SMAP telecommunications submarine cable installation

Application Number: **02562** Commencement Date: **20/08/2024** Status: **Locked**

1. About the project

1.1 Project details

1.1.1 Project title *

SMAP telecommunications submarine cable installation

1.1.2 Project industry type *

Telecommunications

1.1.3 Project industry sub-type

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1.1.4 Estimated start date *

01/03/2025

1.1.4 Estimated end date *

31/03/2026

1.2 Proposed Action details

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

SUBCO South Pty Ltd (SUBCO) is proposing to build the Sydney, Melbourne, Adelaide and Perth (SMAP) telecommunications submarine cable network, providing international connectivity to Australia. The purpose of this cable project is to provide the first fully armoured long-haul cable system in Australia, to deliver

substantially increased capacity and the first net-zero telecommunications cable to increase network performance and resiliency for Australia.

There are five landings for SMAP which include:

- City Beach, Perth, WA
- Garden Island, WA
- West Beach, Adelaide
- Torquay, Victoria (referred to as Voss' Circuit)
- Broadarrow Reserve, Sydney

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

- Att1 – SMAP-EA-MainReport
- Att2 – SMAP-EA-AppA-CoastalAssessment
- Att3 – SMAP-EA-AppB-MarineEcology-ReducedA
- Att3 – SMAP-EA-AppB-MarineEcology-ReducedB
- Att4 – SMAP-EA-AppC-ImpactAssessment
- Att5 – SMAP-EA-AppD-OtherConsiderations
- Att5 – SMAP-EA-AppD-OtherConsiderations_Redacted

In February 2024, a Marine Route Survey (MRS) was initiated 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. The survey findings are guiding decisions related to cable armour and burial. Pending the necessary approvals and permits, cable installation is scheduled to begin in March 2025 and be completed by March 2026.

Cable installation at all landings 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 Att1-SMAP-EA-MainReport for contextual information only. These are being 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 and route clearance

Pre-Lay Grapnel Run Operations will be carried out along areas of the designated cable route which have been marked for burial, generally up to 1,000-1,500m water depths. This procedure occurs prior to cable laying operations. The primary objective of the pre-lay grapnel run is to clear any debris, fishing nets, or lines that may have accumulated within the lay corridor. Ensuring a debris-free route is crucial to mitigate potential risks during submarine cable installation.

A typical grapnel to be used during this activity consists of a 15 m long towing chain, 1.5 m x 0.09 m anchor and 3.5 m long giffords. The total length of the grapnel is approximately 20 m. Typical PLGR vessel speeds are limited to 6 knots.

During the operation, grapnels will be towed by the main lay vessel across the cable route. Any debris recovered during these activities will be unloaded ashore and processed in compliance with local regulations. In cases where debris cannot be removed, a localised route modification will be planned to

circumvent the obstruction.

Further information about pre-lay grapnel run and route clearance is provided in Section 2.4.1, page 17 of Att1-SMAP-EA-MainReport.

Surface laying operations

Surface laying of the cable directly onto the seabed is suitable for low risk, deep water regions where constraints on the cable are expected to be minimal. The cable will be positioned as closely as feasible to the intended route, while maintaining the appropriate amount of slack. This slack allows the cable to conform smoothly to the seabed contours without forming loops or suspensions.

Surface laying operations are generally undertaken in areas with water depths greater than 1,000-1,500m. Typical surface lay activities are conducted at speeds of less than 6 knots. Surface laying is also undertaken in areas where burial is not feasible or not recommended in shallower water depths. Surface laying will be required through a segment of the route into Victoria where seabed consists of hard substrate and another segment into South Australia to minimise impact on seagrass.

Further information about surface laying operations is provided in Section 2.4.2, page 18 of Att1-SMAP-EA-MainReport.

Plough burial operations

Burial of the cable by ploughing will occur by the cable ship towing the plough across the seabed. The plough width is approximately 5.6 m and the trench width is approximately 340 mm. Plough burial is typically undertaken in water depths up to 1,000 m to 1,500 m. In areas where ploughing is planned, the cable will be buried at the target depth of 1.0 m below seabed. Vessel speeds during burial operations are determined by seabed conditions and typically at 1.5 knots or less.

The burial process will be controlled through adjusting the height of the front skids of the plough and managing the speed of the plough's advance (refer to Section 2.5 of Att1-SMAP-EA-MainReport for further details for the plough). The plough creates a furrow in the seabed into which the cable is laid, and displaced sediments fall back over the cable effecting burial.

Further information about plough burial operations is provided in Section 2.4.3, page 18 of Att1-SMAP-EA-MainReport.

Shore end installation

During the shore end installation, the cable is landed and brought ashore to the beach manhole. For the Sydney and Torquay shore end landings, the cable between the beach manhole and the 20 m water depth contour is less than 2 km. Thus, the cable will be landed directly from the main lay vessel.

For the Perth, Garden Island, and Adelaide shore end landings, the cable distance between the beach manhole and the 20 m water depth contour is more than 2 km, a pre-lay shore end installation is therefore necessary. For the Adelaide landing, the cable will be laid on the seabed for the nearshore areas up to 15 m water depth to mitigate impacts to seagrass beds.

The shore end installation will be carried out from either a cable ship or dedicated pre lay shore end shallow-water vessel that is mobilised specifically for the installation of the cable and equipped with the cable storage and cable handling equipment onboard.

Further information about shore end installation is provided in Section 2.4.4, page 19 of Att1-SMAP-EA-MainReport.

Post-lay inspection and burial operations

The post lay inspection and burial operations (PLIB) is the final stage of submarine cable installation and will be completed via water jetting using a remote-controlled vehicle (ROV). The ROV is deployed from the main lay vessel and will be in autonomous propulsion either on its track or in free swimming, depending on

the seabed and currents. The ROV will inspect whether the cable has been buried to the required depth and specifications. In areas where plough burial operation could not be performed, the ROV is used to bury the cable to the required depth. This includes areas such as cable and pipeline crossings, splice locations, or branching units in buried areas.

For water jetting, the ROV will create a narrow (0.5 to 0.75 m wide) temporary trench. The ROV has jetting swords of up to 3 m in length. This temporary trench will backfill as the fluidised seabed settles.

Further information about the post-lay inspection and burial operations is provided in Section 2.4.5, page 19 in Att1-SMAP-EA-MainReport.

Further information about the ROV is provided in Section 2.5, page 22 to 27 of Att1-SMAP-EA-MainReport.

Summary of project area and disturbance footprints

Total length of cable in Australian waters = 4,762.6km

Total length of cable to be surface laid in Australian waters = 3,839.8 km ; total disturbance footprint from surface lay = 0.144km2 = 14.4ha

Total length of cable to be buried in Australian waters = 922.8 km; total disturbance from PLGR and burial = 9.23km2 = 923ha

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

No

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 legislation relevant to cable installation activities is outlined in Section 3, pg 28-38 of Att1-SMAP-EA-MainReport.

Commonwealth

- ***Environment Protection and Biodiversity Act 1999 (EPBC Act)****:* This Act protects Matters of National Environmental Significance (Protected Matters) (MNES), inclusive of Commonwealth marine areas and Commonwealth-listed threatened and migratory species. An Australian Marine Parks Structures and Works Permit will be submitted to cover submarine cable installation activities in these Marine Parks.
- ***Telecommunications Act 1997*** – *Schedule 3A*: Installation of a fibre optic cable system falls under this Act, which is administered by the Australian Communication and Media Authority (ACMA). The proposed cable route falls within the Southern Sydney Cable Protection Zone and the Perth Cable Protection Zone, and as such, the proposed cable system will require an application for a protection zone installation permit for both protection zones. These permits have been sought from the ACMA.
- ***Underwater Cultural Heritage Act 2018***: This Act protects Australia's shipwrecks, sunken aircraft and other underwater cultural heritage. Installation activities are not expected to impact on shipwrecks and submerged heritage. Any unexpected finds of underwater heritage will be managed to avoid impacts.
- ***Fisheries Administration Action 1991 and the Fisheries Management Act 1991***: The Australian Fisheries Management Authority (AFMA), established under the Fisheries Administration Act 1991, is the Australian Government agency responsible for the efficient management and sustainable use of

Commonwealth fish resources on behalf of the Australian community. The project would occur within regions mapped as Commonwealth fisheries falling under the jurisdiction of AFMA. Consultation with AFMA was completed and no further action is required.

- ***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. The NTA prohibits the undertaking of acts that affect Native Title, being acts that are wholly or partly inconsistent with the continued existence, enjoyment, or exercise of Native Title, other than in accordance with the provisions of the NTA. Due to the nature of the submarine cable installation activities, approval from WTOAC is required for the cable installation.
- ***Defence Regulation 2016****:* It is a requirement under the Defence Regulations 2016 that prior to accessing military training areas for cable installation and maintenance activities, vessel operators have an obligation to contact the Department of Defence. The proposed cable route passes through a number of military firing and practice areas in the offshore West Australia Exercise Area and East Australia Exercise Area.

Western Australia

- ***Environmental Protection Act 1986****:* Part IV of the Environmental Protection Act 1986 (EP Act) makes provisions for the State EPA to carry out impact assessment of significant proposals, strategic proposals, and land use planning schemes. The submarine cable installation is not anticipated to result in significant impacts on the environment. An EPBC self-assessment and preliminary environmental impact assessment for the EPA under the EP Act has been completed.
- ***Planning and Development Act 2005****:* The primary piece of legislation governing development and subdivision across WA. The submarine cable installation fall within land subject to the Metropolitan Region Scheme and the local planning scheme. Installation of the submarine cable constitutes development where it occurs within the area governed under the Metropolitan Region Scheme and is reserve ‘Waterways’. Development approval is required and is being sought from the relevant agencies.
- ***Aboriginal Heritage Act 1972****:* the primary source of legislation for the protection of Aboriginal cultural heritage in WA. It has been identified that submarine cable installation works intersect with ACH ID 18417 (Garden Island). The portion of ACH ID 18417 that is affected by the submarine cable installation is under the jurisdiction of the Commonwealth and as such, the Commonwealth regulator will take dictate requirements including those associated with engagement and permitting.

