# Boskalis Cambridge Gulf Marine Sand Sourcing Project

Application Number: 02754

Commencement Date: **22/01/2025** 

Status: Locked

# 1. About the project

## 1.1 Project details

### 1.1.1 Project title \*

Boskalis Cambridge Gulf Marine Sand Sourcing Project

### 1.1.2 Project industry type \*

Mining

### 1.1.3 Project industry sub-type

Other

### 1.1.4 Estimated start date \*

01/01/2026

### 1.1.4 Estimated end date \*

01/01/2042

# 1.2 Proposed Action details

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

<u>NOTE RE. ATTACHED SUPPORTING REPORTS</u>: The attached document "<u>List of EPBC Referral Reports</u> - <u>Boskalis Cambridge Gulf</u>" lists all reports submitted in support of this referral. A similar set of reports was also submitted in support of Boskalis' self-referral of the project under the Western Australia *Environmental Protection Act.* Overall, the State and Commonwealth referral reports contain exactly the same technical content, with some minor differences in report titles (all of the EPBC referral reports have the prefix 'EPBC'), introductory sections tailored to reflect the specific referrals and some minor differences in terms to suit the requirements of each Act, e.g in the State referral reports the term 'proposal' is used while in the EPBC referral reports the term 'proposed action' is used.

Other main differences in the two sets of reports are as follows:

- EPBC Referral Report No. 1 contains a description of the proposed action, whereas this is not contained in the State Referral Report No. 1, as it is provided in preceding State-templates 'EPA Form' and 'Proposal Content Document (PCD)' for which there are no EPBC equivalents.
- EPBC Referral Report No. 2 includes an expanded and separate Marine Fauna Survey Report as Annex 14 (submitted as a separate document), in order to meet Commonwealth guidelines for reporting marine fauna surveys, whereas the marine fauna survey results are integrated into section 9 of the State Referral Report No. 2.
- EPBC Referral Report No. 7 Commonwealth Matters, is more comprehensive than the State version of this report (as it specifically addresses EPBC requirements). In particular, the EPBC version has an expanded section 9 addressing potential impacts on area-based MNES, and especially an expanded section 9.3 addressing potential impacts on the Ord River Floodplain Ramsar wetland.

For location map and boundaries of the Proposed Operational Area (POA) pls refer the attached map: <u>Boskalis Cambridge Gulf - Location Map & Proposed Operational Area (PDF).</u>

This is a brief summary of the proposed action only - pls refer Section 2 (pages 8 to 19) of <u>EPBC Referral</u> <u>Report No. 1 - Boskalis Cambridge Gulf - *Description of Proposed Action & Reg Framework*, for detailed description of the proposed action.</u>

Boskalis Australia Pty Ltd (BKA) is assessing the feasibility of developing a marine sand sourcing operation in Cambridge Gulf (CG) near Wyndham in the northeast of Western Australia (WA) ((see attached map '<u>Boskalis Cambridge Gulf - Location Map & POA</u>'). ). The sand in CG is derived from natural terrestrial sources via river inputs. The sand would be exported to Asian markets for use in construction projects. In proposing CG, BKA has screened alternatives as outlined in Section 18 of <u>Referral Report No. 4 - Boskalis Cambridge Gulf - Impact Assessments</u> and summarized in the section on alternatives below.

The proposal is subject to the WA *Mining Act* including the comprehensive environmental assessment and management framework under that Act, and BKA also self-referred the proposal to the WA EPA under the section 38 of the WA *Environmental Protection Act* (EP Act) on 1 September 2024 (Submission No. APP-0025643).

BKA currently holds two exploration tenements in CG under the WA Mining Act, E80/5655 and E80/6009 as shown on <u>Boskalis Cambridge Gulf - *Location Map & POA* (PDF)</u>. These are referred to by BKA as Blocks 4 and 4A respectively. Based on sand distribution, the proposed operational area where BKA proposes to

apply for a mining tenement is the western part of Block 4 and all of Block 4A as shown on <u>Boskalis</u> <u>Cambridge Gulf - Location Map & POA (PDF).</u>

To support its feasibility assessment BKA has undertaken a wide range of environmental, engineering, economic and other studies since 2018. These studies find that the proposal is feasible and viable and unlikely to cause significant environmental impacts, as defined under the WA EP Act and the Commonwealth *Environmental Protection & Biodiversity Conservation Act* (EPBC Act). The findings of these studies are presented in the full set of Referral Reports as listed in List of EPBC Referral Reports - Boskalis Cambridge Gulf.

