonment EP. The consultation period for this EP will close on **7th November 2025**. More details on consultation and providing feedback can be found on the back page of this fact sheet.

Government Requirements

Under WA Government regulations, Santos is required to consult with relevant authorities and other relevant interested persons and organisations considering the activity type, location, environmental impacts and risks (planned activities and unplanned events) and relevant stakeholder interests or concerns.

Feedback received during consultation will be considered in the development of the EP, which will be submitted to the Department of Mines, Petroleum and Exploration (DMPE) (formerly Department of Energy, Mines, Industry Regulation and Safety – DEMIRS) for assessment.

All petroleum activities in WA land and waters must have an EP accepted by DMPE before any activities under the EP can take place.

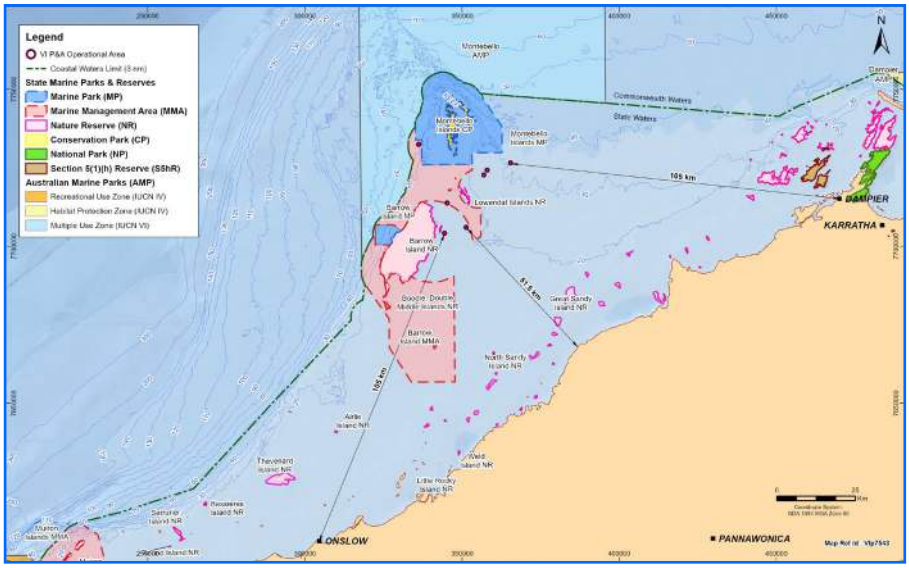

Figure 1. *VI State Waters P&A location and Operational Area.*

Table 1. Activity Summary

Activity details	
Indicative timing	The proposed activities are planned to commence in approximately Q3 2027, subject to obtaining all regulatory and business approvals. Activities may not be continuous, and Activity vessels may depart and then re-enter the operational area intermittently.
Duration	The expected duration at each platform is between approximately 15 and 90 days. The commencement and completion of individual P&A activities across the five-year period will vary and be subject to rig and vessel availability, weather conditions, and technical/equipment requirements, amongst others.
Water depth	Water depth across the Operational Area (OA) is approximately 5 - 35 m.
Proposed activities	• Pre-MODU preparation activities such as inspection and operability tests of the platform and well surface equipment (e.g. valves and wellheads), seabed surveys (using side scan sonar (SSS) and a remotely operated vehicle (ROV), well intervention activities. • MODU soft-pinning in the OA, and positioning above the platforms. • Placement of permanent barriers in the wells. • Cutting and removal of production trees, completion tubing, casing, conductors and wellheads where possible. • During P&A, materials may be placed within the wellbores during the activities, such as but not limited to cement, drilling mud, gels and other non-porous materials such as clays (e.g. bentonite) and other sealants (e.g. bismuth, resin) or lost circulation materials (e.g. fibrous materials). • Post MODU related vessel-based activities, such as surveys and monitoring (by either ROV or topsides inspection).
Vessels, aircraft and other equipment	• The P&A process will be carried out using a jack-up MODU (see **Figure 3**) • The MODU will be supported by up to four support vessels including: • Anchor handling tug supply vessels (AHTS) • Platform support vessel (PSV) • Tow support vessel • A remotely operated vehicle (ROV) will be used. • Helicopters may be used for crew changes, equipment supply, surveillance and emergency response.
Operational Area and exclusion zone	The OA is the area within which planned activities will occur. It consists of seven platforms and a ~500 m radius zone around each platform. Each platform has an existing 500 m radius exclusion zone. Entry into this area is restricted to authorised vessels for safety reasons. Planned activities outside the OA, such as mobilisation of vessels and the MODU, are not a petroleum activity and not covered by this EP.
Petroleum production licences	The wells and platforms are located in offshore production permits TL/1, TL/6, TL/8 and TL/9.

Table 2. Operational Area Information

Table 2 provides locations, water depth and number of wells of each of the platforms, with **Figure 2** providing a visual overview of these locations.