South Australia

- ***Planning, Development and Infrastructure Act 2016****:* provides for matters relevant to use, development and management of land and buildings and sets up the framework for the South Australian planning system. A Development Approval is required under this Act and is being sought with the relevant agencies
- ***Marine Parks Act 2007****:* provides for a system of marine parks in South Australia. The proposed cable route traverses through the Southern Spencer Gulf Marine Park which is zoned as General Managed Use. As such, no permits are required under the Marine Parks Act for submarine cable installation.
- ***Aboriginal Heritage Act 1988****:* All Aboriginal sites, objects and/or remains, whether previously recorded or not, are provided with statutory protection under this Act. Given the low impact nature of the submarine cable installation, impacts to Aboriginal heritage are not expected.
- ***Heritage Places Act 1993****:* makes provisions for the identification, recording, and conservation of places and objects of non-Indigenous heritage significance in South Australia. There are no state heritage areas or state heritage places within the study area.
- ***Historic Shipwrecks Act 1981****:* provides for the protection of shipwrecks and shipwreck relics. There are no protected zones within the study area. Submarine cable installation activities are not expected to impact on shipwrecks and submerged heritage. Any unexpected finds of underwater heritage will be managed to avoid impacts. A permit under this Act is not required.

- ***Native Vegetation Act 1991****:* native vegetation clearance approval from the Native Vegetation Council may be required for an activity that involves native vegetation clearing (e.g. native seagrass). Installation may impact on native seagrass in a way that constitutes as 'clearing' and as such requiring a permit.

Victoria

- ***Environment Effects Act 1978****:* the principal legislation guiding environmental assessment in Victoria. The activities proposed for submarine cable installation in Victoria are unlikely to trigger criteria requiring an EE Act referral. As such, the submarine cable installation is not expected to need to be referred to the Minister for Planning for assessment under the EE Act.
- ***Planning and Environment Act 1987****:* the land subject to the submarine cable installation is covered by the Surf Coast Planning Scheme and traverses the Public Conservation and Resource Zone and land with no planning zones. A planning permit is not required for works in the PPRZ; however, a planning permit is required for works within the PCRZ. The portion of the cable traversing land with no planning zones will not require a planning permit.
- ***Marine and Coastal Management Act 2018****:* is required for the submarine cable installation in Victoria and a Marine and Coastal Act consent is being sought with the relevant agency.
- ***Aboriginal Heritage Act 2006****:* a Cultural Heritage Management Plan (CHMP) is required as the project is a linear project over 100 m. SUBCO is working with the relevant Registered Aboriginal Parties on the CHMP.
- ***Flora and Fauna Guarantee Act 1988****:* with the application of mitigation measures, impacts to threatened species are not expected and as such no permit under this Act is likely to be required.

New South Wales

- ***Environmental Planning and Assessment Act 1979 (EP&A Act)****:* the principal legislation regulating development in NSW. It establishes a regime for the making of development applications, assessment of their environmental impacts, and the determination of those applications. For the Sydney segment, the cable leaves the Southern Sydney Cable Protection Zone (SSCPZ) due to congestion and lands at Maroubra Beach. Based on legal reviews undertaken in January 2024, the submarine cable would require local development consent from Randwick Council under Part 4 of the EP&A Act.
- ***Crown Lands Management Act 2016****:* provides the basis / principles of management of Crown Land for the people of NSW, including environmental conservation and other considerations to be considered when making decisions about Crown Land. A lease will be required under this act to construct, operate and maintain telecommunication infrastructure / facilities within Crown Reserve and Crown Land from the Department of Planning, Housing and Infrastructure – Crown Lands.
- ***Local Environment Plan 2012 – Randwick****:* Broadarrow Reserve Maroubra and the nearshore coastal waters zone is mapped and defined by the Council LEP as Land Use Zoning RE1 – Public Recreation. The Transport and Infrastructure State Environmental Planning Policy (TISEPP) is to be used where any inconsistencies between Environmental Planning Instruments exist, such as an LEP and a State Environmental Planning Policy. Therefore, the submarine cable installation is permitted with consent under TISEPP under the SSI planning pathway.
- ***Ports and Maritime Administration Act 1995****:* A permit to Disturb the seabed is required from the Port Authority of NSW delegate, being the Port Botany Harbour Master. Engagement is ongoing with the Port Authority of NSW to obtain this permit.
- ***National Parks and Wildlife Act 1974****:* provides the basis for the establishment, preservation and management of national parks, historic sites and certain other areas and the protection of certain Aboriginal objects.
- ***Heritage Act 1977****:* provides the basis for the legal protection and management of Aboriginal sites and objects in NSW. No Aboriginal heritage sites have been identified in Broadarrow Reserve and

are unlikely to be uncovered due to the well surveyed nature of the site. An unexpected finds protocol would be implemented in the case of an unexpected find.

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, Commonwealth and other stakeholders has been identified and consulted in regard to the regulatory permitting and licencing requirements of the submarine cable installation activities. Outcomes of the engagement with stakeholders are further detailed in Table 4.1, Section 4, pages 39 to 49 of Att1-SMAP-EA-MainReport.

Commonwealth

- Australian Communications and Media Authority (ACMA)
- Department of Climate Change, Energy, the Environment and Water (DCCEEW)
- Parks Australia (DCCEEW)
- Department of Defence
- National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) and the Offshore Infrastructure Regulator (OIR)
- National Indigenous Australian Agency (NIAA)
- Australian Fisheries Management Authority (AFMA)
- Commonwealth Fisheries Association (CFA)
- Aboriginal groups outside of state waters including Eastern Maar Aboriginal Corporation, Tasmanian Aboriginal Centre and Aboriginal Land Council of Tasmania

Western Australia

- Department of Planning, Lands and Heritage (DPLH), including the Aboriginal Conservation Team
- Department of Water and Environmental Regulation (DWER) and Environmental Protection Authority (EPA)
- Department of Primary Industries and Regional Development (DPIRD)
- Department of Mining, Industry Regulation and Safety (DMIRS)
- Department of Transport (DoT)
- Department of Biodiversity, Conservation and Attractions (DBCA)
- South West Aboriginal Land and Sea Council (SWALSC)
- Fremantle Port Authority
- Town of Cambridge Council
- Recfishwest
- Western Australia Fishing Industry Council (WAFIC)
- Western Rock Lobster (WRL)
- Perth Lifesaving Club – City of Perth

South Australia

- Department of Environment and Water (DEW), including Coast Protection Board and SA Heritage Council
- State Planning Commission (SPC)
- Department of Trade and Investment (DTI)
- Department for Industry, Innovation and Science (DIIS)
- Aboriginal Affairs and Reconciliation
- SA Marine Parks
- SA Sea Rescue Squadron
- City of Charles Sturt

- Kangaroo Island Council
- Kaurna Traditional Owner Organisation
- Narunnga Nation Aboriginal Corporation
- Ngarrindjeri Aboriginal Corporation
- Surf Life Saving SA
- West Beach Parks
- Coastal Management
- Native Vegetation Council
- Central and KI Crown Lands

Victoria

- Department of Energy, Environment and Climate Action (DEECA)
- Great Ocean Road Coast and Parks Authority (GORCPA)
- Parks Victoria
- Department of Jobs, Precincts, and Regions (DJPR)
- Surf Coast Shire
- Wadawurrung Traditional Owners Aboriginal Corporation
-
- Heritage Victoria
- Jan Juc Surf Life Saving Club (JJSLSC)
- Torquay Surf Life Saving Club (TSLSC)
- Life Saving Victoria (LSV)
- Victorian Fisheries Authority
- VRFish
- Seafood Industries Victoria

New South Wales

- NSW State Department of Primary Industries (Fishing and Aquaculture)
- Maritime Infrastructure Delivery Office (MIDO) Transport for NSW
- DPLH – Department of Planning, Lands, and Heritage
- DPLH – Crown Land
- DCCEEW – Planning and Assessment
- National Parks and Wildlife Service
- City of Randwick Council
- Port Authority of NSW

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.

Personal information may be disclosed to other Australian government agencies, persons or organisations where necessary for the above purposes, provided the disclosure is consistent with relevant laws, in particular the Privacy Act 1988 (Privacy Act). Your personal information will be used and stored in accordance with the Australian Privacy Principles.

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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	145 Ann Street Brisbane QLD 4000

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	57663521631
Organisation name	SUBCO SOUTH PTY LTD
Organisation address	14 Church St, Fortitude Valley 4000 QLD

Person proposing to take the action details

Name	Lee Harper
Job title	Chief Operating Officer
Phone	+61 439 606 006
Email	lee@sub.co
Address	14 Church St., Fortitude Valley QLD 4006

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. *

SUBCO South Pty Ltd (SUBCO) has a satisfactory record of responsible environmental management having successfully completed other submarine cable systems including the Oman Australia Cable and Indigo West and Indigo Central cables.

SUBCO 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 (SUBCO) to take the Action.

SUBCO is employing experienced contractors, ASN and OMS to undertake cable installation activities and will ensure proper implementation of environmental management plans prior to work commencement and during installation activities.

Further information can be found in Att6-SMAP-OMS Policy and Att7-SMAP-ASN Strategy

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

SUBCO is employing experienced contractors to undertake cable installation activities and will ensure proper implementation of environmental management plans prior to work commencement and during installation activities. The Referral decision will form the basis of the environmental management plans.

SUBCO is employing experienced contractors, ASN and OMS to undertake cable installation activities and will ensure proper implementation of environmental management plans prior to work commencement and during installation activities.

ASN will employ their *Strategy for environmentally friendly ship operation* during cable installation works. ASN's strategy considers a vessel decarbonisation plan, which is an action plan ASN are progressing to meet decarbonisation targets of a reduction of ~40% by 2030 and ~70% by 2050. ASN's strategy considers the environmental impact of vessels, and outlines actions for:

- The protection of the marine environment and combating the migration of invasive species
- Reducing atmospheric emissions
- Reducing oily operating waste
- Reducing waste collected on board
- Reducing underwater noise
- Reducing environmental impacts from vessel dismantling

OMS will employ their *OMS Group Quality Policy* which details how they will maintain standards of quality, safety and environmental sustainability.

