

SCARBOROUGH TRUNKLINE INSTALLATION (STATE WATERS) ENVIRONMENT PLAN

DAMPIER ARCHIPELAGO, NORTH-WEST AUSTRALIA

Proposed Activity

Woodside (as operator of the Scarborough Project) is planning to install a trunkline in State waters. The State waters component of the trunkline will run from the State waters boundary to the shore crossing, which is about 32 km long.

Installation of the trunkline (including shore crossing and seabed intervention activities) is planned to commence around Q1 2023 and continue for approximately 24 months. The activities will be managed under the Scarborough Trunkline Installation (State waters) Environment Plan (EP).

Activities relating to installation of the trunkline in State waters are described in Table 1 and include shore crossing works, dredging of a trunkline trench and spoil disposal, installation of the pipeline, stabilisation and protection of the trunkline, and supporting activities.

Our intent is to minimise environmental and social impacts associated with the proposed activities, and we are seeking any interest or comments you may have to inform our decision making.

Background

The full Scarborough trunkline will be approximately 435 km in length and will transport dry gas from a floating production unit, located in Commonwealth waters close to the Scarborough field, to the onshore Pluto LNG Facility on the Burrup Peninsula. The Scarborough trunkline will follow the route of the existing Pluto trunkline, with a separation distance of approximately 100 m to the south for the majority of the trunkline in State waters, with offset distance decreasing near the shore crossing.

Activities that extend beyond the State waters boundary, into Commonwealth waters, will be managed under a different EP in accordance with Australian Commonwealth legislation. Operation of the Scarborough trunkline is also outside the scope of this EP and will be the subject of a separate EP.

Woodside is owner and operator of the Scarborough Project.