Platform	Licence Area	Platform Coordinates (DMS)	~Water Depth (m)	Wells
Harriet Bravo	TL1	Lat: -20 34 30.798 Long: 115 38 15.26	26.6	Bambra 7H, Bambra 8H, Bambra East 3, Harriet B1, Harriet B5H
Harriet Charlie	TL1	Lat: -20 35 20.403 Long: 115 37 37.764	24.6	Harriet C1, Harriet C2, Harriet C3, Harriet C4
Linda	TL1	Lat: -20 33 18.584 Long: 115 42 31.856	31.4	Lee 3, Lee 4, Linda 3, Rose 4, Doric 2, Linda North 1
Agincourt	TL/6	Lat: -20 40 7.703 Long: 115 30 51.56	8.1	Jane 1, Agincourt 4H, Artreus 1, Zephyrus 1
Victoria	TL/6	Lat: -20 44 22.236 Long: 115 34 18.184	5.3	Albert 1, Little Sandy-1, Mohave-1, Pedirka-1, Victoria-1, West Cycad-2 (in TL9)
Wonnich	TL/8	Lat: -20 29 58.485 Long: 115 25 44.642	30	Wonnich Deep-1, Wonnich-1
Double Island	TL/9	Lat: -20 45 21.188 Long: 115 30 19.864	7.5	Double Island-1

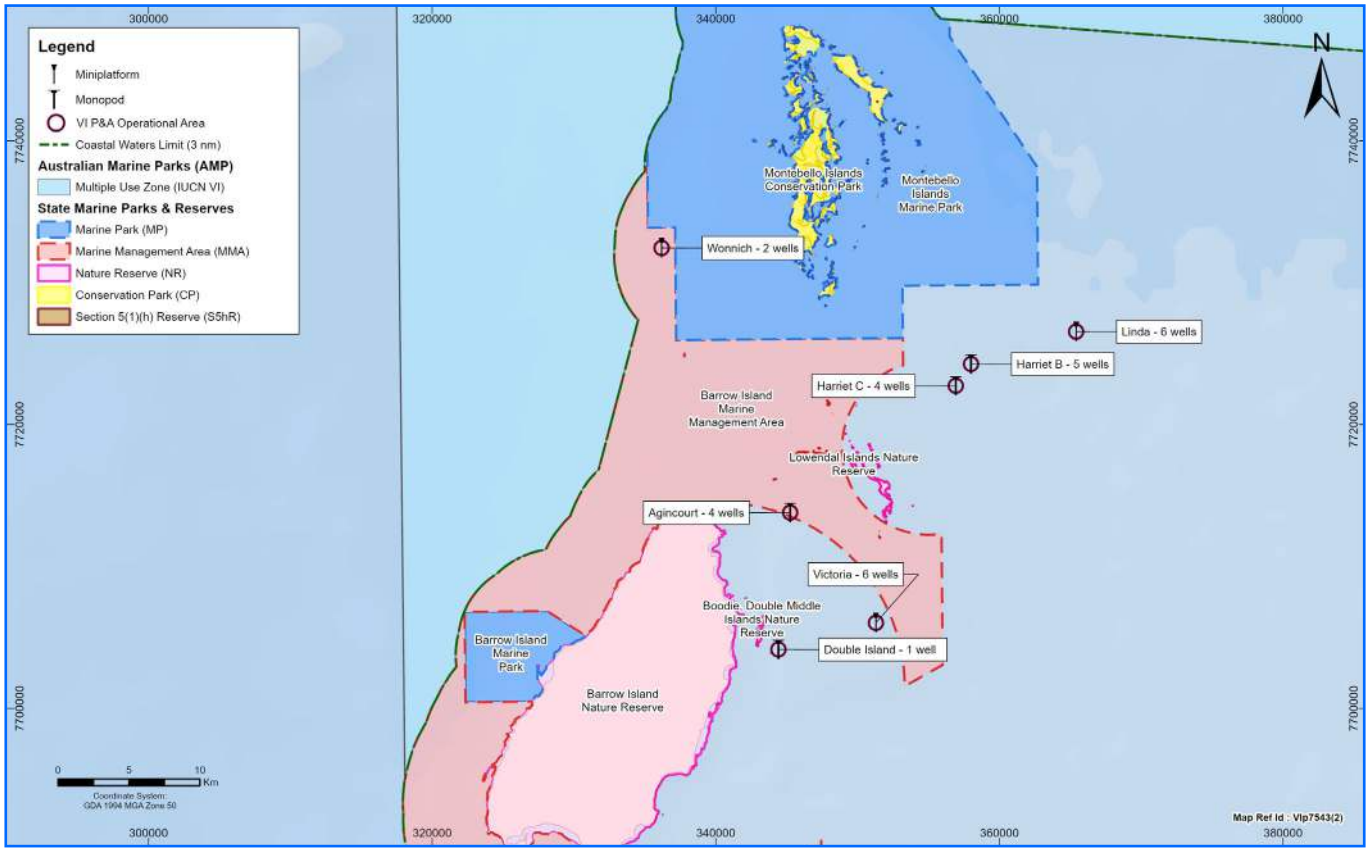

Figure 2. *Operational Area.*

Figure 3. *Example of jack-up MODU undertaking activities at a platform.*

Activity Purpose

As part of the progressive decommissioning of VI Hub assets no longer required for production, Santos is proposing to permanently P&A platform wells. This activity is being undertaken as a precursor to the safe removal of the platforms, which is subject to separate regulatory approvals and associated consultation.