Further information can be found in Att6-SMAP-OMS Policy and Att7-SMAP-ASN Strategy

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	57663521631
Organisation name	SUBCO SOUTH PTY LTD
Organisation address	14 Church St, Fortitude Valley 4000 QLD

Proposed designated proponent details

Name	Lee Harper
Job title	Chief Operating Officer
Phone	+61 439 606 006
Email	lee@sub.co
Address	14 Church St., Fortitude Valley QLD 4006

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	145 Ann Street Brisbane QLD 4000
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	57663521631
Organisation name	SUBCO SOUTH PTY LTD
Organisation address	14 Church St, Fortitude Valley 4000 QLD
Representative's name	Lee Harper
Representative's job title	Chief Operating Officer
Phone	+61 439 606 006
Email	lee@sub.co
Address	14 Church St., Fortitude Valley QLD 4006

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

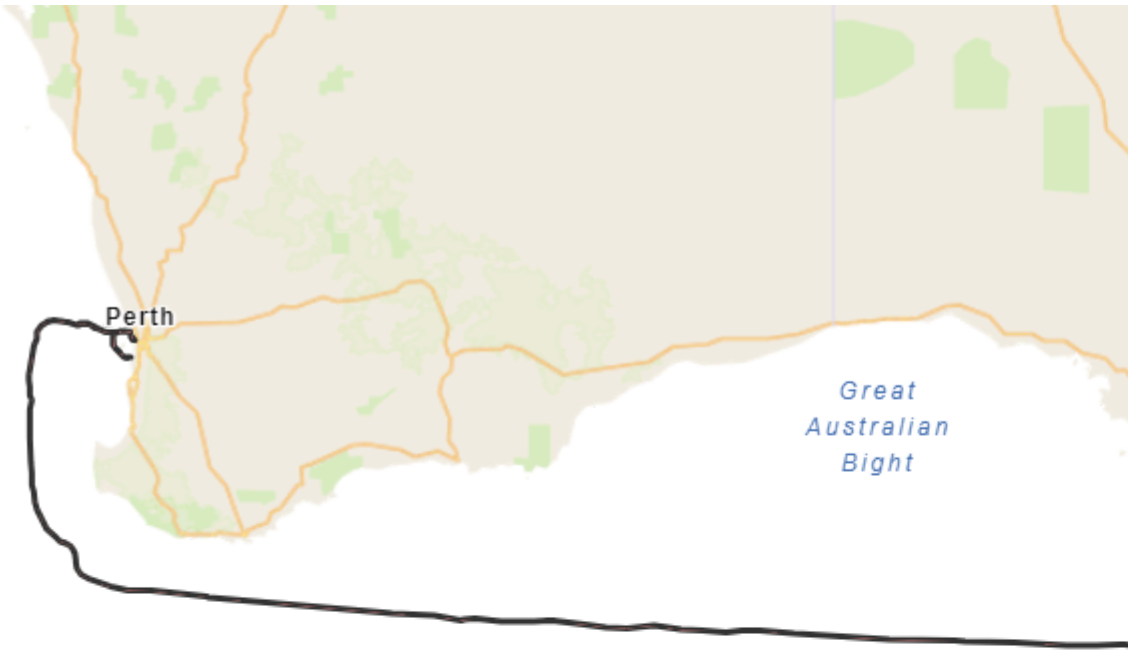
1.4 Payment details: Payment allocation

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

Referring party

2. Location

2.1 Project footprint



Please see attached 2024-09989 SMAP telecommunications submarine cable installation – Project footprint map

Maptaskr © 2024 -34.767511, 154.977842

Powered By Esri - Sources: Esri, TomTom, Garmin, F…

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 SMAP cable installation works in state and commonwealth waters.

The cable installation will start in Western Australia, with landings in Perth and Garden Island. The cable will then continue southeast and land in Adelaide, then Torquay and finish in Sydney. 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 submarine cable installation is outlined in Section 2, pages 3 to 45 of Att2-SMAP-EA-AppA-CoastalAssessment and Section 3, pages 45 to 94 of Att3-SMAP-EA-AppB-MarineEcology_ReducedA.

Western Australia - Perth Landing

Nearshore coastal environment surrounding City Beach in Perth mainly comprises patches of rocky intertidal and subtidal reefs, as well as extensive sandy habitat areas. The cable route intersects mostly mobile sand, bordering macroalgae-covered reef. The cable route crosses an area of veneer of loose gravelly sand over medium dense to dense sand with numerous seagrass patches/marine growth. This landing lands within the Perth Cable Protection Zone (PCPZ).

Western Australia - Garden Island

The nearshore environment shares similar environmental characteristics to those outlined for the Perth landing. Garden Island's nearshore environment is situated within the Cockburn Sound area, where seagrass beds serve as the primary habitat for benthic primary producers.

Key Ecological Features (KEFs) associated with the Perth and Garden Island areas include:

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

South Australia – West Beach Landing

- The nearshore shelf environment near South Australia's state waters consists of various marine habitats, islands and two gulfs encompassing substantial and varied marine systems. Primary habitat characteristics mapped along the nearshore environment consisted of soft sediment with patches of sparce to dense seagrass habitat.

KEFs include:

- Kangaroo Island Pool, canyons and adjacent shelf break, and Eyre Peninsula upwellings

Victoria – Voss' Circuit Landing

- The proposed cable in Victoria lands at Torquay Surf beach located along the Surf Coast in Victoria. This landing is referred to as Voss' Circuit. The coastal waters surrounding the cable route consists solely of shelf habitat. The Victorian nearshore environment has a rich biodiversity and unique ecological assemblage across its nearshore shelf environment. Results from the MRS indicate that the cable will intersect approximately 4 km of rocky outcrop with veneer of sediments before intersecting fine sediment out to the coastal waters limit.

KEFs:

- None identified

New South Wales – Sydney Landing

Within state waters limit of the NSW cable route, the benthic habitats consist entirely of sand and soft sediment substrata out to the NSW State water limit. The cable route intersects the Maroubra Beach National Surfing Reserve which extends from the shoreline and out to the end of the surf zone. The cable will connect into an existing conduit outside of the reserve and therefore no works will be undertaken within the reserve itself.

The offshore waters surrounding the NSW cable route intersects predominately deep ocean floors with patches of slope and shelf habitat. Offshore waters of the Sydney cable route are primarily comprised of open sandy systems with intermittently distributed small rocky reef outcrops.

KEFs:

- Canyons on the eastern continental slope

Further information can be found in Section 2, pages 3 to 45 of Att2-SMAP-EA-CoastalAssessment.

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

The installation phase of the proposed cable route will occur in Commonwealth Waters. Outside of State Marine Park jurisdiction, coastal waters are used for commercial, recreational, and general boating activities.

The cable passes through areas of hydrocarbon activity including oil and gas wells, pipelines and petroleum titled areas in Victoria and South Australia, particularly the BassGas pipeline which extends from the south-east coast of Victoria to the coast of Tasmania, and the Yolla pipeline which is located to the west of the BassGas pipeline. Two petroleum titles are intersected with the submarine cable route with T/49P Otway Basin which is located off the coast of Victoria. This is used as an exploration permit and expires in August 2024. The other is the EPP42 Bight Basin in South Australia which is also an exploration permit that expires in July 2024.

Refer to Figure 4.2, Section 4.4, page 36 of Att5-SMAP-EA-AppD-OtherConsiderations for the location of the cable route against the hydrocarbon activities.

The submarine cable route crosses through a number of in service and out of service submarine cables. Refer to Table 4.5, Section 4.7, pages 37 to 38 and Figure 4.3, Section 4.7, page 39 of Att5-SMAP-EA-AppD-OtherConsiderations for the approximate points where cable route crosses existing submarine cables and the map of these existing cables, respectively.

The submarine cable route has been developed to avoid the declared area in the Bass Strait (OEI-01-2022). The cable route will also avoid the declared Hunter Region offshore area and the proposed Southern Ocean Region. Refer to Figure 4.4, Section 4.9, page 41 of Att5-SMAP-EA-AppD-OtherConsiderations for the map of offshore wind farm declared zones.

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

Western Australia - Perth Landing

In the Perth region, rocky subtidal reefs typically form barrier reefs. The Integrated Marine and Coastal Regionalisation of Australia (IMCRA v.4.0) distinguish the bioregion as the 'Southwest Shelf Transition'. This bioregion is characterised as having shelf habitat bisected by distinctive ridges of limestone reef that supports patchy macroalgae and coral. Between the ridges may be areas of soft sandy or silty sediment that support diverse infauna, and possible areas of seagrass. These linear reefs rise 10–20 m above the seabed, in water depths of around 10–30 m and mostly lie parallel to the shoreline. Although there are numerous reef areas the only recognised significant area of rocky reef within the Perth region occurs around Rottnest Island, approximately 17 km from the cable route. Other primary areas of rocky reef habitats in the region are north surrounding North Reef and large reef structures in the Marmion Marine Park, which borders the CPZ.

Results of the marine route survey (MRS) confirm that the cable will intersect approximately 1.1 km of hard rock outcrop with veneers of sand from about 1.4 km from the shore until approximately 2.5 km.

Western Australia - Garden Island Landing

The Garden Island route contains coarse sand within the nearshore environment and the Five Fathom Banks area. Five Fathom Bank, stretching from the southern part of Becher Point to Rottnest Island, constitutes the most extensive reef system that crosses the cable route in State Waters to the Garden Island landing. Additionally, a limestone reef is found in an offshore direction running from the southwest to the northeast of Five Fathom Bank.

The offshore waters of the Garden Island cable route are shown to intersect shelf and slope habitat. Refer to Figure 3.1, Section 3.2, page 46 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.

South Australia - Adelaide Landing

The Adelaide landing passes north of Kangaroo Island and south of Yorke Peninsula. A continuous chain of marine parks of different zonation occurs through this area called the Southern Spencer Gulf Marine Park.

The cable route intersects the General Use Zone of the State Marine Park.

Victoria – Voss' Circuit Landing

There are two marine protected areas surrounding the cable route and landing site and a third that lies outside a 10 km buffer zone around the cable route. These include:

- Point Addis Marine National Park, located approximately 8 km south of the cable route
- Point Danger Marine Sanctuary, located approximately 4 km north of the cable route
- Barwon Bluff Marine Sanctuary, located 17 km northeast of the cable route

There are three key benthic habitat types observed along the nearshore Torquay marine environment, consisting primarily of sublittoral sand and muddy sand with patches of high energy infralittoral rock and high energy open-coast circalittoral rock.

New South Wales - Sydney Landing

The cable route intersects the Maroubra Beach National Surfing Reserve extends from the shoreline and out to the end of the surf zone. The cable will connect into an existing conduit outside of the Reserve and therefore no works will be undertaken within the Reserve itself. Within a 10 km buffer, an additional three aquatic reserves were identified being:

- Cape Banks Aquatic Reserve, located 6 km south of the cable route
- Bronte-Coogee Aquatic Reserve, located 4 km north of the cable route

Towra Point Nature Reserve, located >10 km west of the cable route within Port Botany

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 - Perth Landing

Nearshore environment along the route reaches -15 m water depth over 7.6 km.

