Subsea Fibre Optic Data Cable Systems Installation - Australia West

Application Number: **03151** Commencement Date: **22/09/2025** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

Subsea Fibre Optic Data Cable Systems Installation - Australia West

1.1.2 Project industry type *

Telecommunications

1.1.3 Project industry sub-type

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1.1.4 Estimated start date *

01/02/2026

1.1.4 Estimated end date *

31/07/2027

1.2 Proposed Action details

1.2.1 Provide an overview of the proposed action, including all proposed activities. *

Google's Global Network Infrastructure group is planning to build fibre optic subsea cables as part of their Australia Connect Initiative and Africa Connect Initiative. This investment in digital infrastructure will improve data security, resilience, capacity and efficiency to meet requirements in Australia now and into the future.

The Australia Connect Initiative will deliver two subsea cable systems:

- Interlink cable system, which will land in Torquay, Victoria, Madora Bay, Western Australia, Christmas Island onward to Asia
- Bosun cable system, connecting Christmas Island to Darwin, Northern Territory

The Africa Connect Initiative complements these efforts with the Umoja cable system connecting Madora Bay, Western Australia to South Africa. An additional future cable system is also proposed to connect Christmas Island onwards to Asia.

This EPBC referral will focus on the cable systems and landings located along the western coast of Australia consisting of Madora Bay (Western Australia), Flying Fish Cove (Christmas Island), and Darwin (Northern Territory). The 'proposed action' that form part of this Referral is considered to be all activities related to the subsea cable installation out to the Australia EEZ, which are restricted to the marine environment.

The scope of this work includes the installation of subsea cables into existing cable conduits 'pop-out points' (PoP). The cables will either be buried below the seabed or laid on the seabed.

An Environmental Assessment Report has been prepared in support of this EPBC referral and is provided as attachments to this referral:

- Att1–Install-West-EA-MainReport
- Att2–Install-West-EA-AppA-CoastalAssessment
- Att3–Install-West-EA-AppB-MarineEcology
- Att4–Install-West-EA-AppC-ImpactAssessment
- Att5–Install-West-EA-AppD-OtherConsiderations
- Att5–Install-West-EA-AppD-OtherConsiderations-Redacted
- Att6-SubComEHS Policy v9.0

A Marine Route Survey (MRS) was conducted in July 2024 to assess the viability and safety of a cable system route. The MRS collected data to inform cable route design, identify potential obstacles or hazards, and assess their impact on alignment, installation, and future maintenance. MRS activities are currently still in progress for the Northern Territory segments. The survey findings have and will be guiding decisions related to cable armour and burial.

Pending the necessary approvals and permits, cable installation for Australia West is scheduled to begin in February 2026 across an estimate timeframe of 10 to 12 months.

Cable installation along all routes will follow a similar installation methodology. The steps for cable installation include pre-lay grapnel run and route clearance, and depending on seabed conditions, the cable will either be surface laid, or buried. Following this, there will be a post-lay inspection and shore end installation.

Onshore project components such as beach manholes and cable conduits do not form part of this assessment, however information for these components have been included in Section 2.3.7, Table 2.2, pg 24 to 25 of Att1-Install-West-EA-MainReport for contextual information only. This infrastructure is already in place in or is currently being built and has been assessed under relevant state jurisdictions and necessary permits obtained separately for those activities and do not form part of this assessment.

Pre-lay grapnel run (PLGR) and route clearance

Before cable laying, a Pre-Lay Grapnel Run (PLGR) will clear debris—like nets, wires, and old cables—from the seabed to ensure proper burial along the planned route.

The typical physical disturbance caused by a PLGR has been reported to reach widths of up to 1 m and depths of up to 1.5 m. For this project, the PLGR impact area will be approximately 0.75 m wide, with each grapnel run spaced up to 150 m. As the grapnel is pulled across the seabed, typical blade seabed penetration of up to 40 cm is achieved, depending on seabed composition.

The grapnel activity will avoid hard seabeds and buried cables. Recovered debris will be properly disposed of at licensed onshore facilities. Vessel speeds will stay below 6 knots.

Further information about pre-lay grapnel run is provided in Section 2.3.1, pg 17 of Att1–Install-West-EA-MainReport.

Pre-Laid Shore End (PLSE) installation

PLSE installation methods are typically employed in nearshore environment areas characterised by long, shallow, and relatively flat seabeds where sensitive marine habitats are present or where sea conditions limit conventional landing method. These conditions are similar to those at Madora Bay, Western Australia and Darwin, Northern Territory. A subsea jet trencher will be used to bury the cable from the PoP to the extent of PLSE operations. The trencher is propelled by the resultant jet reaction force of the water jets mounted on the frame. The trencher measures 7.0x3.5x1.3m with the jetting swords fully retracted.

Further information about PLSE installation is provided in Section 2.3.2, pg 19 of Att1–Install-West-EA-MainReport.

Burial by ploughing

In non-bedrock areas, the cable ship will simultaneously lay and bury the cable using a sea plough—a 5 m-wide sled towed by the vessel. It creates a 0.75 m-wide furrow to a target depth of 1 m, guiding the cable into place. As the plough moves forward (typically under 1 knot), sediment naturally backfills the trench, completing the burial.

Further information about burial by ploughing is provided in Section 2.3.3, pg 20 of Att1–Install-West-EA-MainReport.

Direct beach landings (Christmas Island landing only)

Direct beach landing is planned at both Flying Fish Cove sites on Christmas Island, where deep water near shore enables vessel access and avoids offshore jointing. The shoreline supports equipment mobilisation and diver-assisted cable installation with pipe protection. This efficient method suits confined nearshore zones and is common on similar island terrains.

Further information about direct beach landing for Christmas Island landings is provided in Section 2.3.4, pg 21-23 of Att1–Install-West-EA-MainReport.

Surface laying operations

Surface laying is a cable installation technique typically undertaken in water depths greater than 1,000 m. Surface laying involves accurately placing the cable on the seabed under a known tension, but with no direct burial of the cable into the seabed.

This cable installation technique is undertaken in areas where there is little risk of external aggression to the cable and where the cable will be beyond the reach of fishing or anchoring activities. In addition to the above, surface laying can be used in areas of exposed bedrock, where cable burial is not possible.

Cable deployment speeds using surface laying are between 6-8 knots per hour, depending on local conditions.

Further information about surface laying operations is provided in Section 2.3.5, pg 24 of Att1–Install-West-EA-MainReport.

Post-lay inspection and burial operations

The Post-Lay Inspection and Burial (PLIB) is the final step in subsea cable installation, carried out by a remotely operated vehicle (ROV). Depending on seabed conditions, the ROV operates autonomously on tracks or free-swimming. It verifies burial depth and completes burial in areas where ploughing isn't feasible —such as crossings, splices, or branching units. For water jetting, the ROV creates a narrow trench (0.5–0.75 m wide) that naturally backfills as the seabed settles.

Further information about the post-lay inspection and burial operations and is provided in Section 2.3.6, pg 24 in Att1–Install-West-EA-MainReport.

Further information about the ROV is provided in Section 2.4, pg 26 to 27 of Att1–Install-West-EA-MainReport.

Summary of project area and disturbance footprints

Total length of Australia West cable in Australian waters = 5,969.79 km

Burial by plough

Total length of cable to be buried via the plough = 1368.26 km; total disturbance footprint (assuming a conservative 10 m disturbance footprint) = 13.68 km2 = 1,368 ha

Burial by jetting (PLSE in WA and NT)

Total length of cable to be buried via jetting = 40.44 km; total disturbance footprint (assuming a conservative 5 m disturbance footprint) = 0.20 km2 = 20 ha

Cable surface lay

Total length of cable to be surface laid = 4,561.08 km; total disturbance footprint (assuming 37.5 mm disturbance footprint) = 0.17 km2 = 17 ha

Direct beach landings (Christmas Island)

Total length of cable to be trenched for a direct beach landing = 0.30 km; total disturbance footprint (assuming a conservative 4 m disturbance footprint) = 1.2 km2 or 120 ha

Onshore activities (not assessed as part of this application)

To facilitate the landing of cables and their connection to the terrestrial telecommunications network, the cables will be pulled through to their relevant BMHs through the cable conduits bypassing sensitive nearshore environments and minimising interaction with beach users.

Under this scenario, the cables are typically floated from the cable vessel to the conduits. A shallow-water or cable ship will be stationed offshore near the conduit's minimum working depth. A messenger line will be passed to shore, and a winch near the BMH will pull the cable through the trench and into the BMH. A dive support vessel may be deployed over the conduit to assist with removing cable floats from the cable within 10 to 20 m of the conduit, ensuring a smooth transition as the cable enters the conduit.

The installation process may cause temporary, localised disruption to onshore activities for up to one day, whether in the car park or the reserve. After installation, recreational users are generally unaffected, and any areas disturbed during the landing will be restored to their original condition, ensuring minimal impact on the environment and user experience.

A summary of the existing onshore infrastructure and proposed onshore works (not assessed as part of this application) are provided in Section 2.3.7, pg 24 to 25 of Att1–Install-West-EA-MainReport.

1.2.2 Is the project action part of a staged development or related to other actions or proposals in the region?

Yes

1.2.3 Is the proposed action the first stage of a staged development (or a larger project)?

No

1.2.4 Related referral(s)

EPBC Number	Project Title
2025/10258	Subsea Fibre Optic Data Cable Systems Installation - Australia East

1.2.5 Provide information about the staged development (or relevant larger project).

A separate referral application “EPBC 2025/10258” has been submitted for Subsea Fibre Optic Data Cable Systems – Cable Installation – Australia East for the cable routes in Queensland, New South Wales, and Victoria. This project was determined as ‘Not a Controlled Action’.

1.2.6 What Commonwealth or state legislation, planning frameworks or policy documents are relevant to the proposed action, and how are they relevant? *

A comprehensive list of legislations relevant to cable installation activities are outlined in Section 3, pages 29 to 38 of Att1–Install-West-EA-MainReport.

The section details the legislative requirements applicable to the Commonwealth and State jurisdictions.

Commonwealth (by alphabetical order)

- ***Aboriginal Land Rights Act 1976*** **(ALR) and the Northern Land Council**: The Act provides statutory obligations to Land Councils to assist Aboriginal people with an interest in affected land. The Northern Land Council assists Aboriginal people in the Top End of the Northern Territory to acquire and manage their traditional land and seas.
- ***Defence Regulation 2016***: The proposed action intersects several offshore firing and practice areas. Consultation with the Department was undertaken and is progressing in relation to certain requirements for the cable installation activities.
- ***Environment Protection and Biodiversity Act 1999 (EPBC Act)****:* The proposed action intersects the following marine parks: South-west Corner Marine Park, Perth Canyon Marine Park, Christmas Island Marine Park, Oceanic Shoals Marine Park, and the Argo-Rowley Terrace Marine Park. An Australian Marine Parks 'Structures and Works' licence will be submitted to cover subsea cable installation activities, operation and maintenance activities in these Commonwealth Marine Parks.
- ***Fisheries Administration Action 1991 and the Fisheries Management Act 1991***: The proposed action would occur within regions mapped as Commonwealth fisheries falling under the jurisdiction of AFMA; as such, consultation with AFMA is required for this proposed action. Consultation with AFMA and Commonwealth Fisheries Association was undertaken in relation to carrying out proposed works. Consultation with relevant fisheries is underway. Notifications will be issued to fisheries prior to commencement of installation activities.
- ***Native Title Act 1993****:* The *Native Title Act 1993* (Commonwealth) (NTA) recognises the traditional rights and interests of Aboriginal and Torres Strait Islander people in Australia. A desktop search of existing Native Title along the proposed cable route was conducted revealed that the proposed action will intersect two native title claims: the South West Aboriginal Land and Sea Council Native Title Determination (WCD2021/010) and the Risk vs Northern Territory of Australian Claim. Under both Native Title determinations, the Federal Court determined that Native Title did not exist in relation to any part of the land or waters the subject of the applications. Consultation with the National Indigenous Australians Agency, the South West Aboriginal Land and Sea Council, AAPA, and the Tiwi Islands Land Council has commenced.
- ***Offshore Electricity Act 2021***: The proposed action is within the vicinity of the Bunbury Declared Offshore Wind Areas (OEI-03-2024). At the time of this referral application, feasibility licenses have been granted for the Bunbury Declared Area in Western Australia. Consultation has been undertaken with the Offshore Energy Branch (DCCEEW), National Offshore Petroleum Safety and Environmental Management Authority – Offshore Infrastructure regulator.
- ***Telecommunications Act 1997 – Schedule 3A***: The proposed action falls outside of the Cable Protection Zones. A permit to install in a non-protection zone will therefore be sought for the cable systems.
- ***Underwater Cultural Heritage Act 2018***: Installation activities are not expected to impact on shipwrecks and submerged heritage. Any unexpected finds of underwater heritage will be managed to avoid impacts.