The P&A activity scope is for the decommissioning of all wells by placing permanent barrier plugs in the wells. Additionally, Santos is planning to remove all surface equipment associated with the wells (such as production trees, completion tubing, casing, conductors and wellheads) where possible. Where removal is not possible during this campaign, it will be addressed during separate decommissioning scopes.

There are two known gas seepages, respectively at the Harriet B and Victoria platforms. These seepages are subject to a gas monitoring program as part of a separate EP. Consultation has been conducted and is now closed for that EP.

Defining the Environment that May Be Affected

Santos has undertaken an assessment to define environmental and socioeconomic values and sensitivities that may be affected by proposed activities. To do this, Santos has considered the areas where activity impacts and risks may occur.

Activity impacts typically occur within the OA, the location of which is provided in **Figure 1**. The widest geographic extent of activity risk is defined by potential ecological and socioeconomic impacts resulting from the identified credible scenarios worst case spill events.

For this EP, the following scenarios were considered as being credible worst case spill events:

- Vessel collision resulting in hydrocarbon release from a vessel (marine diesel oil - MDO)
- Loss of well containment during P&A activities

As part of spill response planning, Santos considered exposure values for the four oil phases of a spill, these being shoreline accumulation, floating oil, and dissolved and entrained oil in the water column. These thresholds, combined with advanced and sophisticated computer modelling, enable Santos to predict the areas that may be affected in the unlikely event of a spill.

The computer modelling overlays a great number (usually hundreds) of individual computer simulations, accounting for the range of metocean conditions experienced for the modelled events at their locations, to combine these hypothetical oil spill events into a single map. Each simulation run starts from the same location for each scenario with each run subject to a different set of wind, weather and ocean current conditions derived from historical data. This modelling helps Santos to develop suitable response strategies tailored to the range of spill scenarios.

These strategies are described in the Oil Spill Contingency Plan (OSCP) for this EP, which will be reviewed and assessed by DMPE as part of the environmental approval process.