Further information is provided in Section 2.1.1, page 3 of Att2-SMAP-EA-AppA-CoastalAssessment.

Western Australia - Garden Island Landing

Nearshore environment along the route reaches -15 m water depth over 4.9 km.

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

South Australia – Adelaide Landing

The South Australian continental shelf is characterised by broad, gently sloping plains covered by relatively shallow water.

Nearshore environment along the route reaches -15 m water depth over 7.1 km.

Further information is provided in Section 2.3.1, page 16 of Att2-SMAP-EA-AppA-CoastalAssessment.

Victoria – Voss' Circuit Landing

Nearshore environment along the route reaches -15 m water depth over 3.4 km.

Further information is provided in Section 2.4.1, page 27 of Att2-SMAP-EA-AppA-CoastalAssessment.

New South Wales – Sydney Landing

For the Maroubra landing, the seabed reaches -50m depths over 2.70 km perpendicular to the shore or 1.8% gradient.

Further information is provided in Section 2.5.1, page 37 of Att2-SMAP-EA-AppA-CoastalAssessment.

For all landings, in deep waters the cable will be installed in water depths up to 5,000 m. The 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.

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 28 Threatened Ecological Communities (TECs) were identified based on the PMST. As the submarine cable installation will be marine based, terrestrial-based TECs are not anticipated to be impacted and therefore will not be discussed further.

The giant kelp marine forests are made up of giant kelp (*Macrocystis pyrifera*) and primarily occur from Eddystone Point in north east Tasmania all along the eastern coastline. These forests can occur along the coastlines of VIC where physical conditions and environmental factors are favourable however the exact extent of this is unknown. Based on this the giant kelp forest is assessed to 'may occur' within VIC. The MRS showed that there were no giant kelp forests identified within the cable route.

The PMST also identified 40 biologically important areas (BIAs) to occur along the proposed cable route. These BIAs are tabularised in Table 3.5, page 80 to 82 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.

A total of 221 listed species were identified by the PMST as having the potential to occur within the cable route. Literature researched identified an additional species to occur with the cable route. These species include the following listed species:

The breakdown these EPBC Act listed species per region and migratory animals per region are listed below. For further details, refer to Table 5.1, Section 5, pages 152 to 156 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA:

Western Australia – Perth Landing and Garden Landing

- Four cetaceans
- Four turtles
- Four sharks
- One pinniped
- Twenty-five marine birds
- Ten overfly marine birds
- Five migratory cetaceans
- Six migratory sharks and rays
- Twenty-nine migratory marine birds
- For the Perth segment, the MRS revealed rubble coral along this segment, however there were no coral reef habitats occurring along the route. No macroalgal beds and seagrass habitats were found along this segment.
- For the Garden Island segment, the MRS identified no coral reefs, macroalgae beds, or seagrass along this segment.

South Australia – Adelaide Landing

- Four cetaceans
- Four turtles
- One shark
- One pinniped
- Twenty-five marine birds
- Fourteen overfly marine birds
- Five migratory cetaceans

- Four migratory sharks and rays
- Thirty-one migratory marine birds
- The MRS identified no coral reefs and Giant Kelp along this segment. Seagrass was identified, with conditions ranging from dense, continuous seagrass with nearly 100% cover to isolated tufts with overall coverage of less than 1%. Cable installation within this area is subject to a Development Approval from the SA State Government, which was endorsed on 9 December 2024.

Victoria – Voss' Circuit Landing

- Three cetaceans
- Four turtles
- One shark
- One pinniped
- Twenty-seven marine birds
- Fourteen overfly marine birds
- Five migratory cetaceans
- Four migratory sharks and rays
- Twenty-nine migratory marine birds
- The MRS identified no giant kelp, macroalgae beds or seagrass along this segment.

New South Wales – Sydney Landing

- Three cetaceans
- Four turtles
- Two sharks
- Two fish
- One coral
- Twenty-seven marine birds
- Fourteen overfly marine birds
- Five migratory cetaceans
- Six migratory sharks and rays
- Thirty-three migratory marine birds
- The MRS identified no seagrass and macroalgae along this segment.

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

Western Australia – Perth Landing

In the Perth region, seagrass species in this region are dominated by *Amphibolus griffithii*, *Posidonia sinuosa*, *Phragmites australis* and *Halophila ovalis*, and occur over a range of densities from isolated plants to >90% cover. Seagrasses are mapped to occur just south of the cable route (approximately 600 m south). It is anticipated the cable route will avoid this habitat.

The cable route crosses an area of veneer of loose gravelly sand over medium dense to dense sand with numerous seagrass patches/marine growth. Low to medium rock outcrops (interpreted as Tamala limestone) with intermittent sand veneer are present across the whole survey corridor.

Western Australia – Garden Island Landing

In Garden Island, seagrass has been documented on the eastern side of the Garden Island however is currently not mapped along the western extent surrounding the cable route.

The seabed is locally rugged with very steep slopes mainly associated with medium to high reflectivity patches interpreted as rock/coral outcrops with marine growth. Intermittent veneers of loose gravelly sand with sand waves over dense sand can be observed within rock outcrop areas.

South Australia – Adelaide Landing

Seagrasses in South Australia are generally in a healthy state, serving as vital nursery areas for numerous fish species and as feeding grounds for a variety of marine herbivores. A total of 11 species of seagrass occur throughout s including ***Posidonia* spp., *Amphibolis* spp. And in the shallower regions, *Halophila* spp., *Zostera* and *Heterozostera* spp. Endemic species in s**outhern temperate waters include several genera, *Heterozostera*, *Amphibolis* and *Posidonia*. the cable route will traverse through mapped patchy sparse seagrass habitat and to a smaller extent dense seagrass areas. The MRS confirmed the presence of patchy sparse seagrass habitat and, to a lesser extent, dense seagrass along the first 13 km of the route from the landing site. The seagrass assessment concluded that the total mapped area of seagrass habitat to be disturbed along the cable route was 0.121 hectares.

The coastline between West Beach and Point Malcom comprises a Holocene veneer of sediments over Paleogene-Neogene clays, sand and limestones in conjunction with riverine sediments and coastal dunes. Based on the MRS, the seabed features intercalations of loose to dense slightly gravelly sand over rock and pockets of similar sand with scattered marine growths over rock.

Victoria – Voss' Circuit Landing

Seagrasses can be a key primary producer in Victoria's nearshore environment. Seagrass carbon production per unit area is typically five times greater than phytoplankton alone and hence provides essential ecosystems services through blue carbon acquisition. Common species of seagrass found in Victoria include *Zostera muelleri*, *Halophila australis*, *Amphibolis antarctica*. Along the cable route, seagrass habitats including *Amphibolis antarctica* can be found in the Point Danger Marine Sanctury growing over reef and sediment in the more sheltered areas. The cable will be horizontal directional drilled (HDD) below the Marine Sanctuary and therefore no seagrass habitats are anticipated to be impacted.

Torquay Beach is located within land mapped as belonging to the Western Plains geomorphological unit. The geomorphology of the area is classified as sedimentary derived dissected plains. The geology of the site is classified as Lower Cretaceous feldspathic sandstone and mudstone. The cliffs long the eastern great ocean road have been observed to be primarily comprised of soft rock cliffs that are highly vulnerable to erosion and are therefore vulnerable to periodic cliff fall events.

New South Wales – Sydney Landing

The PMST identified one species of threatened soft coral as relevant to only the Sydney cable route, which is the Cauliflower soft coral (*Denronephthya australis*).

The cable route runs along a gentle to moderate slope with veneer of loose sand less than 1 m over medium dense to very dense sand. Low to medium relief rock is observed within the marine route corridor, 100 m northwards of the proposed route.

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.

Western Australia

A search of the PMST was undertaken to identify Commonwealth Heritage within 10 km of the proposed cable route. In Western Australia, there were seven identified Commonwealth Heritage within 10 km of the route, namely:

- J Gun Battery
- South Perth Post Office
- Perth General Post Office
- Claremont Post Office
- Army Magazine Buildings Irwin Barracks
- Cliff Point Historic Site
- Garden Island

The proposed location for the submarine cable installation in the Broadarrow Reserve is about 800 m northeast of the Malabar Headland (Cmth Heritage ID: 105605). As such, no impacts to this heritage item are anticipated from the submarine cable installation.

South Australia

Adelaide Landing

There are three identified Commonwealth heritage within 10 km of the route, namely:

- North Adelaide Post Office, approx. 10 km northeast of landing
- Headquarters Building 32, Keswick Barracks, approx. 8 km east of landing
- Adelaide General Post Office, approx. 9 km northeast of landing

Victoria

Voss' Circuit Landing

No identified Commonwealth heritage within 10 km of the route.

New South Wales

Sydney Landing

There are 44 identified Commonwealth heritage within 10 km of the route, namely:

- Buildings 31 and 32
- Shark Point Battery
- Residences Group
- Garden Island Precinct
- Rigging Shed and Chapel
- Naval Store
- Buildings MQVB16 and VB56
- Victoria Barracks Perimeter Wall and Gates
- Building VB2 Guard House
- Buildings VB60 and VB62
- Kirribilli House Garden & Grounds
- Botany Post Office
- Factory
- Kirribilli House
- Malabar Headland
- Building VB1 and Parade Ground
- Buildings VB13, 15, 16 & 17
- School of Musketry and Officers mess, Randwick Army Barracks
- Sydney Airport Air Traffic Control Tower
- Buildings VB69, 75 & 76 including Garden

- Paddington Post Office
- Marrickville Post Office
- Bondi Beach Post Office
- Chain and Anchor store (former)
- Office Building
- Buildings VB41, 45, 53
- General Post Office
- Admiralty House and Lodge
- Admiralty House Garden and Fortification
- Army cottage and return verandah
- Cape baily lighthouse
- Macquarie lighthouse
- Pyrmont Post office
- Macquarie Lighthouse group
- Reserve Bank
- Marine Biological Station (former)
- Sydney Customs House (former)
- Gazebo
- Victoria Barracks Squash Courts
- Buildings VB83, 84, 85, 87 & 89
- Buildings VB90, 91, 91A & 92
- Macquarie Lighthouse Surrounding Wall
- Cottage at Macquarie Lighthouse
- Victoria Barracks Precinct

The submarine 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, pages 20 to 23 of Att5-SMAP-EA-AppD-OtherConsiderations.

