Woodside is planning to submit an Environment Plan (EP) to undertake seabed intervention and Trunkline installation activities in Commonwealth waters for the proposed Scarborough development, in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Cth).

The activity involves installation of a carbon steel pipeline (Trunkline) that runs approximately 430 km from the proposed offshore Scarborough Floating Production Unit (FPU) to the existing onshore Pluto LNG facility. The scope of this EP covers seabed intervention and installation activities for the section of the Trunkline in Commonwealth waters from the State waters boundary to the Pipeline End Termination (PLET) in WA-61-L. A separate EP is planned to address seabed intervention and Trunkline installation activities in State waters, for approval by the Western Australian Department of Mines, Industry Regulation and Safety.

Subject to relevant approvals and other constraints such as vessel availability and weather, seabed intervention activities are expected to start in late 2022. Trunkline installation activities in Commonwealth waters are expected to commence in late 2023 following successful completion of the State waters installation scope. The Petroleum Activities Program is expected to take around 24 months to execute with activities occurring in multiple campaigns.

Woodside is operator of the Scarborough field (WA-61-L) with a 73.5% interest. BHP Petroleum (North West Shelf) Pty Ltd holds the remaining 26.5% share in the title.
## Proposed Activity

**Table 1 - Activity summary and project vessels**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Location</strong></td>
<td>• Carnarvon Basin, North-West Australia</td>
</tr>
<tr>
<td><strong>Water depth</strong></td>
<td>• Approximately 32 m (Trunkline route at State waters boundary) to 1400 m (deepest point approximately 275 km along the Trunkline route)</td>
</tr>
</tbody>
</table>
| **Earliest commencement date**                 | • Seabed intervention activities: Q4 2022 pending approvals, vessel availability and weather constraints  
  • Trunkline installation activities: Q4 2023 pending successful completion of State waters installation scope, approvals, vessel availability and weather constraints. |
| **Estimated duration**                         | • Approximately 24 months across multiple campaigns                                           |
| **Distance from Operational Area to nearest port/marina** | • Eastern end of the Trunkline route overlaps with the Pilbara Port Authority Dampier Port Limits |
| **Distance from Operational Area to nearest marine park** | • The trunkline corridor runs through the Montebello Marine Park - Multiple Use Zone (Cwlth), close to the northern boundary  
  • Offshore borrow ground located to the north of the Dampier Marine Park Habitat Protection Zone |
| **Seabed Intervention**                        | • Trailing suction hopper dredge (TSHD)  
  • Offshore construction vessel (OCV)  
  • Fall pipe vessel (rock dump)  
  • Survey vessels  
  • Support vessels  
  • Fuel bunkering vessels |
| **Key Activities**                             | • Surveys:  
  » Geophysical (including hydrographic surveys)  
  » Geotechnical  
  » Prelay survey before pipelay (visual and multibeam echo sounder)  
  • Trenching along the Trunkline route and material disposal at existing Spoil Ground 5A  
  • Borrow ground dredging and backfill along the trunkline  
  • Continental slope crossing seabed preparation  
  • Trunkline and infrastructure crossing supports installation, using rock and mattresses  
  • 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 dumping |
| **Trunkline Installation**                     | • Primary Installation Vessel (PIV) multi-joint operation  
  • Shallow Water Lay Barge (SWLB)  
  • Anchor handling vessel/tug  
  • Pipe supply vessels  
  • Offshore construction vessel (OCV)  
  • Survey vessels  
  • Fuel bunkering vessels |
| **Key activities**                             | • Surveys:  
  » Pre-lay survey of the trunkline route prior to commencement of pipelay (visual and multibeam echo sounder)  
  » Post-lay as-built survey of the completed trunkline (visual and multibeam echo sounder)  
  • Installation of the Trunkline by a SWLB in the shallow water section of the route where the DP pipelay vessel may not be able to access due to water depth restrictions  
  • Setting of SWLB anchors with anchor handling vessel/tug  
  • Installation of the Trunkline by the PIV  
  • Installation of PLET and ancillary structures as required through design by the PIV  
  • Continuous delivery of pipe to the SWLB and PIV by pipe supply vessels  
  • Installation of the foundations for the PLET structure by a construction vessel prior to the installation of the PLET  
  • Dry pre-commissioning of the trunkline by a construction vessel  
  • Contingent activities including wet commissioning, wet buckle recovery and Flood, Clean, Gauge, Testing |
Proposed Locations
The Operational Area includes the following Project Areas:

- **Scarborough Trunkline Project Area**: The proposed Trunkline from the Scarborough FPU (approximately 430 km north-west of the Burrup) to the State waters boundary and 1.5 km either side of the proposed Trunkline centreline to allow for the movement and positioning of vessels (includes Spoil Ground 5A which is included in the Trunkline operational area.).

- **Offshore Borrow Ground Project Area**: Offshore Borrow Ground (location where sand will be sourced to assist with Trunkline stabilisation).