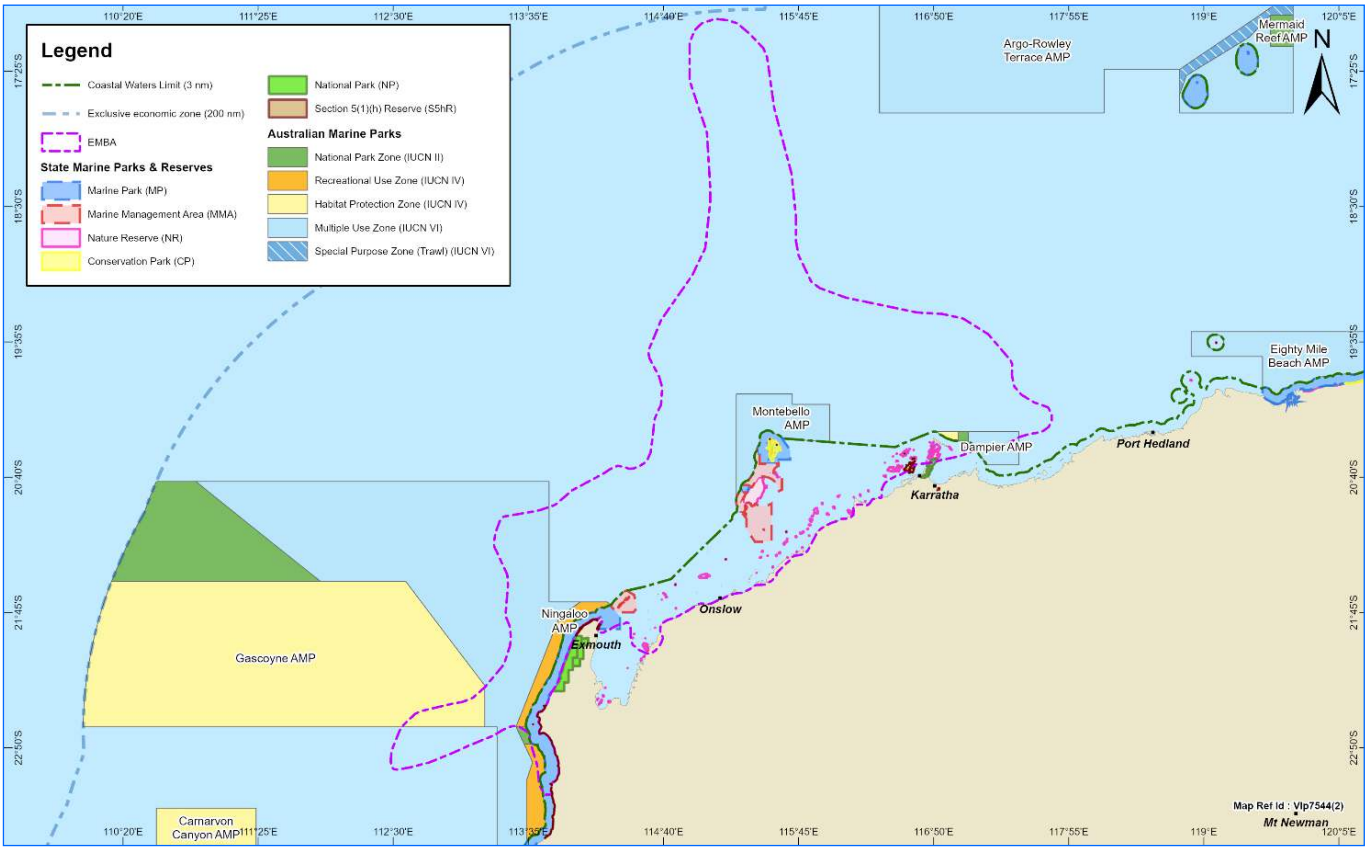

Figure 4. *Environment that May Be Affected (EMBA) for the VI plug and abandonment activities.*

Santos has undertaken a review of publicly available information to identify environmental, social, economic and cultural values and sensitivities that may be affected by activity impacts and risks. The outcomes of this review are summarised in Tables 3 - 6. Distances referenced in the tables below reflect the distance to the value or sensitivity from the nearest boundary of the OA.

Table 3. Environmental values and sensitivities

Value / Sensitivity	Description	Spatial overlap with OA	Spatial overlap with EMBA	Public Information Review
Biologically Important Areas	Biologically important areas (BIAs) are spatially defined areas where aggregations of individuals of a species are known to display biologically important behaviour such as reproduction, foraging, resting or migration.	Yes	Yes	The OA overlaps BIAs for protected species including flatback turtles, green turtles, loggerhead turtles, hawksbill turtles, short-tailed shearwaters, roseate terns, fairy terns, lesser crested terns and humpback whales.
Key Ecological Features	Key Ecological Features (KEFs) are elements of the Commonwealth marine environment that are considered to be of regional importance for either a region's biodiversity or its ecosystem function and integrity.	No	Yes	The OA does not overlap any KEFs. The nearest platform to a KEF is Wonnich, which is located approximately 47 km from the Ancient Coastline at 125 m depth contour KEF. There are other KEFs present within the EMBA.

Table 3. Environmental values and sensitivities ... continued

Value / Sensitivity	Description	Spatial overlap with OA	Spatial overlap with EMBA	Public Information Review
Listed and Protected Marine Fauna	The Australian Government uses the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) to protect and manage threatened, migratory and marine species.	Yes	Yes	The OA and EMBA are traversed by a range of listed and protected marine species that include seabirds, whales, turtles, fish and sharks.
	The Western Australian Government uses the *Biodiversity Conservation Act 1999* (BC Act) to protect and manage listed priority species.	Yes	Yes	Numerous *WA Biodiversity Conservation Act 2016* and DBCA Priority Listed species may occur within the Operational Area. Examples (as listed in the DBCA Lists of threatened and priority fauna) include dwarf sawfish, great white shark, dugong, flatback turtle, eastern curlew, to name a few. Potential risks and impacts to these species are considered throughout Sections 6 and 7 of the EP.

Table 3. Environmental values and sensitivities ... continued

Value / Sensitivity	Description	Spatial overlap with OA	Spatial overlap with EMBA	Public Information Review
Protected Ares	World Heritage Areas (WHA)	No	Yes	No WHAs intercept the OAs. The closest platform to a WHA is Double Island, which is approximately 145 km from the Ningaloo Coast WHA.
	National Heritage Areas (NHA)	No	Yes	No NHAs intercept the OA. The closest platform to a NHA is Linda, which is approximately 78 km from the Dampier Archipelago NHA.
	Australian Marine Parks (AMP)	No	Yes	• No AMPs intercept the OA. • The closest platform to an AMP is Wonnich, which is approximately 3 km from the Montebello Australian Marine Park.
	Western Australian Marine Parks, Marine Management Areas and Nature Reserves	Yes	Yes	No Western Australian Marine Parks intercept the OA. The closest platform to a Western Australian Marine Park is Wonnich, which is approximately 0.5 km from the Montebello Islands Marine Park. The Wonnich and Agincourt platforms are within the Barrow Island Marine Management Area. There are numerous Western Australian Marine Parks, Marine Management Areas and Nature Reserves in the EMBA.

Table 4. Social values and sensitivities

Value / Sensitivity	Description	Spatial overlap with OA	Spatial overlap with EMBA	Public Information Review
Towns/ Communities	Local Government Area	No	Yes	No Local Government Areas intercept the OA. The nearest towns are Onslow, which is in the Shire of Ashburton, and Dampier, which is in the City of Karratha.
Indigenous, subsistence or customary fishing	Indigenous, subsistence or customary fishing areas	No	Yes	Traditional Indigenous fishing in WA waters predominately occurs within inshore tidal waters and is not expected within the OA. Traditional Indigenous fishing in WA waters may occur in proximity to shorelines within the EMBA.
Recreational fishing	Recreational fishing areas	No	Yes	Recreational fishing is not permitted within the 500 m radius exclusion zone for each platform but is known to occur in the EMBA.