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

The submarine cable installation is proposed to take place within the curtilage of three heritage places:

- Garden Island in Western Australia
- City Beach and Floreat Beach Precinct in Western Australia
- Torquay Foreshore Precinct in Victoria

Historic heritage items listed at the local and State level within 2 km of the proposed cable route include the following:

Western Australia

- Garden Island
- Garden Island Batteries
- Cliff Point Historic Site
- City Beach and Floreat Beach Precinct

South Australia

- 5 Rockingham Street, West Beach
- Seaview Road, West Beach

Victoria

- Torquay Foreshore Precinct

NSW

- Malabar Headland
- Post-war cottage
- Electricity Substation No. 362

The submarine cable installation is solely based in the marine environment, as such it is not expected to impact any identified State listed heritage sites. The submarine cable installation is within a 10 km buffer zone of 10 state-listed heritage sites.

In the Perth region, the Indigenous Land Use Agreements (ILUA) Whadjuk People Indigenous Land Use Agreement WI 2017/015 and the Gnaala Karla Booja Indigenous Land Use Agreement WI 20015/005, as well as the Single Noongar Claim Group Compensation Claim WP 2019/001 extend to state waters. As the submarine cable installation route is located within the claim area, the cable proponents have considered the necessary stakeholder engagement with the South West Aboriginal Land and Sea Council.

The landing for Adelaide is located within the Kaurna People Native Title Claim (SCD2018/001). This covers 3,468 square kilometres and ranges from Balhannah through to the coast of Adelaide. This includes the Port of Adelaide where the cable route lands. Following this, the same area is an Indigenous Land Use Agreement of the Kauma People Native Title settlements ILUA. This ILUA was registered on the 19th of November 2018.

The submarine cable installation route intersects one Native Title claim VI2022/002 along the Victorian segments. This title claim is for the Wadawurrung. This area is 12,510 km2 and extends from Ballarat through to 3 nautical miles off the coast of Torquay.

At the Sydney landing, the cable route does not intersect with any Native Titles, however 14 km to the south of the cable route is the Determination for the South Coast People which extends from inland to 3 nautical miles offshore.

With regard to the Native title claim for the Wadawurrung people, Kaurna People and Whadjuk people and the Indigenous Land use agreement for both the Kaurna and Whadjuk people within the cable installation route, the cable proponents have completed necessary stakeholder engagement with the necessary parties.

Further information on this is not available due to Aboriginal Cultural sensitivity reasons.

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. *

Perth Landing to Garden Island Landing

Due to the proximity of the Garden Island and Perth landing, the tidal range along the route does not have a high degree of variability and remains relatively stable.

The large-scale ocean current that will have the biggest effect along this route is the Leeuwin Current (LC).

Perth Landing to Adelaide Landing

The average tidal range varies along this length of the route, with the largest tidal range for this section being within the Gulf of St Vincent and some parts of the Great Australian Bite.

The large-scale ocean current that will have the biggest effect along this route is the South Australian Current (SAC) and the Leeuwin Current (LC).

Adelaide Landing to Torquay Landing

The average tidal range varies along this length of the route, with the largest tidal range for this section being within the Gulf of St Vincent.

The large-scale ocean current that will have the biggest effect along this route is the South Australian Current (SAC) and the Zeehan Current (ZC).

Torquay Landing to Sydney Landing

The average tidal range varies along this length of the route, with the largest tidal range for this section being in Bass Strait.

The large-scale ocean current that will have the biggest effect along this route is the East Australian Current (EAC).

For further information, refer to Section 2.1, pages 4 to 11; Section 2.2, pages 12 to 17; Section 2.3, pages 17 to 26; Section 2.4, pages 27 to 36; and Section 2.5, pages 37 to 45 of Att2-SMAP-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

EPBC Act section	Controlling provision	Impacted	Reviewed
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.

Direct impact	Indirect impact	World heritage
No	No	Australian Convict Sites - Hyde Park Barracks
No	No	Sydney Opera House

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 PMST was undertaken to identify World Heritage Properties within 10 km of the proposed cable route.

Two World Heritage Properties were identified within the 10 km:

- Australian Convict Sites (Hyde Park Barracks) in NSW
- Sydney Opera House in NSW

These World Heritage Properties are located on land at an approximate distance of 9.3 km (Hyde Park Barracks) and 10 km (Sydney Opera House) to the proposed submarine cable route. No impacts to these sites are expected.

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.

Direct impact	Indirect impact	National heritage
No	No	Adelaide Park Lands and City Layout
No	No	Bondi Beach
No	No	Centennial Park
No	No	Cyprus Hellene Club - Australian Hall
No	No	First Government House Site
No	No	Governors' Domain and Civic Precinct
No	No	Great Ocean Road and Scenic Environs
No	No	Hyde Park Barracks
No	No	Kamay Botany Bay: botanical collection sites
No	No	Kurnell Peninsula Headland
No	No	South Australian Old and New Parliament Houses
No	No	Sydney Harbour Bridge

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 search of the PMST was undertaken to identify National Heritage Places within 10 km of the proposed cable route. There are 11 National Heritage Places within 10 km of the cable route in NSW, two in South Australia, and one in Victoria. The National Heritage Places identified are listed below:

WA

No National Heritage Places listed.

South Australia

- South Australian Old and New Parliament Houses (Place ID: 105710)
- The Adelaide Park Lands and City Layout (Place ID: 105758)

Victoria

- Great Ocean Road and Scenic Environs (Place ID: 105875)

NSW

- Kamay Botany Bay: botanical collection sites (Place ID: 106162)
- Cyprus Hellene Club – Australian Hall (Place ID: 105937)
- Hyde Park Barracks (Place ID: 105935)
- Governor's Domain and Civic Precinct (Place ID: 106103)
- Kurnell Peninsula Headland (Place ID: 105812)
- Bondi Beach (Place ID: 106009)
- Sydney Harbour Bridge (Place ID: 105888)
- Sydney Opera House (Place ID: 105738)
- Bondi Surf Pavilion (Place ID: 105748
- Centennial Park (Place ID: 106153)
- First Government House Site (Place ID: 105761)

All of these sites are on land and outside of the cable route. No ground disturbing works will occur on land. As such, no impacts to these sites are expected.

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
No	No	Becher Point Wetlands
No	No	Forrestdale and Thomsons Lakes
No	No	Port Phillip Bay (Western Shoreline) and Bellarine Peninsula
No	No	Towra Point Nature Reserve

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. *

No wetlands listed under the Ramsar Convention were identified to be directly within the cable route. Wetlands identified within the 10 km buffer included:

- Towra Point Nature Reserve – NSW, approximately 12 km from the cable route
- Forrestdale and Thomsons Lakes – WA, approximately 15 km from the cable route

- Becher Point Wetlands – WA, approximately 21 km from the cable route
- Port Phillip Bay (Western Shoreline) and Bellarine Peninsula – VIC, approximately 35 km from the cable route

These areas are not anticipated to be impacted by the submarine cable installation and therefore will not be 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	No	Acacia terminalis subsp. Eastern Sydney (G.P.Phillips 126)	Sunshine Wattle (Sydney region)
No	No	Amphibromus fluitans	River Swamp Wallaby-grass, Floating Swamp Wallaby-grass
No	No	Andersonia gracilis	Slender Andersonia
No	Yes	Anous tenuirostris melanops	Australian Lesser Noddy
No	No	Antechinus minimus maritimus	Swamp Antechinus (mainland)
No	No	Anthochaera phrygia	Regent Honeyeater
No	No	Aphelocephala leucopsis	Southern Whiteface
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	No	Botaurus poiciloptilus	Australasian Bittern
No	Yes	Caladenia concolor	Crimson Spider-orchid, Maroon Spider-orchid
No	No	Caladenia conferta	Coast Spider-orchid

Direct impact	Indirect impact	Species	Common name
No	No	Caladenia tensa	Greencomb Spider-orchid, Rigid Spider-orchid
No	No	Caladenia tessellata	Thick-lipped Spider-orchid, Daddy Long-legs
No	Yes	Calidris acuminata	Sharp-tailed Sandpiper
No	Yes	Calidris canutus	Red Knot, Knot
No	Yes	Calidris ferruginea	Curlew Sandpiper
No	No	Callocephalon fimbriatum	Gang-gang Cockatoo
No	No	Calyptorhynchus banksii naso	Forest Red-tailed Black-Cockatoo, Karrak
No	No	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo
No	Yes	Carcharias taurus (east coast population)	Grey Nurse Shark (east coast population)
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 harrissoni	Harrisson's Dogfish, Endeavour Dogfish, Dumb Gulper Shark, Harrison's Deepsea Dogfish
No	Yes	Centrophorus uyato	Little Gulper Shark
No	No	Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat
No	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	Yes	Chelonia mydas	Green Turtle
No	No	Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)
No	No	Cryptostylis hunteriana	Leafless Tongue-orchid
No	No	Dasyornis brachypterus	Eastern Bristlebird
No	No	Dasyurus geoffroii	Chuditch, Western Quoll
No	No	Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)

Direct impact	Indirect impact	Species	Common name
No	No	Delma impar	Striped Legless Lizard, Striped Snake-lizard
No	Yes	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	Yes	Diomedea amsterdamensis	Amsterdam Albatross
No	Yes	Diomedea antipodensis	Antipodean Albatross
No	Yes	Diomedea antipodensis gibsoni	Gibson's 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	No	Diuris drummondii	Tall Donkey Orchid
No	No	Diuris micrantha	Dwarf Bee-orchid
No	No	Dodonaea procumbens	Trailing Hop-bush
No	No	Drakaea elastica	Glossy-leafed Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid
No	No	Drakaea micrantha	Dwarf Hammer-orchid
No	Yes	Epinephelus daemelii	Black Rockcod, Black Cod, Saddled Rockcod
No	Yes	Eretmochelys imbricata	Hawksbill Turtle
No	No	Erythrotriorchis radiatus	Red Goshawk
No	Yes	Eubalaena australis	Southern Right Whale
No	No	Eucalyptus camfieldii	Camfield's Stringybark
No	No	Falco hypoleucos	Grey Falcon
No	No	Fregetta grallaria grallaria	White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian)
No	Yes	Galeorhinus galeus	School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark
No	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe

Direct impact	Indirect impact	Species	Common name
No	No	Glycine latrobeana	Clover Glycine, Purple Clover
No	No	Grantiella picta	Painted Honeyeater
No	Yes	Halobaena caerulea	Blue Petrel
No	No	Hesperocolletes douglasi	Douglas' Broad-headed Bee, Rottnest Bee
No	Yes	Hippocampus whitei	White's Seahorse, Crowned Seahorse, Sydney Seahorse
No	No	Hirundapus caudacutus	White-throated Needletail
No	Yes	Hoplostethus atlanticus	Orange Roughy, Deep-sea Perch, Red Roughy
No	No	Isoodon obesulus obesulus	Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south-eastern)
No	No	Lachnagrostis adamsonii	Adamson's Blown-grass, Adamson's Blowngrass
No	No	Lathamus discolor	Swift Parrot
No	No	Leipoa ocellata	Malleefowl
No	No	Lepidium aschersonii	Spiny Peppercress
No	Yes	Limosa lapponica baueri	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit
No	No	Limosa lapponica menzbieri	Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit
No	No	Lissolepis coventryi	Swamp Skink, Eastern Mourning Skink
No	No	Litoria aurea	Green and Golden Bell Frog
No	No	Litoria raniformis	Southern Bell Frog,, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog
No	Yes	Macquaria australasica	Macquarie Perch
No	No	Macroderma gigas	Ghost Bat
No	Yes	Macronectes giganteus	Southern Giant-Petrel, Southern Giant Petrel
No	Yes	Macronectes halli	Northern Giant Petrel

Direct impact	Indirect impact	Species	Common name
No	No	Melanodryas cucullata cucullata	South-eastern Hooded Robin, Hooded Robin (south-eastern)
No	No	Meridolum maryae	Maroubra Woodland Snail, Maroubra Land Snail
No	Yes	Nannoperca obscura	Yarra Pygmy Perch
No	Yes	Natator depressus	Flatback Turtle
No	No	Neophema chrysogaster	Orange-bellied Parrot
No	No	Neophema chrysostoma	Blue-winged Parrot
No	Yes	Neophoca cinerea	Australian Sea-lion, Australian Sea Lion
No	No	Notamacropus parma	Parma Wallaby
No	Yes	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Pachyptila turtur subantarctica	Fairy Prion (southern)
No	No	Pedionomus torquatus	Plains-wanderer
No	No	Persicaria elatior	Knotweed, Tall Knotweed
No	No	Petauroides volans	Greater Glider (southern and central)
No	No	Petaurus australis australis	Yellow-bellied Glider (south-eastern)
No	No	Phaethon rubricauda westralis	Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird
No	No	Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)
No	Yes	Phoebetria fusca	Sooty Albatross
No	No	Pimelea spinescens subsp. spinescens	Plains Rice-flower, Spiny Rice-flower, Prickly Pimelea
No	No	Prasophyllum spicatum	Dense Leek-orchid
No	Yes	Pristis pristis	Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish
No	No	Prostanthera densa	Villous Mintbush
No	Yes	Prototroctes maraena	Australian Grayling

Direct impact	Indirect impact	Species	Common name
No	No	Pseudocheirus occidentalis	Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit
No	No	Pseudomys novaehollandiae	New Holland Mouse, Pookila
No	No	Pterodroma heraldica	Herald Petrel
No	No	Pterodroma leucoptera leucoptera	Gould's Petrel, Australian Gould's Petrel
No	Yes	Pterodroma mollis	Soft-plumaged Petrel
No	Yes	Pterodroma neglecta neglecta	Kermadec Petrel (western)
No	No	Pteropus poliocephalus	Grey-headed Flying-fox
No	No	Pterostylis chlorogramma	Green-striped Greenhood
No	No	Pterostylis cucullata	Leafy Greenhood
No	No	Pycnoptilus floccosus	Pilotbird
No	Yes	Rexea solandri (eastern Australian population)	Eastern Gemfish
No	Yes	Rhincodon typus	Whale Shark
No	No	Rhodamnia rubescens	Scrub Turpentine, Brown Malletwood
No	No	Rhodomyrtus psidioides	Native Guava
No	Yes	Rostratula australis	Australian Painted Snipe
No	No	Senecio macrocarpus	Large-fruit Fireweed, Large-fruit Groundsel
No	Yes	Seriolella brama	Blue Warehou
No	Yes	Sphyrna lewini	Scalloped Hammerhead
No	No	Stagonopleura guttata	Diamond Firetail
No	No	Sternula nereis nereis	Australian Fairy Tern
No	No	Swainsona pyrophila	Yellow Swainson-pea
No	No	Syzygium paniculatum	Magenta Lilly Pilly, Magenta Cherry, Daguba, Scrub Cherry, Creek Lilly Pilly, Brush Cherry
No	No	Tecticornia flabelliformis	Bead Glasswort, Bead Samphire
No	Yes	Thalassarche bulleri	Buller's Albatross, Pacific Albatross

Direct impact	Indirect impact	Species	Common name
No	Yes	Thalassarche bulleri platei	Northern Buller's Albatross, Pacific Albatross
No	No	Thalassarche carteri	Indian Yellow-nosed Albatross
No	Yes	Thalassarche cauta	Shy Albatross
No	Yes	Thalassarche chrysostoma	Grey-headed Albatross
No	Yes	Thalassarche eremita	Chatham Albatross
No	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	Yes	Thalassarche melanophris	Black-browed Albatross
No	Yes	Thalassarche salvini	Salvin's Albatross
No	Yes	Thalassarche steadi	White-capped Albatross
No	No	Thelymitra matthewsii	Spiral Sun-orchid
No	No	Thelymitra orientalis	Hoary Sun-orchid
No	No	Thesium australe	Austral Toadflax, Toadflax
No	Yes	Thinornis cucullatus cucullatus	Eastern Hooded Plover, Eastern Hooded Plover
No	Yes	Tringa nebularia	Common Greenshank, Greenshank
No	No	Xerochrysum palustre	Swamp Everlasting, Swamp Paper Daisy
No	No	Zanda latirostris	Carnaby's Black Cockatoo, Short-billed Black-cockatoo

Ecological communities

Direct impact	Indirect impact	Ecological community
No	No	Assemblages of species associated with open-coast salt-wedge estuaries of western and central Victoria ecological community
No	No	Banksia Woodlands of the Swan Coastal Plain ecological community
No	No	Castlereagh Scribbly Gum and Agnes Banks Woodlands of the Sydney Basin Bioregion

Direct impact	Indirect impact	Ecological community
No	No	Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community
No	No	Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland
No	No	Coastal Upland Swamps in the Sydney Basin Bioregion
No	No	Cooks River/Castlereagh Ironbark Forest of the Sydney Basin Bioregion
No	No	Eastern Suburbs Banksia Scrub of the Sydney Region
No	No	Empodisma peatlands of southwestern Australia
No	No	Giant Kelp Marine Forests of South East Australia
No	No	Grassy Eucalypt Woodland of the Victorian Volcanic Plain
No	No	Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia
No	No	Honeymyrtle shrubland on limestone ridges of the Swan Coastal Plain Bioregion
No	No	Kangaroo Island Narrow-leaved Mallee (Eucalyptus cneorifolia) Woodland
No	No	Littoral Rainforest and Coastal Vine Thickets of Eastern Australia
No	No	Natural Damp Grassland of the Victorian Coastal Plains
No	No	Natural Temperate Grassland of the Victorian Volcanic Plain
No	No	Posidonia australis seagrass meadows of the Manning-Hawkesbury ecoregion
No	No	River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria
No	No	Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains
No	No	Sedgelands in Holocene dune swales of the southern Swan Coastal Plain
No	No	Subtropical and Temperate Coastal Saltmarsh
No	No	Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E. brookeriana)
No	No	Tasmanian white gum (Eucalyptus viminalis) wet forest
No	No	Thrombolite (microbial) community of coastal freshwater lakes of the Swan Coastal Plain (Lake Richmond)

Direct impact	Indirect impact	Ecological community
No	No	Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community
No	No	Western Sydney Dry Rainforest and Moist Woodland on Shale
No	No	White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland

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 28 Threatened Ecological Communities (TECs) were identified based on the PMST. As the submarine 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 – SMAP-EA-AppB-MarineEcology_ReducedB.

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 by sediment sampling activities and cable laying. Further information, see Section 3.1, pg 5 of Att4 – SMAP-EA-AppC-ImpactAssessment
- **Underwater noise emissions:** disruption to navigation and behaviour due to underwater noise emissions. Further information, see Section 3.2, pg 9 of Att4 – SMAP-EA-AppC-ImpactAssessment
- **Artificial light emissions:** disruption to marine fauna from artificial light emissions generated from cable installation vessels. Further information, see Section 3.3, pg 12 of Att4 – SMAP-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 14 of Att4 – SMAP-EA-AppC-ImpactAssessment
- **Planned discharges:** this includes sewage and food waste, brine, cooling water and deck drainage. Further information, see Section 3.5, pg 16 of Att4 – SMAP-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 18 of Att4 – SMAP-EA-AppC-ImpactAssessment
- **Marine fauna collisions or entanglement:** the potential for collision to occur between marine fauna and cable installation vessels. Further information, see Section 3.7, pg 19 of Att4 – SMAP-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 20 of Att4 – SMAP-EA-AppC-ImpactAssessment

Cetaceans

The PMST identified four listed whale species as relevant to the cable route:

- Blue whale (*Balaenoptera musculus*)
- Fin whale (*Balaenoptera physalus*)
- Sei whale (*Balaenoptera borealis*)
- Southern right whale (*Eubalaena australis*)

All four 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 4.1, pg 98-99 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.

Fish

The PMST identified nine fish species including four conservation dependant and five threatened species as relevant to the cable route, which includes:

- Australian grayling (*Prototroctes maraena*)
- Black rockcod (*Epinephelus daemelii*)
- Blue warehou (*Seriolella brama*)
- Eastern gemfish (*Rexea solandri*) – eastern Australian population
- Macquarie perch (*Macquaria australasica*)
- Orange roughy (*Hoplostethus atlanticus*)
- Southern bluefin tuna (*Thunnus maccoyii*)
- White's seahorse (*Hippocampus whitei*)
- Yarra pygmy perch (*Nannoperca obscura*)

Refer to Table 4.2, pg 100-103 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.

Turtles

The PMST identified five 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*)

The cable route does not intersect with BIAs with densities of marine turtles expected to be low along the route.

Refer to Table 4.3, pg 104-105 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.