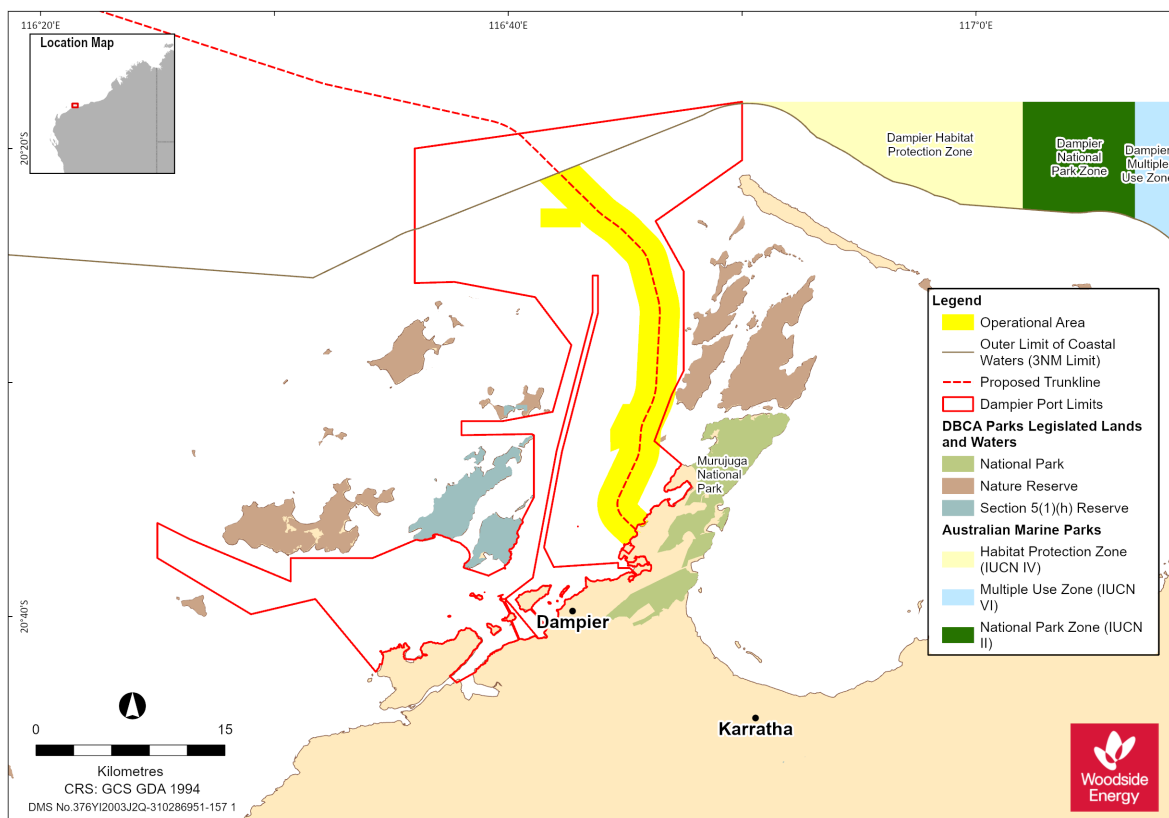


Figure 1. Petroleum Activity Program Operational Areas

Table 1. Activity summary

Scarborough Trunkline Installation (State waters) Environment Plan	
Location	<ul style="list-style-type: none"> Dampier Archipelago, North-West Australia, between the State coastal waters boundary and the Pluto LNG Facility.
Water depth	<ul style="list-style-type: none"> Ranges from Mean Low Water Mark (MLWM) at the shore crossing to ~ 40 m at the State waters boundary.
Earliest commencement date	<ul style="list-style-type: none"> The proposed activities are planned to commence around Q1 2023. Seabed intervention and trunkline installation activities could occur at any time throughout the year (all seasons).
Estimated duration	<ul style="list-style-type: none"> Activities are expected to continue for ~ 24 months. Activities will typically occur 24 hours/day, seven days a week, noting that not all activities will be undertaken at the same time.
Distance to nearest port	<ul style="list-style-type: none"> The trunkline route in State waters lies within the Port of Dampier Limits managed by the Pilbara Ports Authority.
Operational areas	
Trunkline installation project area	<ul style="list-style-type: none"> Existing Spoil Ground A/B (restricted to disposal of backhoe dredge spoil). Existing Spoil Ground 2B. Full pipeline length from shore crossing (MLWM at -KPO.04) to the Coastal Waters boundary (approximately Kilometre Point (KP) 32 along the pipeline route). An area of 1500 m either side of the trunkline centreline, including the defined development envelope (750 m either side) under Ministerial Statement No. 1172, to allow for vessel manoeuvring.
Shore Crossing	
Key activities	<ul style="list-style-type: none"> Construction of a temporary rock groyne/platform on the shoreline adjacent to the pre-excavated trench and the Pluto LNG Jetty. Pre-lay excavation activities including trenching comprising rock removal to create trench, transportation of materials and installation of a bedding layer in the trench. Pull of pipeline from Shallow Water Lay Barge (SWLB), located about 800 m from the shore. Post-lay rock installation and re-instatement
Key equipment	<ul style="list-style-type: none"> Long Reach Excavator
Seabed Intervention	
Key activities	<ul style="list-style-type: none"> Hydrographic, geophysical and geotechnical surveys. Pre-, progress and post construction survey (visual and/or multibeam echo sounder). Trailing suction hopper dredge (TSHD) trenching along the trunkline route with material disposal at existing Spoil Ground 2B. Backhoe dredge (BHD) trenching along the trunkline route with material placed in support split hopper barge (SHB) for disposal in Spoil Ground AB (restricted to BHD activities) and Spoil Ground 2B. Sand backfill along the trunkline by TSHD. Rock placement along the trunkline for pipeline protection/stabilisation. Trunkline pre- and post-lay span rectification. Contingent seabed intervention activities including maintenance dredging/excavation of resettled material in the trench prior to pipelay, post lay dredging, grout bags and rock placement.