Table 5. Economic values and sensitivities

Feature	Description	Spatial overlap with OA	Spatial overlap with EMBA	Public Information Review
Commercial fishing	Commercial fishing (Cth)	Yes	Yes	Five Commonwealth managed fisheries intersect the EMBA of which three intersect the OA, these being the Southern Blue Tuna Fishery, the Western Skipjack Tuna Fishery and the Western Tuna and Billfish Fishery. However, none have had any recent activity within the OA, as per most recent available data.
	Commercial fishing (WA)	Yes	Yes	A number of State managed fisheries intersect the OA and the EMBA. Santos is consulting the following fisheries on an ongoing basis for all proposed State waters operations and decommissioning activities given historic fishing activity within the VI Hub area: • Hermit Crab Fishery • Mackerel Managed Fishery • Marine Aquarium Fish Managed Fishery • Nickol Bay Prawn Managed Fishery • Onslow Prawn Managed Fishery • Specimen Shell Managed Fishery • Western Australian Sea Cucumber Fishery
Defence	Defence activity areas	Yes	Yes	The OA intersects the NWXA Defence restricted training area. This area is a declared military flying training area associated with Learmonth RAAF base. The EMBA also intersects defence training and practice areas associated with the Learmonth RAAF Base.

Table 5. Economic values and sensitivities ... continued

Value / Sensitivity	Description	Spatial overlap with OA	Spatial overlap with EMBA	Public Information Review
Energy Industry	Offshore carbon capture and storage activities Oil and gas activities	No	Yes	No other operator infrastructure or permits/licences intersect the OA. Multiple permits/licences occur in the EMBA.
Shipping	AMSA shipping fairways and recorded vessel movements and shipping routes	No	Yes	No shipping fairways intersect the OA. Several shipping fairways occur throughout the EMBA.
	Port areas	Yes	Yes	The OA intersects the Port of Varanus Island and Port of Barrow Island. The EMBA overlaps the Port of Varanus Island, Port of Ashburton, the Port of Cape Preston West and the Port of Dampier.
Telecomm. infrastructure	Subsea telecommunications cables	No	No	No telecommunications cables are in the OA or the EMBA.
Tourism	Marine and coastal tourism	No	Yes	Marine tourism such as boating, diving and fishing is not permitted within the 500 m radius exclusion zone for each platform but is known to occur in the EMBA, including coastal areas and the Montebello Islands. These activities are concentrated in the vicinity of the population centres such as Exmouth, Dampier and Onslow.

Table 6. Cultural values and sensitivities

Feature	Description	Spatial overlap with OA	Spatial overlap with EMBA	Public Information Review
Aboriginal Heritage	Registered Aboriginal Heritage sites protected under the: *Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth)*	No	Yes	There are no registered sites within the OA. The Dampier Archipelago including the Burrup Peninsula is listed on the National Heritage and is within the EMBA. The Dampier Archipelago islands are approximately 80km from the OA.
	Registered Aboriginal Heritage sites protected under the: *Aboriginal Heritage Act 1972 (WA)* and *Native Title Act 1993 (Cth)*	No	Yes	There are no registered sites within the OA. 274 registered Aboriginal cultural heritage sites are present in the EMBA (ACHIS, 2025).
Cultural Heritage	Registered cultural sites under the: *Underwater Cultural Heritage Act 2018 (Cth)*	No	No	A search of the Australasian Underwater Cultural Heritage Database for in-situ artifacts, underwater sites, terrestrial sites, combined underwater/terrestrial sites, surface exposed underwater heritage sites and intertidal sites did not identify any sites within the OA or EMBA.
	Registered cultural sites under the: *Maritime Archaeology Act 1973 (WA)*	No	Yes	There are no shipwrecks within the OA. The nearest historic shipwreck (Parks Lugger) is located 10 km from the Wonnich platform.

Environmental impact and risk assessment considers planned activities and unplanned events:

- **Planned activities** come with unavoidable and known impacts that occur as part of the Activity, such as noise and atmospheric emissions.
- **Unplanned events** are not expected to occur, such as accidental discharges or spills. These events are assessed to ensure that, in the unlikely of an occurrence, the risks are managed to as low as reasonably practicable (through contingency measures).

The tables below summarise the potential environmental impacts, risks and associated management measures typically used to reduce environmental risks to As Low as Reasonably Practicable (ALARP) for the proposed Activity.