Despite the low likelihood of significant environmental impacts, as a responsible company with stringent environmental and social policies, BKA has committed to self-referring the proposed action under both the WA EP Act and the Commonwealth EPBC Act, for their determination of what further environmental assessments might be required, if any. If it is determined that assessment is required under both Acts, BKA will seek a joint process under the WA environmental assessment system, which is accredited by the Commonwealth.

Key specifications relating to the proposed action include:

Project lifespan: Up to 15 years from commencement of operations.

<u>Zero coastal or land-based development</u>: The proposed action does not involve the construction and operation of any shore-based facilities and does not involve the alteration of the coastline in any way. It will be a 100% vessel-based marine operation.

<u>Marine area</u>: The proposed operational area is located in the central part of the main body of CG where there is a significant seabed sand resource, covering an area of ~100 km2 as shown on <u>Boskalis</u> <u>Cambridge Gulf - Location Map & POA (PDF).</u>

Water depths within the area average -25 m MSL. The seabed within and around the proposed operational area comprises highly-dynamic sand-waves with very little biota and no significant benthic communities, due to the constantly moving substrate, strong tidal currents (>1.5 m/s), constantly high suspended sediments and permanent lack of benthic light (see Section 6.4, pages 73 to 108 of <u>EPBC Referral Report</u> <u>No. 2 - Boskalis Cambridge Gulf - Setting & Existing Environment</u>).

<u>Single vessel</u>: The proposed action will involve a Sand Production Vessel (SPV) based generally on the design of a large Trailer Suction Hopper Dredger (TSHD). It will be an internationally-registered vessel subject to all relevant regulatory requirements of the International Maritime Organization (IMO) and the Australian Maritime Safety Authority (AMSA). While design is conceptual at this stage, indicative specifications are Length Overall (LoA) of ~350 m, draft of ~19 m, sand capacity 75K m3 to 125K m3 and crew of ~25.

<u>Zero activity in CG for 86% of time</u>: The SPV will self-load sand in CG for one to two days every two weeks. It will then sail to the sand delivery port in Asia and return to CG two weeks later to repeat the cycle. This means that the SPV will only operate in CG for 52 days per year, or 14% of the time. There will be zero operational activity in CG for 86% of the time during the project's lifespan of up to 15 years. There will be no refuelling or waste discharges in CG.

<u>Sand volumes</u>: Exploration surveys indicate that there is a minimum of 300 million m3 of sand in the proposed operational area and likely several times more. There are several orders of magnitude higher volumes of sand throughout CG overall. It is proposed to export up to 70 million m3 of sand. This is a maximum of only 23% of the minimum volume of 300 million m3 of sand estimated to occur in the proposed operational area, and a much smaller % of the volume of sand that occurs throughout CG overall. A technical assessment of the sand resource is contained in <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 1 - Sand Assessment.</u>

<u>Low footprint each loading cycle</u>: During each one- to two-day sand loading cycle, the SPV will work over an area of ~0.5 km2 within the proposed operational area, with a drag-head width of ~6 m. The SPV will remove a layer of approximately 40 cm of sand from the seabed during each loading cycle.

<u>End of project seabed condition</u>: At the end of the 15-year project timeframe, if the proposed 70 million m3 of sand is exported, the area within the proposed operational area will be on average <1m deeper than the pre-project seabed. It will still comprise sand with similar seabed morphology, dynamics and habitat features as before sand sourcing (see Section 7.3.3, page 49 of <u>EPBC Referral Report No. 4 - Boskalis</u> <u>Cambridge Gulf - *Impact Assessments*).</u>

<u>No significant environmental impacts</u>: Overall, due to the above factors and other factors as assessed in the Referral Reports, and with the implementation of best-practice impact avoidance, prevention, minimization, mitigation, management and monitoring measures, BKA assesses that the proposal is unlikely to cause significant environmental impacts. If the proposal proceeds, BKA will seek to support research and monitoring initiatives to improve environmental protection and biodiversity conservation in the area, in cooperation with relevant stakeholders including the Traditional Owners (TOs) (see all sections of <u>EPBC</u> <u>Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments*).</u>

<u>Economic benefits & TO support</u>: The proposal will generate a range of economic benefits, including payment of State royalties, payment of voluntary royalties to TO groups, up to 40-50 local jobs, service contracts and business opportunities with priority focus on TOs, and support for local Indigenous Ranger groups and community development (see section 8, page 30, of <u>EPBC Referral Report No. 3 - Boskalis Cambridge Gulf - Traditional Owner Matters</u>). Both TO groups in the area, Balanggarra and Miriuwung-Gajerrong, have issued letters of support for the proposed action (included as Annexes 4 & 5 to <u>EPBC Referral Report No. 3 - Boskalis Cambridge Gulf - Traditional Owner Matters</u>).