Western Australia (by alphabetical order)

- ***Aboriginal Heritage Act 1972 (AHA)***: The AHA ensures any activities, including offshore construction and development, do not harm Aboriginal heritage sites. Developers must conduct heritage surveys where applicable and consult with Aboriginal communities to identify and protect sites of cultural significance.
- ***Biodiversity Conservation Act 2016 and Biodiversity Conservation Regulations 2018***: The Act and regulations provide greater protection for biodiversity, particularly threatened species and

threatened ecological communities. The cable route is not anticipated to cause significant adverse impacts to identified threatened species due to nature of works.

- ***Conservation and Land Management Act 1984***: If cable installation activities are likely to cause the take and/or disturbance of threatened or specially protected species, then an authorisation under section 40 of the Biodiversity Conservation Act 2016 may be required. During early engagement with DBCA, it was confirmed that the location of the cable route does not appear to intersect with lands or waters managed under the Act.
- ***Environmental Protection Act 1986 (EP Act) – Part IV***: The EPA considers impacts in relation to environmental factors and assesses proposals which have the potential to cause significant harm to the environment. As the cable installation activities are not considered unlikely to result in significant impacts to the environment, it is not expected to be necessary to refer the Project under Part IV of the EP Act due to the nature and scale of expected impacts within Western Australia coastal waters.
- **Land Administration Act 1997**: The Act provides for the administration of Crown land in Western Australia, specifically in relation to the establishment of tenure, interest over land and the compulsory acquisition of land generally. A licence granted under the LA Act may be required if a proponent is proposing to conduct an activity over Crown land. The type of licence or other approval that may be required depends on the location of the Crown land to which access is required, as well as the type and length of the activity.
- ***Planning and Development Act 2005***: The Act provides the default position for planning control in Western Australia, including the requirement for planning approvals under a local planning scheme as it establishes a regime of planning control for the LGA.
- **South West Aboriginal Land and Sea Council:** The SWALSC represents the Noongar people, the traditional owners of the southwest corner of Western Australia. The SWALSC plays a crucial role in ensuring that proposed activities respect and protect Noongar cultural heritage and land rights.

Christmas Island

- ***Christmas Island Act 1958***: The Act applies Western Australia laws, including the Local Government Act 1995 on Christmas Island. It grants the Minister responsibility for the Territories the power to make Ordinances for governance. This includes amending or suspending Western Australia laws not aligned with Australian Government policy. The Minister also gains state-level Ministerial and administrative powers, with the ability to delegate them and vest them in Western Australia officials under service delivery arrangements with the Australian Government.

Northern Territory (by alphabetical order)

- ***Aboriginal Sacred Sites Act 1989***: The Northern Territory ASS Act protects all Aboriginal sacred sites in the Northern Territory whether they have been registered or not. Northern Territory Aboriginal sacred sites include coastal and sea areas, including features both above and below the water. An AAPA Authority Certificate was received for marine route survey works along the proposed cable route within the Northern Territory. A separate application will be submitted in response to feedback received from the Northern Territory Harbour Master.
- ***Crown Lands Act 1992***: The CL Act makes provision for the tenure, management and alienation of Crown Lands. The Crown Land Estate is responsible for managing Crown Land in the Northern Territory. A Crown Land License may be required for the permanent installation of the subsea cable.
- ***Environmental Protection Act 2019***: The EP Act is the Northern Territory's primary piece of environmental legislation administered by the Northern Territory Environment Protection Authority. The cable route within the Northern Territory coastal waters limit will be referred to the Northern Territory EPA prior to the commencement of installation. Once referred, the Northern Territory EPA determines the assessment process based on the information provided in the referral documentation. Due to the short-term and localised impacts associated with cable installation, significant impacts are unlikely. As suggested by the EPA during engagement a Tier 1 Referral would be the likely approval process.

- ***Fisheries Act 1988***: The Act primarily manages the aquatic resources of the Northern Territory including an acknowledgement of rights and interests of Aboriginal people and resources. A permit may be required for activities that cause shock, sound or other vibration under water. Engagement has commenced to better understand the need for this permit. Consultation will continue throughout the project to deconflict any issues that may arise.
- ***Heritage Act 2011***: The Act provides for the protection of Aboriginal and Macassan archaeological places listed on the Northern Territory Heritage Register, and places not previously recorded. Engagement with the Northern Territory Heritage Branch has commenced, and preliminary feedback was received.
- ***Planning Act 1999:*** The Act provides for land use planning and control in the Northern Territory. Through engagement with DLPE it was determined that cable installation activities will not require Planning Consent under the Planning Act and the Planning Scheme.
- ***Territory Parks and Wildlife Conservation Act 1976:*** The TPWC Act establishes the Territory parks and reserves and protect and conserve Northern Territory wildlife that is listed as threatened including essential habitat. Engagement with DLPE has commenced and confirmed that no permits are required for cable installation activities.
- ***Territory Coordinator Act 2025:*** The Territory Coordinator is responsible for facilitating the planning and delivery of major infrastructure projects in the Northern Territory and provides for the declaration of Priority Projects.

1.2.7 Describe any public consultation that has been, is being or will be undertaken regarding the project area, including with Indigenous stakeholders. Attach any completed consultation documentations, if relevant. *

A complete list of State and Commonwealth stakeholders has been identified and consulted in regard to the regulatory permitting and licencing requirements of the subsea cable installation activities. Outcomes of the engagement with stakeholders are further detailed in Table 4.1, Section 4, pages 38 to 43 of Att1–Install-West-EA-MainReport.

Commonwealth

- Department of Climate Change, Energy, the Environment and Water (DCCEEW)
- DCCEEW – Parks Australia
- DCCEEW – Offshore Renewables Branch
- Australian Communications and Media Authority (ACMA)
- Australian Fisheries Management Authority (AFMA)
- Australian Maritime Safety Authority
- Australian Hydrographic Office
- Commonwealth Fisheries Association (CFA)
- Department of Defence
- National Indigenous Australian Agency (NIAA)
- National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) and the Offshore Infrastructure Regulator (OIR)

Western Australia

- Department of Biodiversity, Conservation and Attractions (DBCA)
- Department of Energy, Mines, Industry Regulation and Safety (DEMIRS)
- Department Planning, Lands and Heritage
- Department of Transport Western Australia
- Department of Primary Industries and Regional Development
- Department of Water and Environment Regulation and Environmental Protection Authority
- Western Australian Fishing Industry Council (WAFIC)
- City of Mandurah
- Recfishwest
- Gnaala-Karla Booja Aboriginal Corporation (GKB)
- Mandurah Surf Life Saving Club

Christmas Island

- Department of Infrastructure, Transport, Cities & Regional Development and the Arts (Indian Ocean Territories (IOT) Branch)
- Shire of Christmas Island
- LINX Port Authorities

Northern Territory

- Department of Lands, Planning, and Environment (DPLE)
- Department of Agriculture and Fisheries (DAF)
- Environment Protection Authority (EPA)
- Department of Logistics and Infrastructure (DLI)
- City of Darwin
- Department of Territory Families, Housing and Community (Heritage Branch)
- Department of the Chief Minister and Cabinet
- Northern Territory Government Department of Treasury and Finance
- Tiwi Island Land Council
- Tiwi Islands Regional Council (Tiwi Resources)
- Aboriginal Areas Protection Authority (AAPA)
- Darwin Port

- Regional Harbourmaster
- Darwin Harbour Advisory Committee
- Amateur Fisherman's Association of the Northern Territory

Traditional Owner Engagement Plan

A Traditional Owner (TO) Engagement Plan was developed for the project. The plan identified a number of potential TO groups with interest in the offshore areas traversed by the cable routes within the Commonwealth marine areas. Engagement with these groups is in progress and will continue beyond the EPBC referral process.

1.3.1 Identity: Referring party

Privacy Notice:

Personal information means information or an opinion about an identified individual, or an individual who is reasonably identifiable.

By completing and submitting this form, you consent to the collection of all personal information contained in this form. If you are providing the personal information of other individuals in this form, please ensure you have their consent before doing so.

The Department of Climate Change, Energy, the Environment and Water (the department) collects your personal information (as defined by the Privacy Act 1988) through this platform for the purposes of enabling the department to consider your submission and contact you in relation to your submission. If you fail to provide some or all of the personal information requested on this platform (name and email address), the department will be unable to contact you to seek further information (if required) and subsequently may impact the consideration given to your submission.

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1.3.1.1 Is Referring party an organisation or business? *

Yes

Referring party organisation details

ABN/ACN	39008488373
Organisation name	GHD PTY LTD
Organisation address	2000 NSW

Referring party details

Name	Joanna El Khoury
Job title	Technical Director - Marine
Phone	0733163849
Email	Joanna.Elkhoury@ghd.com
Address	145 Ann Street Brisbane QLD 4000

1.3.2 Identity: Person proposing to take the action

1.3.2.1 Are the Person proposing to take the action details the same as the Referring party details? *

No

1.3.2.2 Is Person proposing to take the action an organisation or business? *

Yes

Person proposing to take the action organisation details

ABN/ACN	24672742166
Organisation name	PERCH INFRASTRUCTURE PTY LTD
Organisation address	2000 NSW

Person proposing to take the action details

Name	Steven Lay
Job title	Google's Global Network Infrastructure Group
Phone	+61295666585
Email	stevenlay@google.com
Address	Level 18, 420 George Street Sydney NSW 2000 Australia

1.3.2.14 Are you proposing the action as part of a Joint Venture? *

No

1.3.2.15 Are you proposing the action as part of a Trust? *

No

1.3.2.17 Describe the Person proposing the action's history of responsible environmental management including details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against the Person proposing to take the action. *

Google will be undertaking the work via their registered licence carrier company, Perch Infrastructure Pty Ltd (Perch). Perch has not been involved in any incidents or accidents with adverse environmental consequences.

There are no proceedings under Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of a natural resource against the Person Proposing (Perch) to take the Action.

Perch has engaged SubCom LLC (SubCom) to design, manufacture and install these cables. Perch has engaged SubCom to install the cable systems. SubCom has a satisfactory record of responsible environmental management. SubCom also has a proven track record of successfully completing other submarine cable system projects in Australia:

1. Oman Australia Cable in 2020-2021. Marine Route Survey - EPBC2020/8731 Cable Installation - EPBC2021/8922

2. Hawaiki cable system installed in 2018 EPBC2016/7765

3. Pacific Cable 1 (or PPC-1) installed in 2008-2009

SubCom will ensure proper implementation of environmental management plans prior to work commencement and during installation activities. These significant projects were planned and carried out with due regard for all relevant environmental protection obligations and were completed without any adverse consequences to the environment. SubCom has a long and successful history of delivering submarine cable systems and as they have all required functions 'in-house' they are able to maintain strict project management and environmental controls on all aspects of the project.

1.3.2.18 If the person proposing to take the action is a corporation, provide details of the corporation's environmental policy and planning framework

Perch is employing experienced contractor SubCom to undertake cable installation activities in Australia and will ensure proper implementation of environmental management plans prior to work commencement and during installation activities.

SubCom and its subsidiaries operate under an Environmental, Health and Safety Policy and Management Systems that are ISO14004:2015 accredited. SubCom is committed to compliance with all applicable environmental, health and safety laws and to protection of our employees and the environment. To maintain compliance and to continuously improve our performance, the following policy will guide our environmental, health and safety initiatives and actions. SubCom is committed to:

- Operating our facilities around the world in a manner that protects our employees, public health and the environment.
- Complying with all applicable laws and regulations at every location where we operate and applying our own more stringent standards and policies wherever necessary to protect our employees and the environment.
- Seeking to continuously improve our environmental and safety performance.
- Designing our products and processes in a manner that minimises risks from the manufacture, use and disposal of our products.
- Reducing or eliminating the presence of lead and other hazardous materials from our products in accordance with legal requirements and customer demands.
- Seeking to conserve energy, water and raw materials and to reduce waste and emissions.
- Being a good neighbor in the communities where we operate.

For more further details, see SubCom's Environmental, Health and Safety Policy as provided in Att6-SubComEHS Policy v9.0. SubCom will be undertaking cable installation activities. An Environmental Management Plan (EMP) which will be followed during pre-commencement and installation activities. The EMP describes how the contractor will ensure that all the work is compliant with relevant requirements of the EPBC Act.