Sharks

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

- Freshwater sawfish (*Pristis pristis*)
- White shark (*Carcharodon carcharias*)
- Grey nurse shark (East coast/west coast population) (*Carcharias taurus*)
- Harrisson's dogfish (*Centrophorus harrissni*)

- Little gulper shark (*Centrophorus uyato*)
- Scalloped hammerhead (*Sphyrna lewini*)
- School shark (*Galeorhinus galeus*)
- Whale shark (*Rhincodon typus*)

Refer to Table 4.4, pg 106-109 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.

Pinniped

The PMST identified one listed pinniped, the Australia sea lion (*Neophoca cinerea*) as relevant to only the SA and Perth segment of the cable route.

Refer to Table 4.5, pg 110 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.

Corals

The PMST identified one species of threatened soft coral, the Cauliflower soft coral (*Dendronephthya australis*) as relevant to only the Sydney cable route.

Refer to Table 4.6, pg 111 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.

Marine birds and overfly marine birds

The PMST identified 29 species of marine birds and 14 overfly marine birds as relevant to the cable route. The 29 marine birds species include:

- Amsterdam albatross (*Diomedea amserdamensis*)
- Antipodean albatross (*Diomedea antipodensis*)
- Australian lesser noddy (*Anous tenuirostris*)
- Black-browed albatross (*Thalassarche melanophris*)
- Blue petrel (*Halobaena caerulea*)
- Buller's albatross (*Thalassarche bulleri*)
- Campbell albatross (*Thalassarche impavida*)
- Chatham albatross (*Thalassarche eremita*)
- Eastern curlew (*Numenius madagascariensis*)
- Gibson's albatross (*Diomedea antipodensis gibsoni*)
- Greater sand plover (*Charadrius leschenaultii*)
- Grey-headed albatross (*Thalassarche chrysostoma*)
- Indian Yellow-nosed albatross (*Thalassarche carteri*)
- Lesser sand plover (*Charadrius mongolus*)
- Northern Buller's albatross (*Thalassarche bulleri platei*)
- Northern giant petrel (*Macronectes halli*)
- Northern royal albatross (*Diomedea sanfordi*)
- Ruddy turnstone (*Arenaria interpres*)
- Salvin's albatross (*Thalassarche salvini*)
- Sharp-tailed sandpiper (*Calidris acuminata*)
- Soft-plumaged petrel (*Pterodroma mollis*)
- Shy albatross (*Thalassarche cauta*)
- Sooty albatross (*Phoebetria fusca*)
- Sooty shearwater (*Ardenna grisea*)
- Southern royal albatross (*Diomedea epomophora*)
- Tristan albatross (*Diomedea dabbenena*)
- Wandering albatross (*Diomedea exulans*)
- White-capped albatross (*Thalassarche steadi*)

The 14 marine overfly bird species include the following:

- Australian painted snipe (*Rostratula australis*)

- Black-tailed godwit (*Limosa limosa*)
- Blue-winged parrot (*Neophema chrysostoma*)
- Common greenshank (*Tringa nebularia*)
- Curlew sandpiper (*Calidris ferruginea*)
- Eastern hooded plover (*Thinornis cucullatus cucullatus*)
- Great knot (*Calidris tenuirostris*)
- Grey plover (*Pluvialis squatarola*)
- Latham's snipe (*Gallinago hardwickii*)
- Orange-bellied parrot (*Neophema chrysogaster*)
- Red knot (*Calidris canutus*)
- Swift parrot (*Lathamus discolor*)
- Terek sandpiper (*Xenus cinereus*)
- White-throated needletail (*Hirundapus caudacutus*)

Refer to Table 4.7, pg 112-124 of Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.

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, corals 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 submarine 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 submarine 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 submarine 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 submarine 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

Submarine 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

Submarine 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 submarine 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 submarine 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 submarine 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 submarine 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, the project activities will not be conducted during turtle nesting season.

For further details, refer to Section 4, Table 4.1, page 27 and Table 4.2, pages 28-31 of Att4 – SMAP-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 do not trigger the criteria to be a controlled action. Refer to Section 4, Table 4.1 and Table 4.2 on pages 27-331 of Att4 – SMAP-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 are provided below. Further information on impact descriptions, impact analysis, management controls and environmental outcomes are available in Att 4 – SMAP-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, and ploughing will be avoided in areas of seagrass as much as is the case in South Australia. Cable laying or burial via remote operated vehicle (ROV) water jetting will be used where possible.

Further information is provided in Section 3.1.1, Section 3.1.2, and Section 3.1.3, pg 5-8 of Att4 – SMAP-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 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 9-12 of Att4 – SMAP-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 employing of Best Practice Lighting Design for infrastructure that requires to be lit at night in accordance with the Department of Energy and Environment (2022) National Light Pollution Guidelines, use of directional lighting to minimise light spill and management of lighting on vessel decks to reduce direct light spill.

Further information is provided in Section 3.3.1, Section 3.3.2, and Section 3.3.3, pg 12-14 of Att4 – SMAP-EA-AppC-ImpactAssessment.

Atmospheric emissions

Short-term reduction in air quality in the immediate region along the submarine 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 14-15 of Att4 – SMAP-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 16-17 of Att4 – SMAP-EA-AppC-ImpactAssessment.

Interference with other users

There is potential that fishing would be 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 stakeholders and appropriate notifications, 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 18-19 of Att4 – SMAP-EA-AppC-ImpactAssessment.

Marine fauna collisions or entanglement

The potential for collision to occur between marine fauna and vessels associated with the proposed activities or entanglement with submarine cable is considered low. Recommended management controls during cable installation activities include implementation of Part 8 of the EPBC Regulations (Interacting with Cetaceans and Whale Watching) and implementing the Australian Guidelines for Whale and Dolphin Watching for sea-faring activities.

Further information is provided in Section 3.7.1, Section 3.7.2, and Section 3.7.3, pg 19-20 of Att4 – SMAP-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 3.8.1, Section 3.8.2, and Section 3.8.3, pg 20-21 of Att4 – SMAP-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 alba	Sanderling
No	Yes	Calidris canutus	Red Knot, Knot
No	Yes	Calidris ferruginea	Curlew Sandpiper
No	Yes	Calidris melanotos	Pectoral Sandpiper

Direct impact	Indirect impact	Species	Common name
No	Yes	Calonectris leucomelas	Streaked Shearwater
No	Yes	Caperea marginata	Pygmy Right Whale
No	Yes	Carcharhinus longimanus	Oceanic Whitetip Shark
No	Yes	Carcharodon carcharias	White Shark, Great White Shark
No	Yes	Caretta caretta	Loggerhead Turtle
No	Yes	Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover
No	Yes	Chelonia mydas	Green Turtle
No	No	Cuculus optatus	Oriental Cuckoo, Horsfield's Cuckoo
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	Dugong dugon	Dugong
No	Yes	Eretmochelys imbricata	Hawksbill Turtle
No	Yes	Eubalaena australis	Southern Right Whale
No	Yes	Fregata ariel	Lesser Frigatebird, Least Frigatebird
No	Yes	Fregata minor	Great Frigatebird, Greater Frigatebird
No	Yes	Gallinago hardwickii	Latham's Snipe, Japanese Snipe
No	Yes	Hirundapus caudacutus	White-throated Needletail

Direct impact	Indirect impact	Species	Common name
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	Monarcha melanopsis	Black-faced Monarch
No	Yes	Motacilla cinerea	Grey Wagtail
No	Yes	Motacilla flava	Yellow Wagtail
No	Yes	Myiagra cyanoleuca	Satin Flycatcher
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
No	Yes	Phaethon lepturus	White-tailed Tropicbird
No	Yes	Phoebetria fusca	Sooty Albatross
No	Yes	Physeter macrocephalus	Sperm Whale
No	Yes	Pristis pristis	Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish

Direct impact	Indirect impact	Species	Common name
No	Yes	Rhincodon typus	Whale Shark
No	Yes	Rhipidura rufifrons	Rufous Fantail
No	Yes	Sterna dougallii	Roseate Tern
No	Yes	Sternula albifrons	Little Tern
No	Yes	Symposiachrus trivirgatus	Spectacled Monarch
No	Yes	Thalassarche bulleri	Buller's Albatross, Pacific Albatross
No	Yes	Thalassarche carteri	Indian Yellow-nosed Albatross
No	Yes	Thalassarche cauta	Shy Albatross
No	Yes	Thalassarche chrysostoma	Grey-headed Albatross
No	Yes	Thalassarche eremita	Chatham Albatross
No	Yes	Thalassarche impavida	Campbell Albatross, Campbell Black-browed Albatross
No	Yes	Thalassarche melanophris	Black-browed Albatross
No	Yes	Thalassarche salvini	Salvin's Albatross
No	Yes	Thalassarche steadi	White-capped Albatross
No	Yes	Tringa nebularia	Common Greenshank, Greenshank

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. *

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

- 11 cetaceans (of which four are threatened and assessed in Section 4, Table 4.8, pg 128 of the Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.). These include:
- 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*)
- One additional marine mammal, the Dugong (*Dugong dugon*)
- Five turtles (which are all assessed in Section 4, Table 4.3, pg 103 of the Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.). These species include:
- Flatback turtle (*Natator depressus*)
- Green turtle (*Chelonia mydas*)
- Hawksbill turtle (*Eretmochelys imbricata*)
- Leatherback turtle (*Dermochelys coriacea*)
- Loggerhead turtle (*Caretta caretta*)
- Eight sharks and rays (of which five are listed and assessed in Section 4, Table 4.8, pg 134 of the Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.). These species include:
- Giant manta ray (*Mobula birostris*)
- Oceanic whitetip shark (*Carcharhinus longimanus*)
- Porbeagle (*Lamna nasus*)
- Reef manta ray (*Mobula alfredi*)
- Shortfin mako (*Isurus oxyrinchus*)
- 77 migratory marine birds (of which 33 are listed and assessed in Section 4, Table 4.8, pg 136 of the Att3 – SMAP-EA-AppB-MarineEcology_ReducedA.)