Subject to the outcome of the WA EP Act and Commonwealth EPBC Act referral processes, if appropriate BKA plans to apply to the WA Department of Energy, Mines, Industry Regulation & Safety (DEMIRS) to convert the two Exploration Tenements to a single Mining Tenement as per the proposed operational area shown on <u>Boskalis Cambridge Gulf - *Location Map* & POA (PDF).</u>

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? \*

**NOTE:** All Referral Reports referenced in the response below are attached in the response to Item 1.2.1 above.

For a detailed description of State, Commonwealth and international regulatory framework applicable to the proposed action please see Section 3, pages 20 to 32, of <u>EPBC Referral Report No. 1 - Boskalis</u> <u>Cambridge Gulf - Description of Proposed Action & Reg Framework</u>. Please also refer the attached map: <u>Boskalis Cambridge Gulf - Tenure & Jurisdictions Map (PDF)</u>. A summary is as follows:

Overall jurisdictional setting (pls see Section 3.1, page 20 of EPBC Referral Report No. 1):

- Cambridge Gulf (CG) and BKA's proposed operational area are located within the State Internal Waters (landward of the Territorial Sea Baseline), and are thus subject to the full jurisdiction of the State of WA. The area is also within the sovereign territory of Australia and subject to Commonwealth laws.
- To seaward of CG is the State North Kimberly Marine Park, which extends from the Territorial Sea Baseline seaward to the 3 nm State limit. Seaward of the 3 nm State limit is the Commonwealth Joseph Bonaparte Gulf Marine Park.
- The Port of Wyndham is located ~80 km upstream from the main body of CG under the jurisdiction of the Kimberley Ports Authority. The proposed operational area is not within the declared port area.
- The local Government for the area is the Shire of Wyndham & East Kimberley.
- The coast and hinterland on the western side of CG are <u>Native Title</u> lands of the Balanggarra peoples, which includes marine areas of the State Marine Park out to 3 nm. The coast and hinterland on the eastern side of CG are Native Title lands of the Mirriuwung-Gajerrong peoples, which includes marine areas within the 'False Mouths of the Ord River'. There is no Native Title determination over marine waters within the main body of CG, including the proposed operational area. Both TO groups in the area have issued letters of support for the proposed action (Annexes 4 & 5 to <u>EPBC Referral Report No. 3 Boskalis Cambridge Gulf Traditional Owner Matters</u>).

Commonwealth laws (pls see Section 3.3, pages 28 to 31 of EPBC Referral Report No. 1):

#### Environment Protection & Biodiversity Conservation Act (EPBC Act):

- As outlined in Section 6, pages 23 to 30 of <u>EPBC Referral Report No. 7 Boskalis Cambridge Gulf -</u> <u>Commonwealth Matters</u>, a search of the EPBC Act Protected Matters Search Tool (PMST) found that there are EPBC Act-designated MNES in the general area.
- The potential for the proposed action to cause significant impacts on the identified MNES is
  systematically assessed in <u>EPBC Referral Report No. 7</u> in accordance with the EPBC Act significant
  impact criteria for each MNES type. The assessment considers the nature, scope, scale and
  duration of the proposed action, and applies the WA EPA's impact mitigation hierarchy of avoid,
  minimize, offset and rehabilitate impacts. The assessment, supported by the other Referral
  Reports, finds that the proposed action does not pose a risk of significant impact on any of the
  identified MNES, as defined by the EPBC Significant Impact Guidelines.
- Never-the-less, as a responsible company with stringent environmental policies, BKA is self-referring the proposed action under both the WA EP Act and EPBC Act, for determination of what further environmental assessments might be required, if any. If it is determined that assessment is required under both Acts, BKA will seek a joint process under the WA system, which is accredited by the Commonwealth.

#### AMSA maritime laws:

- As an internationally-registered vessel the Sand Production Vessel (SPV) will be subject to the full suite of international maritime safety and environment protection conventions of the International Maritime Organization (IMO), as implemented in Australia by the Australian Maritime Safety Authority (AMSA), including *inter alia*:
- Navigation Act and supporting Marine Orders.

- *Protection of the Sea (Prevention of Pollution from Ships) Act*, supported by Marine Orders per MARPOL Convention Annexes.
- *Protection of the Sea (Harmful Anti-fouling Systems) Act* (AFS Act), supported by MO 98 Anti-fouling Systems.