1.3.3 Identity: Proposed designated proponent

1.3.3.1 Are the Proposed designated proponent details the same as the Person proposing to take the action? *

Yes

Proposed designated proponent organisation details

ABN/ACN	24672742166
Organisation name	PERCH INFRASTRUCTURE PTY LTD
Organisation address	2000 NSW

Proposed designated proponent details

Name	Steven Lay
Job title	Google's Global Network Infrastructure Group
Phone	+61295666585
Email	stevenlay@google.com
Address	Level 18, 420 George Street Sydney NSW 2000 Australia

1.3.4 Identity: Summary of allocation

Confirmed Referring party's identity

The Referring party is the person preparing the information in this referral.

ABN/ACN	39008488373
Organisation name	GHD PTY LTD
Organisation address	2000 NSW
Representative's name	Joanna El Khoury
Representative's job title	Technical Director - Marine
Phone	0733163849
Email	Joanna.Elkhoury@ghd.com
Address	145 Ann Street Brisbane QLD 4000

Confirmed Person proposing to take the action's identity

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	24672742166
Organisation name	PERCH INFRASTRUCTURE PTY LTD
Organisation address	2000 NSW
Representative's name	Steven Lay
Representative's job title	Google's Global Network Infrastructure Group
Phone	+61295666585
Email	stevenlay@google.com
Address	Level 18, 420 George Street Sydney NSW 2000 Australia

Confirmed Proposed designated proponent's identity

The Person proposing to take the action is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

1.4 Payment details: Payment exemption and fee waiver

1.4.1 Do you qualify for an exemption from fees under EPBC Regulation 5.23 (1) (a)? *

No

1.4.3 Have you applied for or been granted a waiver for full or partial fees under Regulation 5.21A? *

No

1.4.5 Are you going to apply for a waiver of full or partial fees under EPBC Regulation 5.21A?

No

1.4.7 Has the department issued you with a credit note? *

No

1.4.9 Would you like to add a purchase order number to your invoice? *

No

1.4 Payment details: Payment allocation

1.4.11 Who would you like to allocate as the entity responsible for payment? *

Person proposing to take the action

2. Location

2.1 Project footprint

Project Area: 22102.42 Ha **Disturbance Footprint:** 18126.21 Ha

2.2 Footprint details

2.2.1 What is the address of the proposed action? *

Commonwealth Marine Waters

2.2.2 Where is the primary jurisdiction of the proposed action? *

Commonwealth Marine

2.2.3 Is there a secondary jurisdiction for this proposed action? *

No

2.2.5 What is the tenure of the action area relevant to the project area? *

The proposed action is wholly marine. The scope of works for the Environmental Assessment (EA) and project approvals address the cable installation works in state, territory and Commonwealth waters.

The cable installation will commence at the south-western EEZ limit of Western Australia and travel east into existing conduits offshore of Madora Bay. From here it will continue north to Christmas Island, landing into existing BMHs at the Jetty and the Dive Shop, before extending further north into the Northern Territory EEZ and into an existing conduit offshore of Bullocky Point, Darwin.

The cable will be connected to land via conduits and beach manholes which will be in place ahead of cable installation and do not form part of the proposed action which is the subject of this referral.

3. Existing environment

3.1 Physical description

3.1.1 Describe the current condition of the project area's environment.

The existing environmental conditions of the environment relevant to the Project area for the subsea cable installation is outlined in Section 2, pages 4 to 41 of Att2–Install-West-EA-AppA-CoastalAssessment and Section 3 to 6, pages 6 to 106 of Att3–Install-West-EA-AppB-MarineEcology.

Western Australia -Mandurah (Madora Bay)

The area is characterisedby sloping sandy and coarse-grained beaches with presence of active dunes. The geomorphic features consist of mainly continental shelf with ridges and reefs extending up to 100 km wide, a slope marked with submarine, and a well-developed continental rise connecting to the abysmal plain.

Key Ecological Features (KEFs) associated with the Western Australia area include:

- Ancient coastline at 90 m to 120 m depth
- Commonwealth marine environment within and adjacent to the west coast inshore lagoons
- Perth canyon and adjacent shelf break, and other west canyons
- Western demersal slope and associated fish communities
- Western rock lobster

Christmas Island (Flying Fish Cove)

The island's nearshore marine environment is characterised by rocky shores and coral reefs. Christmas Island is a high mountainous island characterised by plateaus and cliffs, creating a stepped appearance. Its coastline consists mainly of cliffs over 5 m high, followed by a narrow intertidal/subtidal platform.

KEFs have not been defined for this area.

Northern Territory (Bullocky Point)

Beginning from the Coastal Water limit, the cable route in the Northern Territory starts on the transitional waters of the Bonaparte Gulf. This region consists of soft and hard substrata, calcareous gravel, sand and silt benthic habitats. The region is categorised as coast to shallow shelf transition, with the deepest sections reaching approximately 120 m. As the Northern Territory cable route travels east, the route transitions into coast to shallow shelf before reaching the Northwest marine region.

KEFs:

- Canyons linking the Argo Abyssal Plain with the Scott Plateau
- Carbonate bank and terrace system of the Sahul Shelf
- Continental Slope Demersal Fish Communities
- Pinnacles of the Bonaparte Basin

Seringapatam Reef and Commonwealth waters in the Scott Reef Complex

3.1.2 Describe any existing or proposed uses for the project area.

Cable installation will occur in state and Commonwealth waters which are used for commercial, recreational, and general boating and fishing activities. A summary of existing and proposed uses is presented below.

The subsea cable systems pass through three gas pipelines along the Western Australia and seven along the Northern Territory cable routes. This included two gas pipelines in Western Australia and one gas pipeline in Northern Territory owned by Clarkson Pipelines; one owned by Thylacine Pipeline in Western Australia; in Northern Territory, two pipelines by Darwin LNG, one pipeline by Darwin Trunkline, two pipelines by HIS Pipelines, and one pipeline by Neptune Bonaparte.

The subsea cable route also intersects petroleum wells by Clarkson Block: six petroleum wells in Western Australia and nine along Northern Territory. Along the Northern Territory cable routes, the Darwin Port frequently undergoes dredging activities. Consultation with Darwin Ports and Northern Territory Regional Harbour Master revealed that the existing single lane shipping channel is expected to be dredged and expanded to two lanes. In response to this advice, a new cable route option was considered to avoid the area.

The most southern Western Australia cable route (Interlink) traverses the proposed offshore wind area in the Indian Ocean off Bunbury Region. At the time of writing this, feasibility licenses have been granted to that area at the time of this referral and do not currently overlap with the Interlink cable route.

The subsea cable systems cross through a number of in service and out of service subsea cables. For further information refer to Section 4.8, Table 4.5, Figure 4.2 pages 29 to 31 of Att5–Install-West-EA-AppD-OtherConsiderations.

The subsea cable route intersects 14 areas containing offshore military firing practice and exercise areas. This included eight areas in Western Australia and four areas in Northern Territory. There are no offshore firing practices or exercise areas on Christmas Island. Additionally five areas of unexploded ordnance (UXO) were identified along the Western Australia cable routes and three UXO areas along the Northern Territory cable routes. For further information refer to Section 5, pages 33 to 36 of Att5–Install-West-EA-AppD-OtherConsiderations

3.1.3 Describe any outstanding natural features and/or any other important or unique values that applies to the project area.

Western Australia

In the nearshore marine environment, the MRS confirmed that the cable routes consists of extensive sandy habitat with patches of hardground and rock substrate. Additionally the MRS identified approximately 3 km of macroalgae patches along the proposed cable route in the nearshore zone. Further investigations are currently being undertaken to quantify and identify the extent of the marine vegetation.

There are two major artificial reefs located offshore of Madora Bay including:

- Bight Reef, approximately 2.5 km from the cable routes
- James Service Reef, along the cable routes

Additionally, there are two Protected Marine Parks (State) identify to occur within the vicinity of the cable routes, including:

- Marmion Marine Park, approximately 70 km from the cable routes
- Shoalwater Islands Marine Park, approximately 18 km from the cable routes

For further information refer to Section 3.1, pages 6 to 22 of Att3–Install-East-EA-AppB-MarineEcology.

Offshore to the 1,500 m depth contour the cable routes traverse shelf benthic habitat, comprising bare sandy areas with scattered limestone reefs and limited seagrass. James Service Reef (0–7 m deep in approx 10.7 m of water) lies within State and Commonwealth waters, with a broken reef extending north from Five Fathom Bank. The routes also intersect the Mandurah artificial reef, 9 km offshore in approximately 25 m water depth, consisting of 30 reinforced concrete modules arranged in clusters of five.

Beyond the 1,500 m depth contour to the EEZ boundary, the cable routes pass sloping terrain with canyons and terraces, from the continental rise to the abyssal plain. On the Mandurah shelf, a deep hole/valley occurs approximately 40 km offshore.

For further information refer to Section 4.1 pages 32 of Att3–Install-East-EA-AppB-MarineEcology.

The cable routes intersect the Multiple Use Zone, National Park Zone and Habitat Protection Zone of the South-west Corner Marine Park and the National Park Zone and Habitat Protection Zone of the Perth Canyon Marine Park.

For further information refer to Section 4.4.1, pages 38 to 42 of Att3–Install-East-EA-AppB-MarineEcology.

Christmas Island

Christmas Island is a high, mountainous island with dramatic coastal cliffs, narrow reef platforms, and steep bathymetry that drops to more than 1,500 m within a few hundred metres offshore. Shallow marine habitats are limited but regionally significant, with fringing coral reefs of high biodiversity, including species not found elsewhere in Australian waters. These reefs support over 650 fish species, more than 80 coral species, and threatened and migratory fauna such as whale sharks, manta rays, sea turtles, spinner dolphins, and humpback whales.

The island is globally recognised for its annual red crab migration, where millions of crabs move from rainforest to ocean to breed, forming an iconic ecological event. It is also internationally important for seabirds, providing critical nesting habitat for endemic and endangered species such as Abbott’s booby, the golden bosun, and the Christmas Island frigatebird. Multiple clusters of seamounts surround the western to southeastern extent of the EEZ, these seamounts include:

- Flying Fish Seamounts (approximately 125 km southwest from the nearest cable route)
- Golden Bo'sunbird Seamounts (approximately 74 km south from the nearest cable route)
- Bartlett Seamounts (approximately 51 km east from the nearest cable route)
- Karma Seamounts (approximately 147 km west from the nearest cable route)

For further information refer to Section 4.3, pages 33 to 35 of Att3–Install-West-EA-AppB-MarineEcology.

The cable route intersects the National Park Zone of the Christmas Island Marine Park. Refer to Section 4.4.2, page 42 to 44 of Att3–Install-West-EA-AppB-MarineEcology.

Northern Territory

The nearshore environment is likely to consist predominately of soft, muddy soft sediment with interspersed with patches of rocks and hardground. Based on current benthic habitat mapping macroalgae occurs approximately 600 m to 800 m offshore of Bullocky Point. Further MRS activities are currently in progress and will be used to inform the final cable alignment towards the nearshore environment.

There are no State Marine Parks, National Parks, or Nature Reserves within the proposed cable for Northern Territory but there are three aquatic reserves within the 10 km buffer zone surrounding the cable route, being:

- East Point Aquatic Life Reserve, approximately 3 km
- Doctor’s Gully Aquatic Life Reserve, approximately 5 km south
- Stokes Hill Wharf, approximately 7 km southeast

For further information refer to Section 3.2, pages 23 to 31 of Att3–Install-West-EA-AppB-MarineEcology.

Offshore from the Coastal Waters limit, the Northern Territory cable route starts in the transitional waters of the Bonaparte Gulf, comprising soft and hard substrata, calcareous gravel, sand, and silt benthic habitats. The area is classified as coast to shallow shelf transition, with the deepest sections reaching so approximately 120 m. As the route extends offshore beyond the coastal waters limit, it crosses a range of geomorphic features including the continental slope, and in some regions, terraces, submarine canyons, and reef structures. Further offshore, the seabed transitions into the abyssal plain, representing the deep ocean floor.

For further information refer to Section 4.2, page 33 of Att3–Install-West-EA-AppB-MarineEcology.

The cable route intersects the Multiple Use Zone of the Oceanic Shoals Marine Park and the National Park Zone of the Argo-Rowley Terrace Marine Park. Refer to Section 4.4.3 and 4.4.4, pages 44 to 48 of Att3–Install-West-EA-AppB-MarineEcology.