Table 7. Proposed activity potential impacts

Proposed activity potential impacts	
Description of impacts	**Compliance with the following key management measures**
Noise emissions	
Noise will be generated by: • Vessels • MODU operations • Dynamic positioning (DP) systems • Flaring during well bleed off activities • Activity support and survey vessels • Helicopters Elevated underwater noise has the potential to change marine fauna behaviour such as attraction, avoidance and disorientation. The sensitivity of fauna to elevated noise levels varies depending on individual response. Noise from proposed activities are not expected to impact socio-economic receptors as the impacts to fish from underwater noise are limited to localised behavioural changes.	• Santos' Procedure for interacting with marine fauna, which is designed to align with the EPBC Regulations 2000. This procedure limits marine fauna approach distances and speed, allowing marine fauna to be avoided or to move away. • Helicopters within the designated OA will adhere to the requirements of the EPBC Regulations Part 8.1 – Interacting with cetaceans (except in emergency conditions or when manoeuvring is not possible). Equipment maintenance will minimise noise generated from vessels and MODU.

Table 7. Proposed activity potential impacts ... continued

Description of impacts	Compliance with the following key management measures
Light emissions	

Lighting will be used as required for safe work conditions and navigational purposes
Light emissions will be generated by:
• Vessel operations
• MODU operations including flaring during well bleed-off (where required)
Light may impact threatened, migratory or local fauna (e.g. marine mammals, marine turtles, sharks, rays, other fish and seabirds) and socio-economic receptors (cultural features). For example, fish may be attracted to artificial light, leading to a short-term localised increase in fauna activity.
The vessels, including the MODU are expected to produce similar light levels to other marine vessels in the region.
	• Lighting is to be limited to that required for safe operations and navigation and will comply with the following maritime regulations:
	  • International Regulations for Preventing Collisions at Sea (COLREGS) / Marine Orders 30: Prevention of Collisions, and
	  • Marine Orders 21: Safety of Navigation and Emergency Procedures.
	• Where practicable, manage the timing of activities to avoid peak BIA nesting seasons where the OA is within 3 nm to these areas.

Physical presence and interaction with other marine users	
Interaction with other marine users may occur as a result of but not limited to: • MODU and ROV presence in OA • Support vessels and helicopters presence in OA The presence of the activity could potentially temporarily inhibit or impact other marine user groups including commercial and recreational fishing, tourism, commercial shipping and other oil and gas activities.	• All project vessels operating within the OA will adhere to navigation safety requirements. • Notices to Mariners. • The MODU and activity vessels will maintain navigation aids. • A 500 m exclusion zone will be maintained around the platforms. • Pre and post activity notifications.

Table 7. Proposed activity potential impacts ... continued

Description of impacts	Compliance with the following key management measures
Seabed disturbance	
Seabed disturbance will occur by: • MODU soft-pinning in the OA and positioning. • Extension of jack-up rig legs (cans) to the seabed (spudding) • Placement of objects on the seabed such as ROV baskets Seabed disturbance could result in localised removal of epifauna or decreases in the abundance and diversity of local infauna.	• MODU move procedure. • All equipment is to be recovered at the end of activity. • Santos continues to consider risks and impacts to cultural values and additional control measures may be adopted following site surveys.
Operational discharges	
The types of MODU and vessel discharges are typical of most offshore commercial vessels and include: • Bilge water • Cooling water • Deck drainage • Desalination brine • Food waste • Sewage and greywater • Ballast water Discharges from the MODU and support vessels may create a localised and temporary reduction in marine water quality.	• Santos' chemical selection process. • All wastewater discharges will comply with relevant MARPOL 73/78, Navigation Act 2012, Protection of the Sea (Prevention of Pollution) Act 1983 and subsequent Marine Order requirements (as appropriate for vessel classification). • Marine Order 91 (Marine Pollution Prevention – Oil), which implements Annex I of MARPOL 73/78. • Marine Order 95 (Marine Pollution Prevention – Garbage), which implements Annex V of MARPOL 73/78. • Marine Order 96 (Marine Pollution Prevention – Sewage), which implements Annex IV of MARPOL 73/78.
Drilling discharges – P&A	
The types of routine discharges from P&A activities include: • Drilling muds; drilling fluids and cuttings; cement and completion fluids (such as well clean up and suspension fluids); packer fluid; chemicals such as tracer dyes; inhibited seawater; de-calcification fluid; brine / seawater (inhibited); milling fluids; cement; barite; bentonite. P&A discharges will be intermittent during the activity with volumes discharged dependent on a range of variables. Discharges to the marine environment will result in a localised (around the discharge location) and temporary (minutes to hours) reduction in water quality.	• Chemical selection procedures. • Cuttings management system. • Well test procedures to reduce oil in water content of drilling fluids. • Well test or well bleed-off procedures. • Inventory control procedure.