#### Biosecurity Act & Regulations (Department of Agriculture, Fisheries & Forestry):

- The SPV will be equipped with an IMO-compliant ballast water treatment system consistent with the IMO International Convention for the Control & Management of Ships' Ballast Water & Sediments and Commonwealth ballast water regulations under the Biosecurity Act.
- The SPV will implement a biofouling management plan with stringent biofouling prevention, management, mitigation and monitoring measures, consistent with IMO biofouling guidelines (IMO 2023) and Commonwealth biofouling regulations under the *Biosecurity Act*.

State laws (pls see Section 3.2, pages 23 to 27 of EPBC Referral Report No. 1):

#### WA Mining Act (DEMIRS)

#### Sand exploration:

- Exploration Tenement E80/5655 issued to BKA Aug 2022 (BKA Block 4).
- Exploration Tenement E80/6009 issued to BKA July 2024 (BKA Block 4A).
- Both have Conditions including environmental requirements for exploration.

#### Sand sourcing:

• Mining Licence is required to mine the sand and is subject to comprehensive environmental assessment process under WA Mining Act.

#### WA Environmental Protection Act (DWER & EPA)

- As outlined in <u>EPBC Referral Report No. 4 Boskalis Cambridge Gulf *Impact Assessments* it is assessed that none of the proposed activities will cause serious or material environmental harm that contravenes the provisions of the EP Act.</u>
- As further outlined in <u>Referral Report No. 4</u> it is assessed that the proposed action is unlikely to cause significant impacts on the relevant (key) State Environmental Factors of Benthic Communities & Habitats, Coastal Processes, Marine Environmental Quality, Marine Fauna, Air Quality and Social Surroundings, or on environmental resources and values overall.
- Given this assessment, and the fact that the proposed action is subject to the environmental regime of the WA *Mining Act*, and the AMSA vessel regulatory regime, BKA considers that the proposal may not require assessment under the WA EP Act.
- Never-the-less as a responsible company with stringent environmental policies, BKA is self-referring the proposal under he WA EP Act, and to the Commonwealth under the EPBC Act, for their determination of what further assessments might be required, if any.

#### WA Biodiversity Conservation Act (DBCA):

- Section 9 of <u>EPBC Referral Report No. 2 Boskalis Cambridge Gulf -Setting & Existing Environment</u> includes a description of protected marine fauna in the CG area, including the results of field surveys commissioned by BKA, presented in <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex</u> <u>14 - Marine Mega-fauna Surveys Report</u>.
- Section 10 of <u>EPBC Referral Report No. 4 Boskalis Cambridge Gulf Impact Assessments</u> includes assessment of potential impacts of the proposed action on marine fauna in accordance with the WA EPA Environmental Factor Guideline for Marine Fauna. The proposed action is unlikely to cause significant impacts on marine fauna, and best practice impact avoidance, minimization, management and monitoring measures are proposed in Section 10 of <u>EPBC Referral Report No. 4</u>.

#### WA Conservation & Land Management (CALM) Act (DBCA):

- The State North Kimberley Marine Park located to seaward of CG is declared and managed under the CALM Act.
- The closest distance between the inner (shoreward) boundary of the Marine Park and the outer (seaward) boundary of the proposed operational area is ~1.5 km. Commercial vessels are expressly permitted to transit through the Marine Park.
- The State Ord River Nature Reserve, located on the eastern side of CG covering the False Mouths of the Ord, is also declared and managed under the CALM Act. The closest distance between the western boundary of the Nature Reserve and the eastern boundary of the proposed operational area is ~9 km.
- Section 14 of <u>EPBC Referral Report No. 4 Boskalis Cambridge Gulf Impact Assessments</u> includes an assessment of potential impacts on the North Kimberley Marine Park and the Ord River Nature Reserve. The proposed action is unlikely to cause significant impacts on these areas, and best practice impact avoidance, minimization, management and monitoring measures are proposed in Section 14 of <u>EPBC Referral Report No. 4</u>.

#### Aboriginal Heritage Act (DPLH):

See EPBC Referral Report No. 3 - Boskalis Cambridge Gulf - Traditional Owner Matters.

Underwater Aboriginal Cultural Heritage

• BKA consulted with the TO groups about marine-based cultural heritage and undertook an extremely comprehensive survey and found no indications.

Land-based Aboriginal Cultural Heritage

- There are significant land-based Aboriginal cultural heritage sites on the eastern side of CG and on Lacrosse Island listed on the WA *Aboriginal Cultural Heritage Inquiry System* (ACHIS). These will not be affected by the proposed action.
- BKA has offered to work with TO groups to develop a Joint Aboriginal Cultural Heritage Management Plan for the area.
- Both TO groups in the area, Balanggarra and Miriuwung-Gajerrong, have issued letters of support for the proposed action (Annexes 4 & 5 to <u>EPBC Referral Report No. 3</u>).