3.1.4 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.

Western Australia – Madora Bay

The nearshore environment along the route reaches 17 m water depth over 23 km.

The cable routes from the Madora Bay landing site starts at Madora Bay moving 13 km in a west direction towards the Coastal Waters limit. This will occur in water depths ranging from 8 to 13 km.

Further information is provided in Section 2.1.1, page 4 of Att2–Install-West-EA-AppA-CoastalAssessment.

Christmas Island

The nearshore environment along the route reaches 49 m water depth over 0.25 km before going to immediate deep water (> 100 m) adjacent to the rocky cliff face.

Further information is provided in Section 2.2.1, page 11 of Att2–Install-West-EA-AppA-CoastalAssessment.

Northern Territory

The nearshore environment is shown to range from -15 m to -35 m over approximately 88 km out to the Coastal Waters limit.

Further information is provided in Section 2.3.1, page 23 of Att2–Install-West-EA-AppA-CoastalAssessment.

Commonwealth waters (all routes)

The cable route lies in water depths up to 5,000 m. The cable route crosses the Australian continental shelf, with the edge of the continental shelf being marked by an abrupt slope over a distance of approximately 25 km where the depth changes from approximately 60 m to approximately 2,000 m.

Further information is provided in Section 2.4.1, page 31 of Att2–Install-West-EA-AppA-CoastalAssessment.

3.2 Flora and fauna

3.2.1 Describe the flora and fauna within the affected area and attach any investigations of surveys if applicable.

A total of seven Threatened Ecological Communities (TECs) were identified based on the Protected Matters Search Tool (PMST). As the subsea cable installation will be marine based, terrestrial-based TECs are not anticipated to be impacted and therefore will not be discussed further.

The PMST also identified 42 Biologically Important Areas (BIAs) to occur along the cable route. These BIAs are presented in Table 4.4, page 52 to 53 of Att3–Install-West-EA-AppB-MarineEcology.

A total of 126 listed species were identified by the PMST as having the potential to occur within the cable route. Of these species, 68 were identified to be threatened terrestrial fauna and flora and have therefore been excluded for this assessment due to the works being wholly marine. The breakdown of identified EPBC Act listed marine species and migratory animals that are assessed as having the potential to occur along the cable route are listed below:

Western Australia

- Six cetaceans
- One ‘Conservation Dependant’ fish
- Three marine turtles
- Two sharks
- One pinniped
- 10 marine birds and five overfly marine birds
- 20 migratory animals

The MRS revealed that sand and hardground are the predominant habitat with approximately 3 km of mapped marine vegetation to occur along the cable route.

Christmas Island

- Five cetaceans
- Six marine turtles
- Two sharks
- Seven marine birds and one overfly marine bird
- 10 migratory animals

Fringing reefs are likely to be the predominant habitat interspersed with rubble, natural pavements and sandy sediments.

Northern Territory

- One cetaceans
- Six marine turtles
- Four sharks
- Five marine birds and five overfly marine birds
- 24 migratory animals

The predominant habitat is likely to consist of soft, sandy and mud habitats with the potential of macroalgae to be present within the nearshore.

For further details on MNES, refer to Table 5.1 to Table 5.9, Section 5, pages 73 to 103 of Att3–Install-West-EA-AppB-MarineEcology:

3.2.2 Describe the vegetation (including the status of native vegetation and soil) within the project area.

Western Australia

The majority of the inshore benthic habitat around Madora Bay consists of unvegetated soft sediment with patches of marine vegetation as identified during the MRS. Further investigations are currently in progress to further identify marine vegetation and extent. The cable routes will intersect areas of rocky reef directly adjacent to the artificial Bight Reef approximately 1 km offshore. The proposed cable routes will additionally intersect two ridge structures approximately 5.5 km and 8.2 km to the west of the Halls Head coastline that are likely rocky reef habitat.

For further information, refer to Section 3.1.4, page 10 of of Att3–Install-East-EA-AppB-MarineEcology.

Christmas Island

Fringing coral reefs are likely to be seen within the nearshore environment, with patches of bare rock, coral rubble, and natural pavement. Soft sediment habitats along the cable route occur mainly between fringing reefs and within reef patches.

For further information refer to Section 4.3, pages 33 to 35 of Att3–Install-West-EA-AppB-MarineEcology.

Northern Territory

Desktop mapping and past benthic assessments show the marine environment to predominately consist of soft sediment with patches of rocks. Based on current benthic habitat mapping macroalgae occurs approximately 600 m to 800 m offshore of Bullocky Point. Further MRS activities are currently in progress and will be used to inform the final cable alignment towards the nearshore environment.

For further information, refer to Section 3.2.2, page 25 of Att3–Install-West-EA-AppB-MarineEcology.

Based on desktop mapping and previous seagrass assessment, the cable route is not anticipated to intersect seagrass patches. Refer to Section 3.2.4, page 25 to 26 of Att3–Install-West-EA-AppB-MarineEcology.

3.3 Heritage

3.3.1 Describe any Commonwealth Heritage Places Overseas or other places recognised as having heritage values that apply to the project area.

Christmas Island

The PMST identified nine Commonwealth Heritage Places to occur within 10 km, this included:

- Administrators House Precinct
- Christmas Island Natural Areas
- Drumsite Industrial Area
- Industrial and Administrative Group
- Malay Kampong Group
- Malay Kampong Precinct
- Phosphate Hill Historic Area
- Poon Saan Group
- Settlement Christmas Island

Northern Territory

- Larrakeyah Barracks Headquarters Building
- Larrakeyah Barracks Precinct
- Larrakeyah Barracks Sergeants Mess
- Royal Australian Air Force (RAAF) Base Commanding Officers Residence
- RAAF Base Precinct
- RAAF Base Tropical Housing Type 2
- RAAF Base Tropical Housing Type 3

The subsea cable installation is solely based in the marine environment, as such it is not expected to impact any identified Commonwealth listed heritage sites. For further information, refer to Section 2.3.3, page 14 of Att5–Install-West-EA-AppB-OtherConsiderations.

3.3.2 Describe any Indigenous heritage values that apply to the project area.

The subsea cable installation is not proposed to take place within the curtilage of any identified Indigenous Heritage places.

Historic heritage items listed at the local and State level within 10 km of the proposed cable route includes the following:

Northern Territory

- Darwin Botanic Gardens
- 8 Gardens Hill Crescent
- 9 Melville Street
- Gardens Road Cemetery
- Navy Victualling Yards
- Vestey's Tank

Results of the searches revealed no State listed Heritage sites within Western Australia and Christmas Island. The subsea cable installation is solely based in the marine environment, as such it is not expected to impact any identified State listed heritage sites.

In Western Australia, the cable routes intersect the following:

- Native Title Determination Outcomes: South West Settlement WCD2021/010 (Native Title does not exist)
- Indigenous Land Use Agreement (ILUA):
    - Gnaala Karla Booja ILUA WI 2015/005
- Future Act Determination Applications:
    - Gnaala Karla Booja WC1998/058 (Application Withdrawn)

In Christmas Island, there are no identified Native Title Claims or Determination sites.

In the Northern Territory, Native Title application claim (DCD2006/001) for the Larrakia people over the lands and seas of the cable route. At current, Native Title does not exist.

Further information is included in Att5–Install-West-EA-AppD-OtherConsiderations, however the relevant sections is not publicly available due to Indigenous or cultural sensitivities.

3.4 Hydrology

3.4.1 Describe the hydrology characteristics that apply to the project area and attach any hydrological investigations or surveys if applicable. *

Western Australia

For Western Australia, Tides are predominantly micro-tidal (<0.5 m) and semi-diurnal. Year-round current data show a southward Leeuwin Current strongest in winter (max 0.6 m/s) and a wind-driven northward Capes Current peaking in summer (max 0.9 m/s).

Christmas Island

Tides are predominantly semi-diurnal and micro-tidal (<0.5 m range). Chart datum is ~0.85 m below local height datum. The region is influenced by the South Equatorial Current pushing warm water westward.

Northern Territory

Tides are semi-diurnal and macro-tidal (6.0–6.9 m range) with strong diurnal inequality. Maximum flood currents near harbour entrance range 0.3 m/s (neap) to 1.0 m/s (spring); ebb currents 0.5 m/s to 1.6 m/s. Inner harbour currents vary between 0.1 m/s and 0.7 m/s depending on tide and location.

For further information, refer to Section 2.1, pages 4 to 9; Section 2.2, pages 10 to 21; Section 2.3, pages 23 to 30 of Att2–Install-West-EA-AppA-CoastalAssessment.

4. Impacts and mitigation

4.1 Impact details

Potential Matters of National Environmental Significance (MNES) relevant to your proposed action area.

EPBC Act section	Controlling provision	Impacted	Reviewed
S12	World Heritage	No	Yes
S15B	National Heritage	No	Yes
S16	Ramsar Wetland	No	Yes
S18	Threatened Species and Ecological Communities	Yes	Yes
S20	Migratory Species	Yes	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	Yes	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

4.1.1 World Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.1.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.1.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

A search of the Protected Matters Search Tool (PMST) was undertaken to identify World Heritage Properties within 10 km of the cable routes. The search revealed that no World Heritage Properties were identified within the 10 km.

4.1.2 National Heritage

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.2.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.2.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

A review was undertaken of the Australian Heritage Database (AHD) 2025 to identify areas of National Heritage Significance that may occur within the cable routes. The search revealed no areas of National Heritage Places to occur within the cable route and within a 10 km buffer.

4.1.3 Ramsar Wetland

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Ramsar wetland
Yes		Becher Point Wetlands
Yes		Peel-Yalgorup System

4.1.3.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.3.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The PMST identified four wetlands listed under the Ramsar Convention were identified to occur within the cable route and 10 km buffer (refer to Section 5.4, pg 67 of Att3-Install-West-EA-AppB-Marine Ecology). This includes:

Western Australia

- Peel-Yalgorup System – approximately 40 km from nearest cable route
- Becher Point Wetlands – approximately 12 km from nearest cable route

Christmas Island

- Hosnies Spring – approximately 10 km from nearest cable route
- The Dales – approximately 14 km from nearest cable route

These areas are not anticipated to be impacted by the subsea cable installation and are therefore not discussed further.

4.1.4 Threatened Species and Ecological Communities

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Threatened species

Direct impact	Indirect impact	Species	Common name
No	Yes	Anous tenuirostris melanops	Australian Lesser Noddy
No	Yes	Ardenna grisea	Sooty Shearwater
No	Yes	Balaenoptera borealis	Sei Whale
No	Yes	Balaenoptera musculus	Blue Whale
No	Yes	Balaenoptera physalus	Fin Whale
No	Yes	Calidris acuminata	Sharp-tailed Sandpiper
No	Yes	Calidris canutus	Red Knot, Knot
No	Yes	Calidris ferruginea	Curlew Sandpiper
No	Yes	Carcharias taurus (west coast population)	Grey Nurse Shark (west coast population)
No	Yes	Carcharodon carcharias	White Shark, Great White Shark
No	Yes	Caretta caretta	Loggerhead Turtle
No	Yes	Centrophorus uyato	Little Gulper Shark
No	Yes	Chelonia mydas	Green Turtle
No	Yes	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	Yes	Diomedea amsterdamensis	Amsterdam Albatross
No	Yes	Diomedea antipodensis	Antipodean Albatross
No	Yes	Diomedea dabbenena	Tristan Albatross
No	Yes	Diomedea epomophora	Southern Royal Albatross
No	Yes	Diomedea exulans	Wandering Albatross
No	Yes	Diomedea sanfordi	Northern Royal Albatross
No	Yes	Diuris micrantha	Dwarf Bee-orchid

Direct impact	Indirect impact	Species	Common name
No	No	Diuris purdiei	Purdie's Donkey-orchid
No	No	Drakaea micrantha	Dwarf Hammer-orchid
No	Yes	Eubalaena australis	Southern Right Whale
No	Yes	Galeorhinus galeus	School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark
No	Yes	Halobaena caerulea	Blue Petrel
No	Yes	Hoplostethus atlanticus	Orange Roughy, Deep-sea Perch, Red Roughy
No	Yes	Leipoa ocellata	Malleefowl
No	Yes	Limosa lapponica menzbieri	Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit
No	Yes	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	Yes	Macronectes halli	Northern Giant Petrel
No	Yes	Natator depressus	Flatback Turtle
No	Yes	Neophoca cinerea	Australian Sea-lion, Australian Sea Lion
No	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	Yes	Pachyptila turtur subantarctica	Fairy Prion (southern)
No	Yes	Phaethon rubricauda westralis	Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird
No	Yes	Phoebetria fusca	Sooty Albatross
No	Yes	Pristis pristis	Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish
No	Yes	Pterodroma mollis	Soft-plumaged Petrel
No	Yes	Rhincodon typus	Whale Shark
No	Yes	Sphyrna lewini	Scalloped Hammerhead
No	Yes	Sternula albifrons	Little Tern
No	Yes	Sternula nereis nereis	Australian Fairy Tern
No	Yes	Thalassarche carteri	Indian Yellow-nosed Albatross

Direct impact	Indirect impact	Species	Common name
No	Yes	Thalassarche cauta	Shy Albatross
No	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	Yes	Thalassarche melanophris	Black-browed Albatross
No	Yes	Thalassarche steadi	White-capped Albatross

Ecological communities

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4.1.4.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.4.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

Threatened Ecological Communities (TECs):

A total of seven Threatened Ecological Communities (TECs) were identified based on the Protected Matters Search Tool (PMST). As the subsea cable installation will be marine based, terrestrial-based TECs are not anticipated to be impacted and therefore will not be discussed further.