Scarborough Trunkline Installation (State waters) Environment Plan

- Key vessel types**
- Trailing suction hopper dredge (TSHD)
 - Backhoe dredge (BHD)
 - Split hopper barges (SHB) and support tugs
 - Rock installation vessel (RIV)
 - Survey vessels
 - Support vessels (including flat top barge (FTB))

Trunkline Installation

- Key activities**
- Surveys:
 - Pre-lay survey of the trunkline route prior to commencement of pipelay (visual & multibeam echo sounder).
 - Post-lay as-built survey of the completed trunkline (visual and multibeam echo sounder).
 - Installation of the trunkline by a pipelay vessel (PV) near the State waters boundary.
 - Installation of the trunkline by a Shallow Water Lay Barge (SWLB) in the shallow water section of the route where the Dynamic Positioning PV may not be able to access due to water depth restrictions.
 - Setting of SWLB anchors with anchor handling vessel/tug.
 - Continuous delivery of pipe to the SWLB and PV by pipe supply vessels.
 - Dry pre-commissioning of the trunkline by a construction vessel.
 - Contingent activities including wet buckle recovery and flood, clean, gauge and testing.

- Key vessel types**
- Shallow Water Lay Barge (SWLB)
 - Anchor handling vessel/tug
 - Pipelay Vessel (PV)
 - Pipe supply vessels
 - Offshore construction vessel (OCV)
 - Survey vessels
 - Fuel bunkering vessels

Communications with Mariners

Safety exclusion zones will apply around the applicable seabed intervention and the trunkline installation vessels. Marine notices will be issued prior to activity commencement to alert vessels which may be operating in waters nearby.

Stakeholder Consultation

Woodside consults stakeholders (relevant authorities and interested persons and organisations) in the course of preparing an EP. Woodside does this to ensure that stakeholders who are potentially affected by proposed activities are consulted and their input is considered in the development of the environment plan, including assisting Woodside in the identification of measures that could be applied to mitigate potential adverse environmental effects that the proposed activity may otherwise cause.

This EP approval falls under the primary environmental approval (Scarborough Development Nearshore Component) as approved through Ministerial Statement No. 1172 and EPBC Act referral 2018/8362 decision - not controlled action if undertaken in a particular manner. The activities will be conducted in line with relevant referred activity and associated management plans required under condition 6 and 7 of Ministerial Statement No. 1172 (i.e. Dredging and Spoil Disposal Management Plan (DSDMP) and Cultural Heritage Management Plan (CHMP)).

A number of mitigation and management measures will be implemented and are outlined in **Table 3**. These measures will continue to be developed in conjunction with the EP, including impact assessments and controls to reduce impacts to an As Low As Reasonably Practical (ALARP) and acceptable level. Further details will be provided in the EP.

Table 3. Summary of key risks and/or impacts and management measures during trunkline installation (State waters)