#### WA Maritime Archaeology Act (WA Museum)

• BKA searched the WA Historic Shipwreck Database and no historic shipwrecks were identified in the proposed operational area, although there are several in the general CG area.

BKA undertook high-resolution hydrographic surveys throughout the entire proposed operational area and a 1 km buffer around the boundary of the area in Feb-March 2024, with no evidence of shipwrecks or related material. See Section 13 of <u>EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments*.</u>

#### WA Fish Resources Management Act (DPIRD Fisheries Division):

- The primary purpose of the FRM Act is the protection and management of fish resources in WA.
- Section 10.3.7 of <u>EPBC Referral Report No. 4 Boskalis Cambridge Gulf *Impact Assessments* assesses that the proposed action is unlikely to cause significant impacts on fish.</u>

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. \*

**NOTE:** All Referral Reports referenced in the response below are attached in the response to Item 1.2.1 above.

BKA recognises that social licence is as important as regulatory licence for development proposals, and in order to ensure that the views, perspectives and positions of relevant key stakeholders are identified and addressed, BKA has undertaken direct, in-person consultations with a wide range of key stakeholders.

<u>EPBC Referral Report No. 6 - Boskalis Cambridge Gulf - Consultation</u> contains details of BKA's consultation program and outcomes from October 2022 to August 2024 (noting that BKA sees consultation as an ongoing process, is continuing to consult and will continue to do so should the proposed action go ahead).

Section 2 (pages 9 to 18) of <u>Referral Report No. 6</u> includes a Stakeholder Analysis, which identified 26 key stakeholder organizations including Traditional Owners (TOs), local, State and Commonwealth government agencies, the ports and shipping sector, the commercial and recreational fishing sectors, the local and regional business community, environmental NGOs and eight key individuals (regional marine users).

Section 3 (pages 19 to 24) of <u>Referral Report No. 6</u> describes the consultation activities carried out by BKA (which are also ongoing). Consultations with stakeholders were commenced in October 2022 and since then BKA implemented an ongoing program to consult with the key stakeholders as identified by the Stakeholder Analysis. Consultations included in-person meetings with presentations about the proposed action, question and answer sessions and strong attention being paid by BKA to recording and addressing questions, requests, issues and concerns raised. Many stakeholders were met with more than once, and communications have been maintained through remote meetings, email and phone calls.

The consultation outcomes and main issues raised and BKA's response to these are presented in Section 4 (pages 24 to 32) of <u>EPBC Referral Report No. 6 - Boskalis Cambridge Gulf - *Consultation*, and minutes of all consultation meetings are kept on file. In summary the major points include, *inter alia*:</u>

- <u>Traditional Owners</u>: The two Traditional Owner groups in the area (BAC and MG Corp) support the proposed action so long as they are fully and closely consulted and it does not impact negatively on their interests, including Native Title and Aboriginal cultural heritage. BKA's studies and reports address potential risks to indigenous values and interests thoroughly and no negative impacts are predicted. Both groups are working with BKA to develop MoUs, which include benefits sharing packages, and both groups have issued letters of support for the proposal as contained in Annexes 4 & 5 to EPBC Referral Report No. 3 Boskalis Cambridge Gulf *Traditional Owner Matters*.
- Other support for the proposal: Several stakeholders consulted expressed support for the proposed action so long as due process is followed and it does not cause significant negative impacts, including the Shire of Wyndham & East Kimberley (SWEK), the Kimberley Development Commission (KDC), the Kimberley Ports Authority (KPA) and Cambridge Gulf Limited (CGL) (which operates the Port of Wyndham under licence from KPA).
- <u>No objections to the proposal</u>: While not stating explicit support for the proposal, several stakeholders stated that they have no objections in terms of their mandates or interests, including WA

DoT-Maritime, Recfishwest and Wyndham-based commercial fisherman.