Full list of the TECs are provided in Appendix A of Att3–Install-West-EA-AppB-MarineEcology

Listed species:

Whilst some of the listed species are likely to occur within the project area, the impacts from the project activities will be indirect and will not cause significant impacts to these species.

These species have the potential to be indirectly impacted as a result of:

- **Seabed disturbance:** disturbance of and damage to soft benthic habitats and the infauna communities cable laying. Further information, see Section 3.1, pg 5 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Underwater noise emissions:** disruption to navigation, behaviour and communication of cetaceans, other mammals, reptiles and fish that use sonar for navigational purposes due to underwater noise emissions. Further information, see Section 3.2, pg 7 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Artificial light emissions:** disruption to marine fauna from artificial light emissions generated from survey vessels. Further information, see Section 3.3, pg 17 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Atmospheric emissions:** emission of greenhouse gases (such as carbon dioxide, methane and nitrous oxide) and non-greenhouse gases (such as sulphur oxides and nitrous oxides) as a result of burning of fuel to power vessel engines, generators and equipment. Further information, see Section 3.4, pg 19 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Planned discharges:** this includes sewage and food waste, brine, cooling water and deck drainage. Further information, see Section 3.5, pg 21 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Interference with other users:** includes temporary loss of access to fishing grounds and navigational waters within the installation area. Further information, see Section 3.6, pg 23 of Att4–Install-East-EA-AppC-ImpactAssessment
- **Marine fauna collisions or entanglement:** the potential for collision to occur between marine fauna and survey vessels. Further information, see Section 3.8, pg 25 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Pest introduction and proliferation:** Invasive marine pests (IMPs) are identified as marine plants, animals and algae, which have been introduced into a location that is not within their natural dispersal range but which provides conditions that support their survivorship. Further information, see Section 3.8, pg 27 of Att4–Install-West-EA-AppC-ImpactAssessment

Cetaceans

The PMST identified six threatened whale species and two dolphin species as relevant to the cable route:

- Blue whale (*Balaenoptera musculus*)
- Fin whale (*Balaenoptera physalus*)
- Sei whale (*Balaenoptera borealis*)
- Southern right whale (*Eubalaena australis*)
- Australian snubfin dolphin (*Orcaella heinsohni*)
- Australian humpback dolphin (*Sousa sahulensis*)

All six whale species are threatened and migratory and are considered to occur in specific regions during their annual migrations or in feeding and aggregation sites.

Refer to Table 5.1, pg 73-74 of Att3–Install-West-EA-AppB-MarineEcology

Fish

The PMST identified one fish species which is conservation dependent as relevant to the cable route, which includes orange roughy (*Hoplostethus atlanticus*).

Refer to Table 5.2, pg 75of Att3–Install-West-EA-AppB-MarineEcology

Turtles

The PMST identified six listed turtle species relevant to the cable route, which includes the following:

- Flatback turtle (*Natator depressus*)
- Green turtle (*Chelonia mydas*)
- Hawksbill turtle (*Eretmochelys imbricata*)
- Leatherback turtle (*Dermochelys coriacea*)
- Loggerhead turtle (*Caretta caretta*)
- Olive ridley turtle (*Lepidochelys olivacea*)

These species are all mobile and are only likely to occur in the region as transient visitors.

Refer to Table 5.3, pg 76-77 of Att3–Install-West-EA-AppB-MarineEcology

Sharks

The PMST identified 11 listed shark species (six threatened and three conservation dependant) as relevant to the cable route, which includes:

- Dwarf sawfish (*Pristis clavata*)
- Freshwater sawfish (*Pristis pristis*)
- Green sawfish (*Pristis zijsron*)
- White shark (*Carcharodon carcharias*)
- Grey nurse shark (East coast/west coast population) (*Carcharias taurus*)
- Northern river shark (*Glyphis garricki*)
- Little gulper shark (*Centrophorus uyato*)
- School shark (*Galeorhinus galeus*)
- Speartooth shark (*Glyphis glyphis*)
- Scalloped hammerhead (*Sphyrna lewini*)
- Whale shark (*Rhincodon typus*)

Refer to Table 5.4, pg 78-80 of Att3–Install-West-EA-AppB-MarineEcology

Pinniped

The PMST identified one threatened seal species as relevant to the proposed Western Australia cable route which is the Australian sea lion (*Neophoca cinerea*). Refer to Table 5.5, pg 81 of Att3–Install-West-EA-AppB-MarineEcology for further information.

Invertebrate

The PMST identified one threatened invertebrate species as relevant to the proposed Western Australia cable route which is the Carter's freshwater mussel (*Westralunio carteri*). This species was assessed as 'unlikely to occur' Refer to Table 5.6, pg 82 of Att3–Install-West-EA-AppB-MarineEcology for further information.

Seasnakes

The PMST identified three threatened seasnake species as relevant to the proposed Western Australia cable route. All three seasnakes were assessed as 'unlikely to occur' this includes:

- Dusky sea snake (*Aipysurus fuscus*)
- Leaf-scaled sea snake (*Aipysurus foliosquama*)

- Short-nosed seasnake (*Aipysurus apraefrontalis*)

Marine birds and overfly marine birds

The PMST identified 17 threatened marine birds and nine threatened overfly marine birds. The 17 marine birds species include:

- Abbott's booby (*Papasula abbotti*)
- Amsterdam albatross (*Diomedea amsterdamensis*)
- Antipodean albatross (*Diomedea antipodensis*)
- Australian lesser noddy (*Anous tenuirostris melanops*)
- Black-browed albatross (*Thalassarche melanophris*)
- Blue petrel (*Halobaena caerulea*)
- Campbell albatross (*Thalassarche impavida*)
- Christmas Island white-tailed tropic bird (Phaethon lepturus fulvus)
- Eastern curlew (*Numenius madagascariensis*)
- Greater sand plover (*Charadrius leschenaultii*)
- Indian Yellow-nosed albatross (*Thalassarche carteri*)
- Lesser sand plover (*Charadrius mongolus*)
- Little tern (*Sternula albifrons*)
- Northern giant petrel (*Macronectes halli*)
- Northern royal albatross (*Diomedea sanfordi*)
- Ruddy turnstone (*Arenaria interpres*)
- Sharp-tailed sandpiper (*Calidris acuminata*)
- Soft-plumaged petrel (*Pterodroma mollis*)
- Shy albatross (*Thalassarche cauta*)
- Sooty albatross (*Phoebetria fusca*)
- Sooty shearwater (*Ardenna grisea*)
- Southern giant-petrel (*Macronectes giganteus*)
- Southern royal albatross (*Diomedea epomophora*)
- Tristan albatross (*Diomedea dabbenena*)
- Wandering albatross (*Diomedea exulans*)
- White-capped albatross (*Thalassarche steadi*)

The nine marine overfly bird species include the following:

- Asian dowitcher (*Limnodromus semipalmatus*)
- Australian painted snipe (*Rostratula australis*)
- Black-tailed godwit (*Limosa limosa*)
- Common Greenshank (*Tringa nebularia*)
- Curlew sandpiper (*Calidris ferruginea*)
- Great knot (*Calidris tenuirostris*)
- Grey plover (*Pluvialis squatorala*)
- Red knot (*Calidris canutus*)
- Terek sandpiper (*Xenus cinereus*)

Refer to Table 5.8, pg 84-90 of Att3–Install-West-EA-AppB-MarineEcology

4.1.4.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.4.6 Describe why you do not consider this to be a Significant Impact. *

The cable installation activities have been assessed as **unlikely** to have a significant impact on the listed species likely to occur within the cable alignment that will:

Lead to a long-term decrease in the size of a population

With the implementation of identified management measures, particularly those relating to managing the risk of marine pollution and avoiding sensitive habitats and adherence to Part 8 of the EPBC Regulations (2000), potential impacts on animal navigation and passage will be mitigated. Interference with animals to cause mortality and subsequent population decline is unlikely to occur as a result of the installation activities.

Reduce the area of occupancy of the species

The project will not reduce the area of occupancy of any marine mammals, marine reptiles, sharks, fish and marine birds as most of these species are transient or migratory animals. Suitable habitat for the passage of each of these species will occur adjacent the subsea cable installation works. The installation activities are unlikely to impact the population distribution or habitat use of any of these species.

Fragment an existing population into two or more populations

The subsea cable installation activities are unlikely to fragment the populations of marine mammals, marine reptiles, sharks, fish, corals and marine birds into two or more populations. Due to the nature of the open ocean expanse through which the cable will pass and the mobility of these species, protected marine fauna are expected to swim away from the activities. During subsea cable installation these species are expected to avoid the area; if encountered mitigation measures will minimise potential impacts.

Adversely affect habitat critical to the survival of a species

The subsea cable installation is unlikely to affect habitat critical to survival of species. The cable route will be targeting soft sediments and will not negatively affect critical habitats that support different life-history stages of any of the species. Area of disturbance will be a very narrow corridor containing habitat well represented in the region.

Disrupt the breeding cycle of a population

Subsea cable installation activities are unlikely to disrupt the breeding cycle of these species. Most species do not breed or roost within the cable route, and the activities will not prevent movement to breeding or roosting grounds. The area is already traversed by commercial shipping traffic. Potential to interfere with any of these species such that the breeding cycle is affected is considered unlikely.

Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline

Subsea cable installation activities may temporarily disturb and modify the sediment; however, this change will be temporary, localised in nature and the habitat to be affected does not represent an important habitat supporting different life-history stages of the species. It is unlikely that the subsea cable installation activities will modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline.

Result in invasive species that are harmful to an endangered species becoming established in the habitat of the endangered species

Vessels and immersible equipment conducting the activity have a chance of carrying a marine pest in their ballast water or as biofouling; however, management controls applied to these vessels reduce this risk to prevent introductions from occurring. The subsea cable installation activities are unlikely to result in invasive species that are harmful to an endangered species becoming established in the habitat of the endangered species.

Introduce disease that may cause the species to decline

As no animals are being released through the course of the subsea cable installation activities, the proposed action is not predicted to introduce disease that may impact upon fauna nor is the proposed action predicted to accelerate the movements of diseased fauna to cause spread.

Interfere with the recovery of the species.

The subsea cable installation is **unlikely** to interfere substantially with the recovery of any of these species. All these species are transient or migratory through the area.

For further details, refer to Section 4, Table 4.1, page 33 and Table 4.2, pages 34-37 of Att4–Install-West-EA-AppC-ImpactAssessment

4.1.4.7 Do you think your proposed action is a controlled action? *

No

4.1.4.9 Please elaborate why you do not think your proposed action is a controlled action. *

Cable installation activities are unlikely to cause Significant Impacts to identified threatened species and therefore does not trigger the criteria to be a controlled action. For further details, refer to Section 4, Table 4.1, page 33 and Table 4.2, pages 34-37 of Att4–Install-West-EA-AppC-ImpactAssessment

4.1.4.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

A summary of the proposed mitigation measures is provided below. Further information on impact descriptions, impact analysis, management controls and environmental outcomes are available in Att4–Install-West-EA-AppC-ImpactAssessment.

Seabed disturbance

Disturbance to the seabed and benthic habitats will occur mainly during cable burial activities. Recommended management controls include avoiding ecologically sensitive areas during the cable installation activities, no planned anchoring of the vessel during installation activities, avoidance of rocky reefs and other underwater features. Surface cable laying or burial via water jetting (for the Western Australia and Northern Territory PLSE) will be used where possible.