Within Commonwealth waters, the Scarborough Trunkline will extend from the FPU towards the existing Pluto offshore platform and infrastructure, approximately 200 km offshore north-west of the Burrup. The Scarborough Trunkline will then deviate to the south to avoid the existing facilities and minimise environmental, technical and safety risks. From approximately 20 km south-east of the Pluto platform, the Trunkline will be routed alongside the Pluto Trunkline until it reaches Mermaid Sound.

Sand may be required to assist with stabilisation along a ~20 km section of the Scarborough Trunkline from the State waters boundary. This sand is proposed to be obtained from the Offshore Borrow Ground Project Area in Commonwealth waters, as shown in Figure 1. The Offshore Borrow Ground is approximately 17 km², located 20 km to the east of the proposed Trunkline route and adjacent to the Dampier Marine Park. A minimum 250 m buffer will be in place from the Marine Park boundaries.

Communications with Mariners
Safety exclusion zones will apply around the 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.

Table 2 - Summary of key risks and/or impacts and management measures.

<table>
<thead>
<tr>
<th>Potential Risk and/or Impact</th>
<th>Mitigation and/or Management Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planned activities</strong></td>
<td></td>
</tr>
<tr>
<td>Interests of relevant stakeholders with respect to:</td>
<td>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.</td>
</tr>
<tr>
<td>• Defence activities</td>
<td>Advice to relevant stakeholders prior to the commencement of activities.</td>
</tr>
<tr>
<td>• Petroleum activities</td>
<td>All vessels within the Scarborough activity area will adhere to the navigation safety requirements including the Navigation Act 2012 and any subsequent Marine Orders.</td>
</tr>
<tr>
<td>• Commercial fishing activities</td>
<td>Vessel masters will implement interaction management actions in accordance with the EPBC Regulations 2000.</td>
</tr>
<tr>
<td>• Shipping activities</td>
<td>The dredging vessel will have trained crew as marine fauna observers and adhere to the observation and exclusion zones for marine fauna.</td>
</tr>
<tr>
<td><strong>Marine fauna interactions</strong></td>
<td>All routine marine discharges will be managed according to legislative and regulatory requirements and Woodside’s Environmental Performance Standards where applicable.</td>
</tr>
<tr>
<td><strong>Marine discharges</strong></td>
<td>Infrastructure will be positioned on the seabed within design footprint to reduce seabed disturbance.</td>
</tr>
<tr>
<td><strong>Seabed disturbance</strong></td>
<td>Bathymetric and other surveys will be undertaken to monitor seabed characteristics before and after activities.</td>
</tr>
<tr>
<td>• A management framework for dredging and backfill activities based on water quality will be developed.</td>
<td>Dredging and spoil disposal activities will be undertaken in compliance with a sea dumping permit.</td>
</tr>
<tr>
<td>• A minimum 250 m buffer from the Dampier Marine Park boundaries will be in place for the borrow ground dredging activities.</td>
<td></td>
</tr>
</tbody>
</table>

Vessel interaction
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.

Implications for Stakeholders
Woodside will consult relevant stakeholders whose interests, functions, and activities may be affected by the proposed activities. We will also keep informed other stakeholders who have an identified interest in the planned activities. Woodside has undertaken an assessment to identify potential risks to the marine environment and relevant stakeholders, considering timing, duration, location and potential impacts arising from the construction and installation activities. This EP approval falls under the primary environmental approval of the Scarborough Offshore Project Proposal (OPP) and the activities will be conducted in line with relevant requirements of the OPP. A number of mitigation and management measures will be implemented and are summarised in Table 2. These measures will continue to be developed in conjunction with the EP, including impact assessments and controls to reduce impacts to an ALARP and acceptable level. Further details will be provided in the EP.

About Scarborough
The Scarborough gas resource is located offshore, approximately 375 km west-northwest of the Burrup Peninsula and is part of the Greater Scarborough gas fields which are estimated to hold 13.0 Tcf (2C, 100%) of dry gas.

Woodside, as operator of the Scarborough Joint Venture, is proposing to develop the Scarborough gas resource through new offshore facilities connected by an approximately 430 km pipeline to a proposed expansion of the existing Pluto LNG onshore facility (Pluto Train 2).

For more information about the proposed Scarborough development, visit woodside.com.au.
## Potential Risk and/or Impact Mitigation and/or Management Measure

### Waste management
- 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.

### Unplanned activities

#### Hydrocarbon release
- Appropriate spill response plans, equipment and materials will be in place and maintained.
- Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment.

#### Introduction of invasive marine species
- 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 requirements.

---

**Providing Feedback**

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. If you would like to comment on the proposed activities outlined in this information sheet, or would like additional information, please contact Woodside before 30 September 2021.

Please note that your feedback and our response will be included in our Environment Plan for the proposed activity, which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for acceptance in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Cth).

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