- <u>Marine biodiversity</u>: Several stakeholders including WA DWER, DBCA, DPIRD Fisheries, the Commonwealth DCCEEW and the Northern Prawn Fishery Industry identified potential impacts on inshore dolphin species, marine turtles, sawfish and river sharks as issues that need to be addressed. BKA's studies and reports address potential risks to these species thoroughly – and significant impacts are not predicted (see Section 10 of EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - Impact Assessments and EPBC Referral Report No. 7 - Boskalis Cambridge Gulf -Commonwealth Matters</u>). If the proposed action proceeds, BKA will look to support research and monitoring of relevant biodiversity issues in the CG area, in coordination with relevant biodiversity stakeholders.
- <u>Marine biosecurity</u>: WA DWER and Commonwealth DCCEEW identified the potential introduction of marine pests via ballast water and hull fouling as a main issue that needs to be addressed. BKA's studies and reports address these potential risks thoroughly and no significant risks are predicted. The SPV will be fitted with IMO-compliant ballast water treatment system, and will comply with the Biofouling Regulation under the Commonwealth Biosecurity Act, including having an approved Biofouling Management Plan with very stringent biofouling prevention, management, mitigation and monitoring measures (see Section 7.3.7 of EPBC Referral Report No. 4 Boskalis Cambridge Gulf *Impact Assessments*).
- <u>Turbidity</u>: WA DWER stated that while natural turbidity levels might be high in CG, potential turbidity impacts of the operation will still need to be thoroughly addressed, as per the WA EPA EIA guidelines this should include the cumulative impacts of any additional turbidity caused by the operation over and above natural background levels. BKA's studies and reports address the turbidity issue thoroughly and significant impacts are not predicted (see Section 7.3.4 of <u>EPBC Referral Report No. 4 Boskalis Cambridge Gulf Impact Assessments</u> and also Section 6 of <u>EPBC Referral Report No. 8 Boskalis Cambridge Gulf Full Modelling</u>).
- <u>Underwater noise</u>: WA DWER stated that potential impacts of underwater noise from the SPV is a key issue that needs to be addressed, and this has been assessed in Section 10.3 (pages 112 to 119) of <u>EPBC Referral Report No. 4 Boskalis Cambridge Gulf *Impact Assessments*.
  </u>
- <u>Commercial fisheries</u>: Several stakeholder groups, including DPIRD Fisheries, AFMA, WAFIC and NPF Industry are interested to ensure that the proposal does not cause negative impacts on fisheries resources, commercial fisheries and fish species, including the gillnet fishery (mainly barramundi and threadfin salmon), the mud-crab fishery and the Northern Prawn Fishery (NPF). While there is an extremely low level of commercial fishing activity in CG (one gillnet operator only – who also fishes elsewhere along the coast outside of CG), fisheries stakeholders highlighted the need to consider the potential role of CG as a nursery area. BKA's studies and reports address potential risks to fish and fisheries – and no significant impacts are predicted (see Section 10.3.7, pages 121 to 127 of <u>EPBC</u> <u>Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments*). If the proposed action proceeds, BKA will look to support research and monitoring of relevant fisheries issues in the CG area, in close coordination with relevant fisheries stakeholders.
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- <u>Recreational fisheries Issues</u>: No objections to the proposal were raised by this sector as recreational fishing in the general area targets upstream and coastal areas and does not overlap with the proposed operational area. The proposed action is unlikely to have negative impacts on recreational fishing (see Section 10.3.7, pages 121 to 126 and Section 13, pages 142 to 145 of <u>EPBC Referral Report No. 4 Boskalis Cambridge Gulf *Impact Assessments*). Should the proposed action proceed, BKA will consider sponsoring the Wyndham Volunteer Marine Rescue (WVMR), which will have safety benefits for the recreational fishing sector.
  </u>
- <u>Port, navigation & maritime issues</u>: The WA DoT Maritime, KPA and CGL did not raise concerns about potential impacts on safety of navigation and port operations and KPA and CGL welcomed benefits for the Port of Wyndham (see Annex 2 of <u>EPBC Referral Report No. 4 - Boskalis Cambridge</u> <u>Gulf - Impact Assessments</u>).
- <u>Broader socioeconomic & community development</u>: The East Kimberley Chamber of Commerce and Industry (EKCCI), KDC and SWEK support the project so long as there are no negative impacts and there are benefits for local socioeconomics, business and the community and for the shire and region overall. The proposal will have positive socioeconomic, business and the community impacts (see Section 13 of <u>EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments*). BKA will continue to keep these bodies informed and seek to work with them to optimize benefits.
  </u>
- <u>Environmental NGOs</u>: The Conservation Commission of WA (CCWA) made two major points, 1) does BKA intend to self-refer the proposal to the State under the WA EP Act and Cmwlth EPBC Act?, and 2) are there marine nursery areas in CG that need to be protected? BKA is self-referring the proposal under both the WA EP Act and Cmwlth EPBC Act. BKA recognizes that all of the mangrove and estuarine inlets around CG have nursery values, and has assessed this issue thoroughly. The proposal will not impact directly or indirectly on these areas (see Section 7.3, pages 47 to 70 of <u>EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments*). Environs Kimberley, an NGO based in Broome, did not respond to consultation invitations via email and phone.
  </u>

Minutes of all consultation meetings are kept on file.