Further information is provided in Section 3.1.1, Section 3.1.2, and Section 3.1.3, pg 5-7 of Att4–Install-West-EA-AppC-ImpactAssessment.

Underwater noise emissions

Disturbance to marine fauna including marine birds from above ground and underwater noise may occur in response to noise generated by vessel movement as well as installation activities. Recommended management controls during cable installation activities include timing of survey effort to occur outside of peak migration months where possible, implementation of Part 8 of the EPBC Regulations (2000) and the Australian Guidelines for Whale and Dolphin Watching for sea-faring activities, and maintenance of vessel machineries to reduce noise emissions.

Further information is provided in Section 3.2.1, Section 3.2.2, and Section 3.2.3 on pg 7-17 of Att4–Install-West-EA-AppC-ImpactAssessment.

Artificial light emissions

Artificial light from the installation vessel may attract and disorientate fauna such as birds, marine turtles, fish and other pelagic species, particularly during peak breeding and migratory periods. Recommended management controls include use of directional lighting to minimise light spill and management of lighting on vessel decks to reduce direct light spill, in accordance with the National Light Pollution Guidelines for Wildlife (DCCEEW 2023).

Further information is provided in Section 3.3.1, Section 3.3.2, and Section 3.3.3, pg 17-19 of Att4–Install-West-EA-AppC-ImpactAssessment.

Atmospheric emissions

Short-term reduction in air quality in the immediate region along the subsea cable installation route may occur due to the burning of hydrocarbons which would occur from the cable installation vessel.

Recommended management controls include properly maintaining equipment; catalytic converters and exhaust filters will be correctly fitted; limiting of idling time of diesel engines, and compliance with The International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI as implemented in Commonwealth waters by the Commonwealth *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (PSPPS Act); and Marine Order 97: Marine pollution prevention - air pollution).

Further information is provided in Section 3.4.1, Section 3.4.2, and Section 3.4.3, pg 19-20 of Att4–Install-West-EA-AppC-ImpactAssessment.

Planned discharges

Possible planned discharges associated with cable installation activities include sewage and food waste, brine, cooling water, and deck drainage. Recommended mitigation measures include collecting sewage and food waste in accordance with relevant State legislation and Australian regulations (AMSA) and compliance with MARPOL regulations (Annex IV).

Further information is provided in Section 3.5.1, Section 3.5.2, and Section 3.5.3, pg 21-23 of Att4–Install-West-EA-AppC-ImpactAssessment.

Interference with other users

There is potential that fishing would be temporarily disrupted, that fishing apparatus may be damaged upon catching onto the installation equipment or that vessels may be required to change navigational course to avoid collision risk.

Recommended management controls include undertaking installation activities in accordance with all marine navigation and vessel safety requirements under the International Convention of the Safety of Life at Sea (SOLAS) 1974 and *Navigation Act 2012*, consultation with relevant stakeholders, proper notifications via Notice to Mariners and others, equipping the installation vessel with all navigational and safety requirements for operation in Australian waters, and conducting visual observations by trained watch keepers on the vessel 24 hours per day to support management of collision risk with other users.

Further information is provided in Section 3.6.1, Section 3.6.2, and Section 3.6.3, pg 23-24 of Att4–Install-West-EA-AppC-ImpactAssessment.

Pest introduction and proliferation

Vessels carrying invasive marine pests (IMPs) may unintentionally but successfully introduce these species to the region where the installation activity is occurring.

Recommended control measures include sourcing vessels locally; international vessels arriving in Australia should adhere to Australian quarantine requirements, and management of ballast water must follow Australian Quarantine and Inspection Service (AQIS) guidelines.

Further information is provided in Section 3.9.1, Section 3.9.2, and Section 3.9.3, pg 27-28 of Att4–Install-West-EA-AppC-ImpactAssessment.

4.1.4.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The cable installation activities will not require offsets.

4.1.5 Migratory Species

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

Direct impact	Indirect impact	Species	Common name
No	Yes	Actitis hypoleucos	Common Sandpiper
No	Yes	Anous stolidus	Common Noddy
No	Yes	Apus pacificus	Fork-tailed Swift
No	Yes	Ardenna carneipes	Flesh-footed Shearwater, Fleshy-footed Shearwater
No	Yes	Ardenna grisea	Sooty Shearwater
No	Yes	Balaenoptera bonaerensis	Antarctic Minke Whale, Dark-shoulder Minke Whale
No	Yes	Balaenoptera borealis	Sei Whale
No	Yes	Balaenoptera edeni	Bryde's Whale
No	Yes	Balaenoptera musculus	Blue Whale
No	Yes	Balaenoptera physalus	Fin Whale
No	Yes	Calidris acuminata	Sharp-tailed Sandpiper
No	Yes	Calidris canutus	Red Knot, Knot
No	Yes	Calidris ferruginea	Curlew Sandpiper
No	Yes	Calidris melanotos	Pectoral Sandpiper
No	Yes	Caperea marginata	Pygmy Right Whale
No	Yes	Carcharhinus longimanus	Oceanic Whitetip Shark
No	Yes	Carcharias taurus	Grey Nurse Shark
No	Yes	Carcharodon carcharias	White Shark, Great White Shark
No	Yes	Caretta caretta	Loggerhead Turtle
No	Yes	Chelonia mydas	Green Turtle
No	Yes	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth

Direct impact	Indirect impact	Species	Common name
No	Yes	Diomedea amsterdamensis	Amsterdam Albatross
No	Yes	Diomedea antipodensis	Antipodean Albatross
No	Yes	Diomedea dabbenena	Tristan Albatross
No	Yes	Diomedea epomophora	Southern Royal Albatross
No	Yes	Diomedea exulans	Wandering Albatross
No	Yes	Diomedea sanfordi	Northern Royal Albatross
No	Yes	Eubalaena australis	Southern Right Whale
No	Yes	Hydroprogne caspia	Caspian Tern
No	Yes	Isurus oxyrinchus	Shortfin Mako, Mako Shark
No	Yes	Lagenorhynchus obscurus	Dusky Dolphin
No	Yes	Lamna nasus	Porbeagle, Mackerel Shark
No	Yes	Limosa lapponica	Bar-tailed Godwit
No	Yes	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	Yes	Macronectes halli	Northern Giant Petrel
No	Yes	Megaptera novaeangliae	Humpback Whale
No	Yes	Mobula alfredi	Reef Manta Ray, Coastal Manta Ray
No	Yes	Mobula birostris	Giant Manta Ray
No	Yes	Natator depressus	Flatback Turtle
No	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	Yes	Onychoprion anaethetus	Bridled Tern
No	Yes	Orcinus orca	Killer Whale, Orca
No	Yes	Pandion haliaetus	Osprey

Direct impact	Indirect impact	Species	Common name
No	Yes	Phaethon rubricauda	Red-tailed Tropicbird
No	Yes	Phoebetria fusca	Sooty Albatross
No	Yes	Physeter macrocephalus	Sperm Whale
No	Yes	Pristis pristis	Largetooth Sawfish, Freshwater Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish
No	Yes	Rhincodon typus	Whale Shark
No	Yes	Sterna dougallii	Roseate Tern
No	Yes	Sternula albifrons	Little Tern
No	Yes	Thalassarche carteri	Indian Yellow-nosed Albatross
No	Yes	Thalassarche cauta	Shy Albatross
No	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	Yes	Thalassarche melanophris	Black-browed Albatross
No	Yes	Thalassarche steadi	White-capped Albatross

4.1.5.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.5.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

The PMST identified 108 migratory species as matters having the potential to occur within the cable route and 10 km buffer area. These species include:

- 14 cetaceans (of which six are threatened and assessed in Section 5, Table 5.1, pg 73 of the Att3–Install-West-EA-AppB-MarineEcology).This includes:
  - Antarctic minke whale (Balaenoptera bonaerensis)
  - Bryde's whale (Balaenoptera edeni)
  - Dusky dolphin (Lagenorhynchus obscurus)
  - Humpback whale (Megaptera novaeangliae)
  - Killer whale (Orcinus orca)
  - Pygmy right whale (Caperea marginata)
  - Sperm whale (Physeter macrocephalus)
  - Spotted bottlenose dolphin (Tursiops aduncus)
- One additional marine mammal: dugong (*Dugong dugon*)
- One additional marine reptile: saltwater crocodile (*Crocodylus porosus*)
- Six turtles which are all assessed in Section 5, Table 5.3, pg 78 of the Att3–Install-West-EA-AppB-MarineEcology
- 13 sharks and rays of which five are threatened and assessed in Section 5, Table 5.4, pg 78 of the Att3–Install-West-EA-AppB-MarineEcology. This includes:
  - Giant manta ray (*Mobula birostris*)
  - Grey nurse shark (*Carcharias taurus*)
  - Longfin mako (*Isurus paucus*)
  - Narrow sawfish (*Anoxypristis cuspidata*)
  - Oceanic whitetip shark (*Carcharhinus longimanus*)
  - Porbeagle (*Lamna nasus*)
  - Reef manta ray (*Mobula alfredi*)
  - Shortfin mako (*Isurus oxyrinchus*)
- 30 migratory marine birds (of which 17 are threatened and assessed in Section 5, Table 5.8, pg 84 of the Att3–Install-West-EA-AppB-MarineEcology). This includes:
  - Barn swallow (*Hirundo rustica*)
  - Bar-tailed godwit (*Limosa lapponica*)
  - Bridled tern (*Onychoprion anaethetus*)
  - Broad-billed sandpiper (*Limicola falcinellus*)
  - Brown booby (*Sula leucogaster*)
  - Caspian tern (*Hydroprogne caspia*)
  - Common noddy (*Anous stolidus*)
  - Common redshank (*Tringa totanus*)
  - Common sandpiper (*Actitis hypoleucos*)
  - Flesh-footed shearwater (*Puffinus carneipes*)
  - Fork-tailed swift (*Apus pacificus*)
  - Great frigatebird (*Fregata minor*)
  - Grey-tailed tattler (*Tringa brevipes*)
  - Grey wagtail (*Motacilla cinerea*)
  - Lesser frigatebird (*Fregata ariel*)
  - Little curlew (*Numenius minutus*)
  - Little ringed plover (*Charadrius dubius*)
  - Long-toed stint (*Calidris subminuta*)
  - Marsh sandpiper (*Tringa stagnatilis*)
  - Oriental plover (*Charadrius veredus*)
  - Oriental pratincole (*Glareola maldivarum*)
  - Osprey (*Pandion haliaetus*)
  - Pacific golden plover (*Pluvialis fulva*)

- Pectoral sandpiper (*Calidris melanotos*)
- Pin-tailed snipe (*Gallinago stenura*)
- Red-footed booby (*Sula sula*)
- Red-necked stint (*Calidris ruficollis*)
- Red-rumped swallow (*Cecropis daurica*)
- Red-tailed tropicbird (*Phaethon rubricauda*)
- Roseate tern (*Sterna dougallii*)
- Ruff (reeve) (*Philomachus pugnax*)
- Sanderling (*Calidris alba*)
- Streaked shearwater (*Calonectris leucomelas*)
- Swinhoe's snipe (*Gallinago megala*)
- Wandering tattler (*Tringa incana*)
- Whimbrel (*Numenius phaeopus*)
- White-tailed tropicbird (*Phaethon lepturus*)
- Wood sandpiper (*Tringa glareola*)
- Yellow wagtail (*Motacilla flava*)

These species have the potential to be indirectly impacted as a result of:

- **Seabed disturbance:** disturbance of and damage to soft benthic habitats and the infauna communities by cable laying. Further information, see Section 3.1, pg 5 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Underwater noise emissions:** disruption to navigation, behaviour and communication of cetaceans, other mammals, reptiles and fish that use sonar for navigational purposes due to underwater noise emissions. Further information, see Section 3.2, pg 7 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Artificial light emissions:** disruption to marine fauna from artificial light emissions generated from survey vessels. Further information, see Section 3.3, pg 17 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Atmospheric emissions:** emission of greenhouse gases (such as carbon dioxide, methane and nitrous oxide) and non-greenhouse gases (such as sulphur oxides and nitrous oxides) as a result of burning of fuel to power vessel engines, generators and equipment. Further information, see Section 3.4, pg 19 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Planned discharges:** this includes sewage and food waste, brine, cooling water and deck drainage. Further information, see Section 3.5, pg 21 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Interference with other users:** includes temporary loss of access to fishing grounds and navigational waters within the installation area. Further information, see Section 3.6, pg 23 of Att4–Install-East-EA-AppC-ImpactAssessment
- **Marine fauna collisions or entanglement:** the potential for collision to occur between marine fauna and survey vessels. Further information, see Section 3.8, pg 25 of Att4–Install-West-EA-AppC-ImpactAssessment

Pest introduction and proliferation: Invasive marine pests (IMPs) are identified as marine plants, animals and algae, which have been introduced into a location that is not within their natural dispersal range but which provides conditions that support their survivorship. Further information, see Section 3.8, pg 27 of Att4–Install-West-EA-AppC-ImpactAssessment

4.1.5.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.5.6 Describe why you do not consider this to be a Significant Impact. *

The cable installation activities have been assessed as unlikely to have a significant impact on the migratory species likely to occur within the cable alignment that will:

Substantially modify (including fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species

With the implementation of identified management measures, particularly adherence to Part 8 of the EPBC Regulations (2000) and potential impacts on animal navigation and passage will be mitigated. The cable route where feasible will avoid sensitive habitats and timeframes, interference with animals to cause mortality and subsequent population decline is **unlikely to occur** as a result of the subsea cable installation.

Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species

Vessels and immersible equipment conducting the activity have a chance of carrying marine pests in their ballast water or as biofouling; however, management controls applied to these vessels reduce this risk to prevent introductions from occurring. The subsea cable installation is **unlikely** to result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species

Seriously disrupt the lifecycle (breeding, feeding, migration, or resting behaviour) or an ecologically significant proportion of the population of a migratory species

The works associated with the project are **unlikely** to disrupt the life cycle of any of the species. These species do not breed, feed, migrate or rest roost exclusively within habitats crossed by the cable route, and the activities will not prevent movement to these areas. These species are expected to avoid subsea cable installation activities. If encountered appropriate mitigation measures, such as the adherence to Part 8 of the EPBC Regulations (2000) and the Australian Guidelines for Whale and Dolphin Watching for sea-faring activities, are in place to minimise potential for impact. Consequently, the project is not considered likely to seriously disrupt the lifecycle of any migratory species.

Further information is provided in Table 4.4, Section 4 page 42 of Att4–Install-West-EA-AppC-ImpactAssessment

4.1.5.7 Do you think your proposed action is a controlled action? *

No

4.1.5.9 Please elaborate why you do not think your proposed action is a controlled action. *

Cable installation activities are unlikely to cause Significant Impacts to identified migratory species and therefore does not trigger the criteria to be a controlled action. Refer to Section 4, Table 4.1 and Table 4.2 on pages 33-34 of Att4–Install-West-EA-AppC-ImpactAssessment.

4.1.5.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

A summary of the proposed mitigation measures are provided below. Further information on impact descriptions, impact analysis, management controls and environmental outcomes are available in Att4–Install-West-EA-AppC-ImpactAssessment.

Seabed disturbance

Disturbance to the seabed and benthic habitats will occur mainly during cable burial activities. Recommended management controls include avoiding ecologically sensitive areas during the cable installation activities, no planned anchoring of the vessel during installation activities, avoidance of rocky reefs and other underwater features. Surface cable laying or burial via water jetting (for Western Australia and Northern Territory PLSE) will be used where possible.

Further information is provided in Section 3.1.1, Section 3.1.2, and Section 3.1.3, pg 5-7 of Att4–Install-West-EA-AppC-ImpactAssessment.

Underwater noise emissions

Disturbance to marine fauna including marine birds from above ground and underwater noise may occur in response to noise generated by vessel movement as well as installation activities. Recommended management controls during cable installation activities include timing of survey effort to occur outside of peak migration months where possible, implementation of Part 8 of the EPBC Regulations (2000) and the Australian Guidelines for Whale and Dolphin Watching for sea-faring activities, and maintenance of vessel machineries to reduce noise emissions.

Further information is provided in Section 3.2.1, Section 3.2.2, and Section 3.2.3 on pg 7-17 of Att4–Install-West-EA-AppC-ImpactAssessment.

Artificial light emissions

Artificial light from the installation vessel may attract and disorientate fauna such as birds, marine turtles, fish and other pelagic species, particularly during peak breeding and migratory periods. Recommended management controls include use of directional lighting to minimise light spill and management of lighting on vessel decks to reduce direct light spill, in accordance with the National Light Pollution Guidelines for Wildlife (DCCEEW 2023).

Further information is provided in Section 3.3.1, Section 3.3.2, and Section 3.3.3, pg 17-19 of Att4–Install-West-EA-AppC-ImpactAssessment.

Atmospheric emissions

Short-term reduction in air quality in the immediate region along the subsea cable installation route may occur due to the burning of hydrocarbons which would occur from the cable installation vessel.

Recommended management controls include properly maintaining equipment; catalytic converters and exhaust filters will be correctly fitted; limiting of idling time of diesel engines, and compliance with The International Convention for the Prevention of Pollution from Ships (MARPOL) Annex VI as implemented in Commonwealth waters by the Commonwealth *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (PSPPS Act); and Marine Order 97: Marine pollution prevention - air pollution).

Further information is provided in Section 3.4.1, Section 3.4.2, and Section 3.4.3, pg 19-20 of Att4–Install-West-EA-AppC-ImpactAssessment.

Planned discharges

Possible planned discharges associated with cable installation activities include sewage and food waste, brine, cooling water, and deck drainage. Recommended mitigation measures include collecting sewage and food waste in accordance with relevant State legislation and Australian regulations (AMSA) and compliance with MARPOL regulations (Annex IV).

Further information is provided in Section 3.5.1, Section 3.5.2, and Section 3.5.3, pg 21-23 of Att4–Install-West-EA-AppC-ImpactAssessment.

Interference with other users

There is potential that fishing would be temporarily disrupted, that fishing apparatus may be damaged upon catching onto the installation equipment or that vessels may be required to change navigational course to avoid collision risk.

Recommended management controls include undertaking installation activities in accordance with all marine navigation and vessel safety requirements under the International Convention of the Safety of Life at Sea (SOLAS) 1974 and *Navigation Act 2012*, consultation with relevant stakeholders, proper notifications via Notice to Mariners and others, equipping the installation vessel with all navigational and safety requirements for operation in Australian waters, and conducting visual observations by trained watch keepers on the vessel 24 hours per day to support management of collision risk with other users.

Further information is provided in Section 3.6.1, Section 3.6.2, and Section 3.6.3, pg 23-24 of Att4–Install-West-EA-AppC-ImpactAssessment.

Pest introduction and proliferation

Vessels carrying invasive marine pests (IMPs) may unintentionally but successfully introduce these species to the region where the installation activity is occurring.

Recommended control measures include sourcing vessels locally; international vessels arriving in Australia should adhere to Australian quarantine requirements, and management of ballast water must follow Australian Quarantine and Inspection Service (AQIS) guidelines.

Further information is provided in Section 3.9.1, Section 3.9.2, and Section 3.9.3, pg 27-28 of Att4–Install-West-EA-AppC-ImpactAssessment.

4.1.5.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The cable installation activities will not require offsets.

4.1.6 Nuclear

4.1.6.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.6.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposed action does not incorporate a nuclear action.

4.1.7 Commonwealth Marine Area

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

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4.1.7.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

Yes

4.1.7.2 Briefly describe why your action has a direct and/or indirect impact on these protected matters. *

The cable installation activities will traverse across the EEZ with surface lay as the main cable installation method. The following impacts have the potential to occur:

- **Planned discharges:** this includes sewage and food waste, brine, cooling water and deck drainage. Further information, see Section 3.1, pg 5 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Atmospheric emissions:** emission of greenhouse gases (such as carbon dioxide, methane and nitrous oxide) and non-greenhouse gases (such as sulphur oxides and nitrous oxides) as a result of burning of fuel to power vessel engines, generators and equipment. Further information, see Section 3.4, pg 19 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Interference with other users:** includes temporary loss of access to fishing grounds and navigational waters within the installation area. Further information, see Section 3.6, pg 22 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Pest introduction and proliferation:** Invasive marine pests (IMPs) are identified as marine plants, animals and algae, which have been introduced into a location that is not within their natural dispersal range but which provides conditions that support their survivorship. Further information, see Section 3.9, pg 26 of Att4–Install-West-EA-AppC-ImpactAssessment
- **Accidental release of solid wastes:** waste on board the vessel may be released into the marine environment if not properly contained . Further information, see Section 3.10 pg 28 of Att4–Install-West-EA-AppC-ImpactAssessment.

4.1.7.4 Do you consider this likely direct and/or indirect impact to be a Significant Impact? *

No

4.1.7.6 Describe why you do not consider this to be a Significant Impact. *

The cable installation activities were assessed as unlikely to have a significant impact on the Commonwealth Marine Area environment as the activities will not:

- Result in a known or potential pest species becoming established in the Commonwealth marine area
- Modify, destroy, fragment, isolate or disturb an important or substantial area of habitat such that an adverse impact on marine ecosystem functioning or integrity in a Commonwealth marine area results.
- Have a substantial adverse effect on a population of a marine species or cetacean including its life cycle (for example, breeding, feeding, migration behaviour, life expectancy) and spatial distribution
- Result in a substantial change in air quality or water quality (including temperature) which may adversely impact on biodiversity, ecological integrity; social amenity or human health
- Result in persistent organic chemicals, heavy metals, or other potentially harmful chemicals accumulating in the marine environment such that biodiversity, ecological integrity, social amenity or human health may be adversely affected
- Have a substantial adverse impact on heritage values of the Commonwealth marine area, including damage or destruction of an historic shipwreck.

For further details, refer to Section 4, Table 4.1, pg 33 of Att4–Install-West-EA-AppC-ImpactAssessment.

4.1.7.7 Do you think your proposed action is a controlled action? *

No

4.1.7.9 Please elaborate why you do not think your proposed action is a controlled action. *

Cable installation activities are unlikely to cause significant impacts to the Commonwealth Marine Area and its threatened species and therefore does not trigger the criteria to be a controlled action. Refer to Section 4, Table 4.1 and Table 4.2 on pages 33-37 of Att4–Install-West-EA-AppC-ImpactAssessment.

4.1.7.10 Please describe any avoidance or mitigation measures proposed for this action and attach any supporting documentation for these avoidance and mitigation measures. *

A summary of the proposed mitigation measures are provided below. Further information on impact descriptions, impact analysis, management controls and environmental outcomes are available in Att4–Install-West-EA-AppC-ImpactAssessment.

Planned discharges

Possible planned discharges associated with cable installation activities include sewage and food waste, brine, cooling water, and deck drainage. Recommended mitigation measures include collecting sewage and food waste in accordance with relevant State legislation and Australian regulations (AMSA) and compliance with MARPOL regulations (Annex IV).

Further information is provided in Section 3.5.1, Section 3.5.2, and Section 3.5.3, pg 21-23 of Att4–Install-West-EA-AppC-ImpactAssessment.

Atmospheric emissions

Short-term reduction in air quality in the immediate region along the subsea cable installation route may occur due to the burning of hydrocarbons which would occur throughout the cable installation activities.

Recommended management controls include properly maintaining equipment; catalytic converters and exhaust filters will be correctly fitted; limiting of idling time of diesel engines, and compliance with MARPOL Annex VI as implemented in Commonwealth waters by the Commonwealth *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (PSPPS Act); and Marine Order 97: Marine pollution prevention - air pollution).

Further information is provided in Section 3.4.1, Section 3.4.2, and Section 3.4.3, pg 19-20 of Att4–Install-West-EA-AppC-ImpactAssessment.

Interference with other users

There is potential that fishing would be temporarily disrupted, that fishing apparatus may be damaged upon catching onto the installation equipment or that vessels may be required to change navigational course to avoid collision risk. Fishing gear such as crab pots may be unintentionally displaced or recovered if located within the direct path of the grapnel run. It is noted that interference with fishing equipment is an offense in Western Australia under Section 172 of the *Fish Resources Management Act 1994* and penalties apply.

Recommended management controls include undertaking installation activities in accordance with all marine navigation and vessel safety requirements under the International Convention of the Safety of Life at Sea (SOLAS) 1974 and *Navigation Act 2012*, consultation with relevant stakeholders, proper notification via Notice to Mariners and others, equipping the installation vessel with all navigational and safety requirements for operation in Australian waters, and conducting visual observations by trained watch keepers on the vessel 24 hours per day to support management of collision risk with other users.

Further information is provided in Section 3.6.1, Section 3.6.2, and Section 3.6.3, pg 23-24 of Att4–Install-West-EA-AppC-ImpactAssessment.