Table 7. Proposed activity potential impacts ... continued

Description of impacts	Compliance with the following key management measures
Atmospheric emissions	
Atmospheric emissions will occur from: • Fuel combustion to operate the MODU, vessels and helicopters • Operation of vessel incinerators • Cold venting during wireline pressure control equipment bleed-off and well annuli • When transferring dry bulk products, tank venting is necessary to prevent tank overpressure. The vent air will contain minor quantities of product particles, which will suspend in the air or settle on the sea surface. • Flaring and well bleed off to remove hydrocarbons during well suspension / abandonment activities. Atmospheric emission from the above activities may result in a temporary, localised reduction of air quality in the environment immediately surrounding the discharge point during the activity. Non-GHG emissions (NOx and SOx) can lead to a reduction in local air quality. Other atmospheric emissions may include greenhouse gases (GHG) such as CO_2, N_2O and CH_4.	• The MODU and support vessels will comply with MARPOL Annex VI (Prevention of Air Pollution from Ships), the *Navigation Act 2012*, the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* and subsequent Marine Orders, which require vessels to have a valid International Air Pollution Prevention Certificate (for vessels more than 400 tonnage), and to use low-sulphur fuel. • Ozone-depleting substances onboard vessels and the facilities will comply with relevant MARPOL 73/78 (Annex VI - air pollution), *Navigation Act 2012*, *Protection of the Sea (Prevention of Pollution) Act 1983* and subsequent Marine Order requirements (as appropriate for vessel classification). • Maintenance systems. • Emissions, energy consumption and energy production data reporting. • Bulk solid transfer procedure.

Table 8. Potential activity risks

Potential activity risks	
Description of risks	**Compliance with the following key management measures**
Unplanned introduction of invasive marine species (IMS)	
Introduction of invasive marine species (IMS) may occur due to: • Biofouling on vessels and external/internal niches (such as sea chests, seawater systems) • Biofouling on equipment that is routinely submerged in water (such as ROVs) • Discharge of high-risk ballast water If successfully established, IMS can: • Change in ecosystem function / composition • Disruptions to other marine users. • Impact to marine primary producers - reduced access to fishing grounds.	• Ballast water exchange operations will comply with the International Convention for the Control and Management of Ships' Ballast Water and Sediments 2004 (as appropriate to vessel class), Australian Ballast Water Management Requirements (DAWE 2020), *Protection of the Sea (Harmful Anti-fouling Systems) Act 2006*, and *Biosecurity Act 2015*. • Biofouling management for vessels will be in accordance with the IMO Guidelines. • Compliance with the International Convention on the Control of Harmful Anti-fouling Systems on Ships 2001. • Valid International Anti-Fouling Systems Certificate.
Unplanned interaction with marine fauna	
Potential interaction with marine fauna may occur as a result of: • Vessel operations • Helicopter operations Marine fauna in surface waters that are most at risk from vessel collision include marine mammals, marine turtles and whale sharks. Potential strike or collision may result in severe injury or mortality. The MODU is not self-propelled and will be stationary once on location and MODU related marine fauna interactions are not anticipated.	• Santos' Procedure for interacting with marine fauna, which is designed to align with the EPBC Regulations 2000. This procedure limits marine fauna approach distances and speed, allowing marine fauna to be avoided or to move away. • Helicopters within the designated OA will adhere to the requirements of the EPBC Regulations Part 8.1 – Interacting with cetaceans (except in emergency conditions or when manoeuvring is not possible).

Table 8. Potential activity risks ... continued

Description of impacts	Compliance with the following key management measures
Unplanned release of solid objects	
Objects that could be accidentally released to the marine environment from vessels or during activities include: • Non-hazardous solid wastes • Hazardous solid wastes • Equipment and materials • Dropped objects from the MODU or support vessels Impacts can include: • Smothering benthic environments • Harm to marine fauna through entanglement	• Bulk solid transfer procedure • Dropped object procedures • Waste management procedures • Appropriate storage of wastes • Crane and lifting procedures
Unplanned hazardous liquid release	
Unplanned hazardous liquid release (non-hydrocarbon and chemical) may occur during: • Transferring, storing or using bulk products (e.g., mixed cement) • Mechanical failure of equipment, such as a tank or pipework failure • Handling and storage spill and leaks due to insufficient fastening • Hose or hose connection failure or leak • Lifting – dropped objects damaging liquid vessels (containers) inadequate bunding Non-hydrocarbon liquids include miscellaneous chemicals and waste streams (brine, mixed cement, cleaning and cooling agents, stored or spent chemicals and leftover paint materials) used or stored on board activity vessels, including the MODU. • Impacts to water quality are expected to be short-term and localised due to the selection of environmentally acceptable chemicals, the relatively small size of an unplanned spill and the rapid dispersal. • A decrease in water quality is likely to be restricted to the immediate area surrounding the spill location and contained within the OA.	• Procedures to manage the selection, storage, handling and clean-up of chemicals and other non-hydrocarbon liquids. • Spill kits will be available on-board vessels and personnel will receive an induction/training to inform them of deck spill response requirements. • Chemical storage areas will typically be set up in cabinets or bunded storage areas • Vessel lifting standards and cargo transfer procedures • Bulk liquid transfer procedure.