Stakeholder engagement is on-going and planned into the future, including any meetings that might be requested by stakeholders, and an on-going consultation process is in place with the two TO groups in the CG area (BAC and MG Corp).

Should the proposed action proceed, a Stakeholder Reference Group (SRF) or similar could be established and operated throughout the life of the project.

# 1.3.1 Identity: Referring party

#### **Privacy Notice:**

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

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

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

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See our Privacy Policy to learn more about accessing or correcting personal information or making a complaint. Alternatively, email us at privacy@awe.gov.au.

#### Confirm that you have read and understand this Privacy Notice \*

#### 1.3.1.1 Is Referring party an organisation or business? \*

Yes

Referring party organisation details		
ABN/ACN	52794309036	
Organisation name	RAAYMAKERS, STEPHEN CRAIG trading as EcoStrategic Consultants	
Organisation address	12 Esterina Close, Redlynch QLD 4870	
Referring party details		
Name	Stephen Raaymakers	
Job title	Consultant	
Phone	040 9909 422	
Email	steve@eco-strategic.com	
Address	PO Box 968, Edge Hill, QLD 4870, AUSTRALIA	

# 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	83099738333	
Organisation name	BOSKALIS AUSTRALIA PTY LIMITED	
Organisation address	Suite 1, Level 3, 9, Havelock Street, West Perth, WA 6005.	
Person proposing to take the action details		
Name	Peter Boere	
Job title	Director	
Phone	0419987158	
Email	peter.boere@boskalis.com	
Address	Suite 1, Level 3, 9, Havelock Street, West Perth, WA 6005.	

### 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. \*

Boskalis Australia Pty Ltd is a subsidiary of Royal Boskalis, a Netherlands-based international company formed over 100 years ago – see www.boskalis.com. Boskalis gained the official 'Royal' designation in 1974, which in the Netherlands system can only be held by companies that meet extremely stringent governance and reputational standards, including existing for over 100 years, being leaders in their field, and not being subject to regulatory breaches.

Boskalis is a world leading company in marine dredging, coastal management, offshore contracting and marine construction services, with a global fleet of over 600 dredgers and highly-specialized work vessels of various types, and a global staff of over 11,000.

Boskalis has a strong history of responsible environmental management and maintains stringent environment, social and sustainability policies and procedures – please refer the following attached supporting documents (Electronic File Names):

- Boskalis Environment & Social Policy 2023.
- Boskalis Code of Conduct 2023.
- Boskalis Sustainability Report 2023.

Boskalis has not been subject 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.

Boskalis has a strong record of environmental performance in Australia, including in 2023-24 being contracted by the Commonwealth Government – Great Barrier Reef Marine Park Authority (GBRMPA), to carry out the **world's largest coral reef remediation project to date**, at <u>Douglas Shoal</u> on the southern **Great Barrier Reef**, which was impacted by the coal ship the MV Shen Neng. GBRMPA and the Traditional Owners of the area have expressed very positive satisfaction and appreciation for the high technical, environmental and social standard and performance of Boskalis on the Douglas Shoal project – the relevant GBRMPA Director has advised that he would be pleased to provide a reference to DCCEEW for Boskalis' work for GBRMPA.

Boskalis has carried out a range of other projects in Australia which required implementation of and compliance with extremely stringent environmental protection measures, including but not limited to:

- Port of Melbourne channel deepening in 2008-2009, where in addition to undertaking the work, Boskalis also brought its global expertise to bear to assist the Port of Melbourne to undertake their environmental impact studies and develop and implement an environmentally responsible management plan for dredging and managing contaminated sediments from the Yarra River.
- Port Adelaide channel dredging in 2019, which including implementing stringent measures to prevent impacts on nearby seagrass beds and dolphin population.

At the global level, Boskalis plays a major role in supporting the global transition to a non-carbon future, having worked on the installation of over 100 offshore wind farms in various parts of the world to date, and rapidly expanding further into this sector (see - https://boskalis.com/markets/offshore-energy/offshore-wind).

Boskalis plays a vital role in assisting island- and coastal-nations and communities with climate change adaptation, undertaking coastal management and protection works around the world, including being a leader in nature-based and green-engineering solutions, to adapt to climate change-induced sea level rise (see https://boskalis.com/sustainability/environmental-and-social/nature-based-solutions and https://boskalis.com/about-us/company-profile/building-with-nature ).