Potential Risk and/or Impact	Mitigation and/or Management Measure
Planned	
Interests of relevant stakeholders including: <ul style="list-style-type: none"> • Petroleum activities • Commercial and recreational fishing activities • Shipping activities • Recreational water users and tourism 	<ul style="list-style-type: none"> • Consultation with relevant petroleum titleholders, commercial fishers and their representative organisations, and government departments and agencies to inform decision making for the proposed activity and development of the EP. • Advice to relevant stakeholders prior to the commencement of activities. • All vessels within the Scarborough activity area will adhere to the navigation safety requirements including the Navigation Act 2012 and any subsequent Marine Orders.
Vessel interaction	<ul style="list-style-type: none"> • Woodside will notify relevant fishery stakeholders and government maritime safety agencies of specific start and end dates, specific vessel-on-location dates and any exclusion zones prior to commencement of the activity.
Marine discharges	<ul style="list-style-type: none"> • All routine marine discharges will be managed according to legislative and regulatory requirements.
Waste management	<ul style="list-style-type: none"> • Waste generated on the vessels will be managed in accordance with legislative requirements and a Waste Management Plan. • Wastes will be managed and disposed of in a safe and environmentally responsible manner that prevents accidental loss to the environment. • Wastes transported onshore will be sent to appropriate recycling or disposal facilities by a licensed waste contractor.
Seabed disturbance	<ul style="list-style-type: none"> • Implement the water quality monitoring program and tiered monitoring and management framework (TMMF) to manage water quality associated with dredging, spoil disposal and backfill activities to a level where impacts are not predicted to occur to benthic communities and habitats. • If rock placement test dumps are required, they will be conducted within the indicative 30 m trunkline corridor. • Anchoring procedures to guide the setting of anchors for the SWLB (if required) and include: <ul style="list-style-type: none"> • Accurate positioning of anchors • Prevention of excessive anchor wire drag on the seabed by ensuring sufficient tension is maintained during anchor running operations • Anchoring within 750 m of either side of the trunkline • Anchor installation as per mooring design analysis • Any wet parked items will be tracked and removed from the seabed. • Infrastructure will be placed on the seabed within the design footprint using positioning technology. • Bathymetric and other surveys will be undertaken to monitor seabed characteristics before and after activities. • Comply with in force Sea Dumping Permit (No. SD2019/3982 or amended). • TSHD draghead will be positioned within approved footprints prior to and during trenching and backfill activities. • THSD overflow pipes to be raised prior to spoil or backfill transport. • TSHD hopper door seals will be inspected prior to mobilisation. • Overflow funnels on TSHD fitted with 'green valves'.
Vessel interaction	<ul style="list-style-type: none"> • Woodside will notify relevant fishery stakeholders and government maritime safety agencies of specific start and end dates, specific vessel-on-location dates and any exclusion zones prior to commencement of the activity.
Light emissions	<ul style="list-style-type: none"> • Lighting will be limited to the minimum required for navigational and safety requirements, with the exception of emergency events. • Crew transfers which require direction of floodlights outside the vessel will preferentially occur during daylight hours during peak hatchling season(s) (December to March). • PV, RIV and TSHD to use block-out blinds / curtains on accommodation windows at night when operating vessels during peak turtle hatchling emergence periods (December to March).
Ground disturbance	<ul style="list-style-type: none"> • Shore-crossing activities will be confined to previously disturbed footprint at the Pluto LNG facility.

Potential Risk and/or Impact	Mitigation and/or Management Measure
Unplanned	
Hydrocarbon release	<ul style="list-style-type: none"> • Appropriate spill response plans, equipment and materials will be in place and maintained. • Appropriate refueling procedures and equipment will be used to prevent spills to the marine environment.
Marine fauna interactions	<ul style="list-style-type: none"> • The TSHD and relevant vessels will have trained crew as marine fauna observers. • Compliance with the EPBC Regulations 2000– Part 8 Division 8.1 Interacting with cetaceans. • Compliance with marine fauna interaction procedures set out in force Sea Dumping Permit (No. SD2019/3982 or amended). • Compliance with EPBC 2018/8362 particular manners to mitigate potential impacts on whales. • For TSHD operations during daylight hours (excluding transit) adherence to defined observation and exclusion zone. • Installation of turtle deflection chains in front of the TSHD drag head. • At completion of dredge run (fill of hopper), stop dredge pumps as soon as practicable after the TSHD drag head is lifted from the seafloor.
Introduction of invasive marine species	<ul style="list-style-type: none"> • All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species. • Compliance with Australian biosecurity requirements and guidance. • Contracted vessels comply with Australian ballast water management requirements and Australian Biofouling Management Requirements.

Feedback

If you would like to comment on the proposed activities outlined in this information sheet, or would like additional information, please contact Woodside before **18 January 2023** via:

E: Feedback@woodside.com.au | Toll free: 1800 442 977

You can subscribe via our website to receive Consultation Information Sheets for proposed activities: www.woodside.com

Please note that stakeholder feedback will be communicated to the Department of Mines, Industry Regulation and Safety (DMIRS) as required under legislation. Woodside will communicate any material changes to the proposed activity to affected stakeholders as they arise.

Please note that your feedback and our response will be included in our Environment Plan for the proposed activity, which will be submitted to DMIRS for acceptance in accordance with the *Petroleum (Submerged Lands) (Environment) Regulations 2012*.

Please let us know if your feedback for this activity is sensitive and we will make this known to DMIRS upon submission of the Environment Plan in order for this information to remain confidential to DMIRS.