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 sediment sampling activities and cable laying. Further information, see Section 3.1, pg 5 of Att4 – SMAP-EA-AppC-ImpactAssessment
- **Underwater noise emissions:** disruption to navigation and behaviour due to underwater noise emissions. Further information, see Section 3.2, pg 9 of Att4 – SMAP-EA-AppC-ImpactAssessment
- **Artificial light emissions:** disruption to marine fauna from artificial light emissions generated from cable installation vessels. Further information, see Section 3.3, pg 12 of Att4 – SMAP-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 14 of Att4 – SMAP-EA-AppC-ImpactAssessment
- **Planned discharges:** this includes sewage and food waste, brine, cooling water and deck drainage. Further information, see Section 3.5, pg 16 of Att4 – SMAP-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 18 of Att4 – SMAP-EA-AppC-ImpactAssessment
- **Marine fauna collisions or entanglement:** the potential for collision to occur between marine fauna and cable installation vessels. Further information, see Section 3.7, pg 19 of Att4 – SMAP-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 20 of Att4 – SMAP-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 submarine 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 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 submarine 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 or roost exclusively within habitats crossed by the cable route, and the activities will not prevent movement to breeding or roosting grounds. These species are expected to avoid submarine cable installation activities. If encountered appropriate mitigation measures, such as the adherence to Part 8 of the EPBC Regulations (2000) 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 pg 36-37 of Att4 – SMAP-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 26-30 of Att4 – SMAP-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 – SMAP-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, and ploughing will be avoided in areas of seagrass as much as practicable. Cable laying or burial via remote operated vehicle (ROV) water jetting will be used where possible.

Further information is provided in Section 3.1.1, Section 3.1.2, and Section 3.1.3, pg 5-8 of Att4 – SMAP-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 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 9-12 of Att4 – SMAP-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 employing of Best Practice Lighting Design for infrastructure that requires to be lit at night in accordance with the Department of Energy and Environment (2022) National Light Pollution Guidelines, use of directional lighting to minimise light spill and management of lighting on vessel decks to reduce direct light spill.

Further information is provided in Section 3.3.1, Section 3.3.2, and Section 3.3.3, pg 12-14 of Att4 – SMAP-EA-AppC-ImpactAssessment.

Atmospheric emissions

Short-term reduction in air quality in the immediate region along the submarine 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 14-15 of Att4 – SMAP-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 16-17 of Att4 – SMAP-EA-AppC-ImpactAssessment.

Interference with other users

There is potential that fishing would be 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 stakeholders, 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 18-19 of Att4 – SMAP-EA-AppC-ImpactAssessment.

Marine fauna collisions or entanglement

The potential for collision to occur between marine fauna and vessels associated with the proposed activities or entanglement with submarine cable is considered low. Recommended management controls during cable installation activities include implementation of Part 8 of the EPBC Regulations (Interacting with Cetaceans and Whale Watching) and implementing the Australian Guidelines for Whale and Dolphin Watching for sea-faring activities.

Further information is provided in Section 3.7.1, Section 3.7.2, and Section 3.7.3, pg 19-20 of Att4 – SMAP-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 3.8.1, Section 3.8.2, and Section 3.8.3, pg 20-21 of Att4 – SMAP-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 include 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.

Direct impact	Indirect impact	Commonwealth marine area
No	Yes	EEZ and Territorial Sea

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. 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 3.5, pg 16 of Att4 – SMAP-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 14 of Att4 – SMAP-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 18 of Att4 – SMAP-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 20 of Att4 – SMAP-EA-AppC-ImpactAssessment
- **Accidental release of waste:** waste on board the vessel may be released into the marine environment is not contained properly. Further information, see Section 3.10 pg 22 of Att4 – SMAP-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 if there is a real chance or possibility that it will:

- 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 26-30 of Att4 – SMAP-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 therefore do not trigger the criteria to be a controlled action. Refer to Section 4, Table 4.1 and Table 4.2 on pages 27-31 of Att4 – SMAP-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 – SMAP-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 16-17 of Att4 – SMAP-EA-AppC-ImpactAssessment.

Atmospheric emissions

Short-term reduction in air quality in the immediate region along the submarine 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 14-15 of Att4 – SMAP-EA-AppC-ImpactAssessment.

Interference with other users

There is potential that fishing would be 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 stakeholders, 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 18-19 of Att4 – SMAP-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 3.8.1, Section 3.8.2, and Section 3.8.3, pg 20-21 of Att4 – SMAP-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 21-22 of Att4 – SMAP-EA-AppC-ImpactAssessment.

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

No significant impacts identified, therefore no offsets proposed.

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 submarine 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.

Direct impact	Indirect impact	Commonwealth land area
Yes	Yes	Commonwealth Land -
Yes	Yes	Defence - HMAS STIRLING-ROCKINGHAM ;HMAS STIRLING - GARDEN ISLAND

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 743 Commonwealth Lands to occur within cable route. None of these areas are marine based and therefore are not anticipated to be impacted by the submarine cable installation.

Full list of identified Commonwealth Land Areas is described in Appendix A of Attachment 3 – SMAP-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.

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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 cable installation activities do not intersect any areas of Commonwealth Heritage Places Overseas and therefore no impacts are 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 SMAP submarine cable has been routed and designed with aim to minimise potential impacts on the environment.

Routing adjustments examples include:

- South Australian landing was modified to avoid a recreational diving area and areas of seagrass
- Victorian landing was modified to avoid the Point Danger Marine Sanctuary
- Sydney landing was modified to avoid a shipwreck and dumping ground
- De-confliction with Defence practice area and UXO areas
- De-confliction with other planned submarine cables

Cable installation adjustments examples include:

- Cable laying methods within South Australian seagrass habitat was modified to surface lay method to avoid larger disturbance footprints from ploughing or trenching activities on seagrass communities

5. Lodgement

5.1 Attachments

1.2.1 Overview of the proposed action

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att1-SMAP-EA-MainDocument.pdf This file contains the main environmental assessment report for the proposed action.	06/12/2024	No	High
#2.	Document	Att2-SMAP-EA-AppA-CoastalAssessment.pdf This file contains the coastal assessment for the proposed landings and the cable route.	30/08/2024	No	High
#3.	Document	Att3-SMAP-EA-AppB-MarineEcology-ReducedA.pdf This file contains 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.	06/12/2024	No	High
#4.	Document	Att3-SMAP-EA-AppB-MarineEcology-ReducedB.pdf This file contains 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.	06/12/2024	No	High
#5.	Document	Att4-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	06/12/2024	No	High
#6.	Document	Att5-SMAP-EA-AppD-OtherConsiderations.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 landing sites and cable route.	06/12/2024	Yes	High
#7.	Document	Att5-SMAP-EA-AppD-OtherConsiderations_REDACTED.pdf This is a redacted version of Att5-SMAP-AppD-OtherConsiderations	06/12/2024	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-SMAP-EA-MainDocument.pdf This file contains the main environmental assessment report for the proposed action.	05/12/2024	No	High

1.2.7 Public consultation regarding the project area

	Type	Name	Date	Sensitivity	Confidence

#1.	Document	Att1-SMAP-EA-MainDocument.pdf This file contains the main environmental assessment report for the proposed action.	05/12/2024	No	High

1.3.2.17 (Person proposing to take the action) Proposer's history of responsible environmental management

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att6-SMAP-OMS Policy.pdf This file contains OMS Group's HSE Policy, including compliance and regulations, safe working environment, HSE structure and resources, communication and collaboration, environmental responsibility, emergency preparedness and continuous improvement	01/07/2024	No	High
#2.	Document	Att7-SMAP-ASN Strategy.pdf This file contains ASN's strategy for environmentally friendly ship operation. It details how ASN will minimise the environmental footprint of their vessel operations.	05/06/2024	No	High

3.1.1 Current condition of the project area's environment

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att2-SMAP-EA-AppA-CoastalAssessment.pdf This file contains the coastal assessment for the proposed landings and the cable route.	29/08/2024	No	High
#2.	Document	Att3-SMAP-EA-AppB-MarineEcology-ReducedA.pdf This file contains 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.	05/12/2024	No	High

3.1.2 Existing or proposed uses for the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att5-SMAP-EA-AppD-OtherConsiderations_REDACTED.pdf This is a redacted version of Att5-SMAP-AppD-OtherConsiderations	06/12/2024	Yes	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3-SMAP-EA-AppB-MarineEcology-ReducedA.pdf This file contains 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.	05/12/2024	No	High

3.1.4 Gradient relevant to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att2-SMAP-EA-AppA-CoastalAssessment.pdf This file contains the coastal assessment for the proposed landings and the cable route.	29/08/2024	No	High

3.2.1 Flora and fauna within the affected area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att3-SMAP-EA-AppB-MarineEcology-ReducedA.pdf This file contains 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.	05/12/2024	No	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-SMAP-EA-AppD-OtherConsiderations_REDACTED.pdf This is a redacted version of Att5-SMAP-AppD-OtherConsiderations	05/12/2024	Yes	High

3.3.2 Indigenous heritage values that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att5-SMAP-EA-AppD-OtherConsiderations_REDACTED.pdf This is a redacted version of Att5-SMAP-AppD-OtherConsiderations	05/12/2024	Yes	High

3.4.1 Hydrology characteristics that apply to the project area

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att2-SMAP-EA-AppA-CoastalAssessment.pdf This file contains the coastal assessment for the proposed landings and the cable route.	29/08/2024	No	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-SMAP-EA-AppB-MarineEcology-ReducedA.pdf This file contains 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.	05/12/2024	No	High

#2.	Document	Att3-SMAP-EA-AppB-MarineEcology-ReducedB.pdf This file contains 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.	05/12/2024	No	High
#3.	Document	Att4-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	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-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	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-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	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-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	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-SMAP-EA-AppB-MarineEcology-ReducedA.pdf This file contains 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.	05/12/2024	No	High
#2.	Document	Att4-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	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-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	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-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	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-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	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-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	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-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	High

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

	Type	Name	Date	Sensitivity	Confidence
#1.	Document	Att4-SMAP-EA-AppC-Impact Assessment.pdf This file is the impact assessment, where impacts against MNES and other protected matters are described and assessed.	05/12/2024	No	High

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	145 Ann Street Brisbane QLD 4000
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. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ 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. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

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	57663521631
Organisation name	SUBCO SOUTH PTY LTD
Organisation address	14 Church St, Fortitude Valley 4000 QLD
Representative's name	Lee Harper
Representative's job title	Chief Operating Officer
Phone	+61 439 606 006
Email	lee@sub.co
Address	14 Church St., Fortitude Valley QLD 4006

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

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Lee Harper of SUBCO SOUTH 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. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

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. *

☑ I would like to receive notifications and track the referral progress through the EPBC portal. *

☑ I, **Lee Harper of SUBCO SOUTH 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. *

☐ I would like to receive notifications and track the referral progress through the EPBC portal. *