Pest introduction and proliferation

Vessels carrying invasive marine pests (IMPs) may unintentionally but successfully introduce these species to the region where the installation activity is occurring.

Recommended control measures include sourcing vessels locally; international vessels arriving in Australia should adhere to Australian quarantine requirements, and management of ballast water must follow Australian Quarantine and Inspection Service (AQIS) guidelines.

Further information is provided in Section 3.9.1, Section 3.9.2, and Section 3.9.3, pg 27-28 of Att4–Install-West-EA-AppC-ImpactAssessment.

Accidental release of solid wastes

Variety of hazardous and non-hazardous solid wastes may be released unintentionally into the environment. Recommended management controls include appropriate waste containment facilities, no waste materials disposed overboard in accordance with MARPOL Annex V.

Further information is provided in Section 3.10 pg 28 of Att4–Install-West-EA-AppC-ImpactAssessment.

4.1.7.11 Please describe any proposed offsets and attach any supporting documentation relevant to these measures. *

The cable installation activities will not require offset areas due to the marine nature of work.

4.1.8 Great Barrier Reef

4.1.8.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.8.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The study area is not within proximity to the Great Barrier Reef.

4.1.9 Water resource in relation to large coal mining development or coal seam gas

4.1.9.1 Is the proposed action likely to have any direct and/or indirect impact on this protected matter? *

No

4.1.9.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The proposed action relates to the installation of subsea cables and does not involve the construction or operation of coal seam gas wells; and does not involve the extraction of coal seam gas.

4.1.10 Commonwealth Land

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.10.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.10.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The PMST results identified 176 Commonwealth Lands to occur within the study area. None of these areas are marine based and therefore are not anticipated to be impacted by the subsea cable installation activities.

Full list of identified Commonwealth Land Areas is described in Appendix A of Att3–Install-West-EA-AppB-MarineEcology

4.1.11 Commonwealth Heritage Places Overseas

You have identified your proposed action will likely directly and/or indirectly impact the following protected matters.

A direct impact is a direct consequence of an action taken – for example, clearing of habitat for a threatened species or permanent shading on an ecological community as the result of installing solar panels.

An indirect impact is an 'indirect consequence' such as a downstream impact or a facilitated third-party action.

—

4.1.11.1 Is the proposed action likely to have any direct and/or indirect impact on any of these protected matters? *

No

4.1.11.3 Briefly describe why your action is unlikely to have a direct and/or indirect impact. *

The study area does not intersect any areas of Commonwealth Heritage Places Overseas and therefore impacts to these are not anticipated.

4.1.12 Commonwealth or Commonwealth Agency

4.1.12.1 Is the proposed action to be taken by the Commonwealth or a Commonwealth Agency? *

No

4.2 Impact summary

Conclusion on the likelihood of significant impacts

You have indicated that the proposed action will likely have a significant impact on the following Matters of National Environmental Significance:

None

Conclusion on the likelihood of unlikely significant impacts

You have indicated that the proposed action will unlikely have a significant impact on the following Matters of National Environmental Significance:

- World Heritage (S12)
- National Heritage (S15B)
- Ramsar Wetland (S16)
- Threatened Species and Ecological Communities (S18)
- Migratory Species (S20)
- Nuclear (S21)
- Commonwealth Marine Area (S23)
- Great Barrier Reef (S24B)
- Water resource in relation to large coal mining development or coal seam gas (S24D)
- Commonwealth Land (S26)
- Commonwealth Heritage Places Overseas (S27B)
- Commonwealth or Commonwealth Agency (S28)

4.3 Alternatives

4.3.1 Do you have any possible alternatives for your proposed action to be considered as part of your referral? *

No

4.3.8 Describe why alternatives for your proposed action were not possible. *

The subsea cable has been routed and designed with aim to minimise potential impacts on the environment.

Routing adjustments include:

- Multiple survey routes assessed as options and refined
- Deconfliction to avoid seamounts in offshore Commonwealth waters
- Deconfliction with Defence practice area and UXO area
- Deconfliction with other planned subsea cables

Cable installation adjustments examples include:

- Burial of the cable via water jetting in Western Australia and Northern Territory coastal waters due to shallow water depths and presence of marine vegetation (WA)

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1-Install-West-EA-MainReport.pdf This file contains the main environmental assessment report for the proposed action.	30/09/2025	No	High
#2.	Document	Att2–Install-West-EA-AppA-CoastalAssessment.pdf This file contains the coastal assessment for the proposed action.	30/09/2025	No	High
#3.	Document	Att3-Install-West-EA-AppB-Marine Ecology.pdf This file is the summary of threatened species within the project area. It includes the likelihood of occurrence and impact (direct and indirect) of all threatened species extracted from the PMST search.	30/09/2025	No	High
#4.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	30/09/2025	No	High
#5.	Document	Att5-Install-West-EA-AppD-Other Considerations.pdf This file contains descriptions of other matters that would need to be considered, such as heritage and commercial interests within or near the proposed action.	30/09/2025	Yes	High
#6.	Document	Att5-Install-West-EA-AppD-Other Considerations_Redacted.pdf This file is a redacted version of Att5-Install-West-EA-AppD-Other Considerations.	30/09/2025	No	High
#7.	Document	Att6-SubCom-EHS-EHS Policy.pdf This file contains SubCom's EHS policy.	30/09/2025	No	High

1.2.6 Commonwealth or state legislation, planning frameworks or policy documents that are relevant to the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1-Install-West-EA-MainReport.pdf This file contains the main environmental assessment report for the proposed action.	29/09/2025		High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1-Install-West-EA-MainReport.pdf This file contains the main environmental assessment report for the proposed action.	29/09/2025		High

1.3.2.18 (Person proposing to take the action) If the person proposing to take the action is a corporation, provide details of the corporation’s environmental policy and planning framework

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att6-SubCom-EHS-EHS Policy.pdf This file contains SubCom's EHS policy.	29/09/2025		High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att2–Install-West-EA-AppA-CoastalAssessment.pdf This file contains the coastal assessment for the proposed action.	29/09/2025		High
#2.	Document	Att3-Install-West-EA-AppB-Marine Ecology.pdf This file is the summary of threatened species within the project area. It includes the likelihood of occurrence and impact (direct and indirect) of all threatened species extracted from the PMST search.	29/09/2025		High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att5-Install-West-EA-AppD-Other Considerations.pdf This file contains descriptions of other matters that would need to be considered, such as heritage and commercial interests within or near the proposed action.	29/09/2025		High
#2.	Document	Att5-Install-West-EA-AppD-Other Considerations_Redacted.pdf This file is a redacted version of Att5-Install-West-EA-AppD-Other Considerations.	29/09/2025		High

3.1.3 Natural features, important or unique values that applies to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3-Install-West-EA-AppB-Marine Ecology.pdf This file is the summary of threatened species within the project area. It includes the likelihood of occurrence and impact (direct and indirect) of all threatened species extracted from the PMST search.	29/09/2025		High

3.1.4 Gradient relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att2–Install-West-EA-AppA-CoastalAssessment.pdf This file contains the coastal assessment for the proposed action.	29/09/2025		High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3-Install-West-EA-AppB-Marine Ecology.pdf This file is the summary of threatened species within the project area. It includes the likelihood of occurrence and impact (direct and indirect) of all threatened species extracted from the PMST search.	29/09/2025		High

3.2.2 Vegetation within the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3-Install-West-EA-AppB-Marine Ecology.pdf This file is the summary of threatened species within the project area. It includes the likelihood of occurrence and impact (direct and indirect) of all threatened species extracted from the PMST search.	29/09/2025		High

3.3.1 Commonwealth heritage places overseas or other places that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att5-Install-West-EA-AppD-Other Considerations.pdf This file contains descriptions of other	29/09/2025		High

		matters that would need to be considered, such as heritage and commercial interests within or near the proposed action.			
#2.	Document	Att5-Install-West-EA-AppD-Other Considerations_Redacted.pdf This file is a redacted version of Att5-Install-West-EA-AppD-Other Considerations.	29/09/2025		High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att5-Install-West-EA-AppD-Other Considerations.pdf This file contains descriptions of other matters that would need to be considered, such as heritage and commercial interests within or near the proposed action.	29/09/2025		High
#2.	Document	Att5-Install-West-EA-AppD-Other Considerations_Redacted.pdf This file is a redacted version of Att5-Install-West-EA-AppD-Other Considerations.	29/09/2025		High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att2–Install-West-EA-AppA-CoastalAssessment.pdf This file contains the coastal assessment for the proposed action.	29/09/2025		High

4.1.3.3 (Ramsar Wetland) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3-Install-West-EA-AppB-Marine Ecology.pdf This file is the summary of threatened species within the project area. It includes the likelihood of occurrence and impact (direct and indirect) of all threatened species extracted from the PMST search.	29/09/2025		High

4.1.4.2 (Threatened Species and Ecological Communities) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3-Install-West-EA-AppB-Marine Ecology.pdf This file is the summary of threatened species within the project area. It includes the likelihood of occurrence and impact (direct and indirect) of all threatened species extracted from the PMST search.	29/09/2025		High
#2.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.4.6 (Threatened Species and Ecological Communities) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.4.9 (Threatened Species and Ecological Communities) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.4.10 (Threatened Species and Ecological Communities) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.5.2 (Migratory Species) Why your action has a direct and/or indirect impact on the identified protected matters

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3-Install-West-EA-AppB-Marine Ecology.pdf This file is the summary of threatened species within the project area. It includes the likelihood of occurrence and impact (direct and indirect) of all threatened species extracted from the PMST search.	29/09/2025		High
#2.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.5.6 (Migratory Species) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.5.9 (Migratory Species) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.5.10 (Migratory Species) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.7.2 (Commonwealth Marine Area) Why your action has a direct and/or indirect impact on the identified protected matters

Type	Name	Date	Sensitivity	Confidence
#1.	Document Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.7.6 (Commonwealth Marine Area) Why you do not consider the direct and/or indirect impact to be a Significant Impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.7.9 (Commonwealth Marine Area) Why you do not think your proposed action is a controlled action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.7.10 (Commonwealth Marine Area) Avoidance or mitigation measures proposed for this action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-Install-West-EA-AppC-Impact Assessment.pdf This file contains the impact assessment, where impacts against MNES and other protected matters are described and assessed.	29/09/2025		High

4.1.10.3 (Commonwealth Land) Why your action is unlikely to have a direct and/or indirect impact

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3-Install-West-EA-AppB-Marine Ecology.pdf This file is the summary of threatened species within the project area. It includes the likelihood of occurrence and impact (direct and indirect) of all	29/09/2025		High

threatened species extracted from the PMST search.

5.2 Declarations

Completed Referring party's declaration

The Referring party is the person preparing the information in this referral.

ABN/ACN	39008488373
Organisation name	GHD PTY LTD
Organisation address	2000 NSW
Representative's name	Joanna El Khoury
Representative's job title	Technical Director - Marine
Phone	0733163849
Email	Joanna.Elkhoury@ghd.com
Address	145 Ann Street Brisbane QLD 4000

☑ Check this box to indicate you have read the referral form. *

☑ Check this box to confirm these are the correct identification details. *

☑ By checking this box, I, **Joanna El Khoury of GHD PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

Completed Person proposing to take the action's declaration

The Person proposing to take the action is the individual, business, government agency or trustee that will be responsible for the proposed action.

ABN/ACN	24672742166
Organisation name	PERCH INFRASTRUCTURE PTY LTD
Organisation address	2000 NSW
Representative's name	Steven Lay

Representative's job title	Google's Global Network Infrastructure Group
Phone	+61295666585
Email	stevenlay@google.com
Address	Level 18, 420 George Street Sydney NSW 2000 Australia

☑ Check this box to indicate you have read the referral form. *

☑ Check this box to confirm these are the correct identification details. *

☑ I, **Steven Lay of PERCH INFRASTRUCTURE PTY LTD**, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.

✔ Completed Proposed designated proponent's declaration

The Proposed designated proponent is the individual or organisation proposed to be responsible for meeting the requirements of the EPBC Act during the assessment process, if the Minister decides that this project is a controlled action.

Same as Person proposing to take the action information.

☑ Check this box to indicate you have read the referral form. *

☑ Check this box to confirm these are the correct identification details. *

☑ I, **Steven Lay of PERCH INFRASTRUCTURE PTY LTD**, the Proposed designated proponent, consent to the designation of myself as the Proposed designated proponent for the purposes of the action described in this EPBC Act Referral. *

You may receive automated notifications that aim to assist you in tracking the progress of your project. You can opt out of these notifications by updating your communication preferences on your profile.