Table 8. Potential activity risks ... continued

Description of impacts	Compliance with the following key management measures
Unplanned minor hydrocarbon release	
Unplanned minor hydrocarbon release may occur due to: • Loss of primary containment • Pipework failure or rupture, hydraulic hose failure • Lifting – dropped objects damaging diesel infrastructure • Human error during tank filling or storage container transfers • ROV failure Minor releases refer to relatively small volumes of hydrocarbons from storage containers, transfer equipment and pipework on the MODU or support vessels that enters the marine environment. Most of these types of release occur within bunded deck areas, and are less than $1m^3$, however it remains possible for such spills to enter the marine environment. A localised decrease in water quality may occur, however due to the relatively small volumes impacts are expected to be short term as the hydrocarbon would rapidly dilute and dissolve into the ocean.	• Dropped object prevention procedures. • Hazardous chemical management procedures. • General chemical management procedures. • Dangerous goods managed in accordance with International Maritime Dangerous Goods Code • Spill response plans • ROV inspection and maintenance procedures • Documented maintenance program • Bulk liquid transfer procedure to provide detail about chemical bunkering processes being undertaken

Table 8. Potential activity risks ... continued

Description of impacts	Compliance with the following key management measures
Unplanned marine diesel oil (MDO) release	

An unplanned 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. Such events could have sufficient impact to result in the rupture of a diesel tank leading to a loss of integrity and releasing 325 m3 in the environment.
• Vessel - MODU refuelling. Fuel released prior to the cessation of pumping as well as fuel remaining in the transfer line may escape to the environment releasing 37.5m3 of MDO.
Potential impacts that may occur as a result of hydrocarbon exposure could include:
• Sub-lethal stress and, in some cases, total or partial mortality of sensitive benthic organisms (e.g., corals) and the early life stages of resident fish and invertebrate species.
• A reduction in water quality has the potential to impact marine fauna. Some species of marine fauna may have cultural significance.
• Seabirds that encounter sea surface hydrocarbons may experience secondary effects through ingestion of condensate after eating exposed fish or preening.
• Potential for temporary disruption to fishing activities e.g. disruption/ displacement of Fishing activities caused by the physical presence of the slick, loss of catch, decline in commercially important fish stocks and/or suspension of fishing operations
	• Accepted OSCP
	• All project vessels operating within the OA will adhere to the navigation safety requirements including:
	  • International Regulations for Preventing Collisions at Sea 1972,
	  • Chapter 5 of International Convention for the Safety of Life at Sea 1974,
	  • International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978, and the Navigation Act 2012 and any subsequent Marine Orders that specify standards for crew training and competency, navigation, communication, and safety measures.
	  • Notices to Mariners.
	• A 500 m exclusion zone will be established and maintained around the platforms
	• The MODU and vessels will maintain navigation aids.

Table 8. Potential activity risks ... continued

Description of impacts	Compliance with the following key management measures
Unplanned hydrocarbon release from loss of well control	
Based on industry statistics and Santos' risk assessments, the likelihood of a loss of well control event leading to a spill of this size is considered 'unlikely' – requires exceptional circumstances and is unlikely even in the long term. The combination of the standard prevention control measures (i.e., safe drilling methods), and the spill response strategies, as presented in the OSCP, together reduce the hydrocarbon spill risk to a low level Potential impacts that may occur as a result of hydrocarbon exposure could include: • Sub-lethal stress and, in some cases, total or partial mortality of sensitive benthic organisms (e.g., corals) and the early life stages of resident fish and invertebrate species. • A reduction in water quality has the potential to impact marine fauna. Some species of marine fauna may have cultural significance. • Seabirds that encounter sea surface hydrocarbons may experience secondary effects through ingestion of condensate after eating exposed fish or preening. • Potential for temporary disruption to fishing activities.	• Accepted Well Management Plan • Accepted MODU Safety Case • Accepted OSCP • MODU Preventative Maintenance System • MODU and support vessels spill response plans

Consultation

Consultation provides Santos with an opportunity to receive feedback from authorities, persons and organisations whose interests may be affected by proposed petroleum activities. This feedback helps us to refine or change the management measures we are planning in order to address potential activity impacts and risks.

Santos' objective for proposed activities is to reduce environmental impacts and risks to a level that is as low as reasonably practicable (ALARP) and acceptable over the life of the activity.

Consultation also helps us to identify values and sensitivities where information is not publicly available, such as spiritual and cultural connection to land and sea country, as well as first-hand feedback on commercial and recreational fishing, tourism and local community activities and interests.

DMPE has developed a Guideline to assist petroleum, geothermal and pipeline operators to develop EPs in accordance with WA legislative requirements. The **Guideline** is also a useful resource for authorities or other relevant interested persons or organisations to understand the Department's expectations with respect to consultation in the preparation of an EP.

Providing feedback

You might be a relevant authority or other relevant interested persons or organisations if, for example, you have spiritual or cultural connections to land and sea country in accordance with Indigenous tradition that might be affected by our activity; if you otherwise carry out recreational or commercial fishing, tourism or other activities that might be affected by our proposed activity; or if you are part of a local community that might be affected by our proposed activity.

If you consider you may be a relevant person, please contact us as soon as possible if you require any further information or if you think you are not on our consultation list.

We are asking for relevant persons to provide feedback by **7th November 2025**.

The merits of feedback provided through the consultation process will be considered during EP development, with a summary of responses presented in the EP submitted to DMPE for assessment. Please let us know if you would like your personal/organisational details or any part of your feedback to remain confidential and we will ensure this remains confidential to DMPE.

Contact

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