Boskalis also plays a major role in protecting the World's oceans from pollution from ship groundings, collisions, sinkings and other marine casualties, through the wholly-Boskalis-owned subsidiary Smit Salvage - which is the world's leading salvage operator (https://smit.com/). This includes being contracted by the United Nations in 2023 to remove over 160,000 metric tonnes of crude oil cargo from the abandoned and rotting super-tanker *MT Safer*. The derelict tanker was moored in the Red Sea off the coast of Yemen, threatening to break apart and cause a catastrophic oil spill throughout highly-sensitive coral reef, mangrove, seagrass and fishery areas of the Red Sea. The effective action by Boskalis-Smit averted such environmental catastrophe. See videos:

https://www.youtube.com/watch?app=desktop&v=pRp2M47LcuE

https://www.youtube.com/watch?v=kCsQJqvuSYg

https://www.youtube.com/watch?v=HIAZeRIjUw8

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

Please refer the following supporting documents attached to the response to 1.3.2.17 above.

- Boskalis Environment & Social Policy 2023.
- Boskalis Code of Conduct 2023.
- Boskalis Sustainability Report 2023.

The main elements of each are summarized as follows:

#### Boskalis Environment & Social (E&S) Policy 2023:

The E&S Policy applies to all Boskalis business operations and activities, business units, subsidiaries and all staff and contractors. Core requirements are:

- Conduct business with integrity, honesty and fairness.
- Comply with all applicable laws and the Boskalis Code of Conduct (see below).
- Strive to be a leader in sustainability in the dredging, offshore contracting and marine services industries.
- Take account of the interests of all relevant stakeholders, including employees, shareholders and financial institutions, suppliers, clients, government bodies, educational and knowledge institutes, industry and society associations (including NGOs) and the communities in which Boskalis operates.
- Promote sustainability as a fundamental part of the way Boskalis does business, and promote the same principles in relationships with customers, suppliers and other business partners.
- Be a significant contributor to the United Nations Sustainable Development Goals (SDGs).
- Align business practices with the United Nations Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises.
- Optimize environmental management systems in accordance with the requirements of the ISO 14001 standard, with the aim of achieving continuous improvement in environmental performance.

The E&S policy focusses on six core environment and social themes that are of most relevance to the nature of Boskalis' operations globally:

**Climate change**: Boskalis aims to be climate neutral for its own operations by 2050, and has an ongoing program to green its vessel fleet and shore-based facilities. As outlined above, at the global level, Boskalis plays a major role in supporting the global transition to a non-carbon future, having worked on the installation of over 100 offshore wind farms in various parts of the world to date, and rapidly expanding further into this sector. As also outlined above, Boskalis plays a vital role in assisting island- and coastal-nations and communities with climate change adaptation, undertaking coastal management and protection works around the world, including being a leader in nature-based and green-engineering solutions, to adapt to climate change-induced sea level rise.

**Biodiversity**: Boskalis operates in the coastal zone and in marine waters, where protection of coastal and marine biodiversity including, depending on the area, wetlands, coastal bird habitats, mangroves, seagrasses, coral reefs and marine fauna species of conservation significance, is a key priority. Boskalis has long experience in implementing best practice measures to prevent, reduce, mitigate, manage and monitor potential impacts on coastal and marine biodiversity.

**Pollution prevention**: As outlined above, Boskalis plays a major role in protecting the World's oceans from pollution from ship groundings, collisions, sinkings and other marine casualties, through the wholly-Boskalis-owned subsidiary Smit Salvage - which is the world's leading salvage operator (https://smit.com/). With its own fleet of over 600 marine vessels, Boskalis applies the highest standards in accordance with the International Maritime Organization (IMO) regime, to ensure the prevention and mitigation of all forms of pollution from its vessels. Boskalis has a zero-oil spill ambition across all of its activities.

**Ship recycling**: With its own fleet of over 600 marine vessels, from time-to-time vessels reach the end of their operational life and need to be decommissioned. When contracting third-parties to dismantle and recycle its decommissioned vessels, Boskalis requires compliance with international best-practices including the IMO *International Convention for the Safe and Environmentally Sound Recycling of Ships*, the *EU Regulation on Ship Recycling* and the International Labour Organization (ILO) *Ship Breaking Guidelines*. In the event that Boskalis sells one of its vessels, a specific perpetual obligation is included in the contract that the ship recycling principles must be adhered to if the vessel is scrapped in the future.

**Communities**: Boskalis operates in the coastal zone and in marine waters, where a range of communities can exist including coastal cities, towns and villages, commercial, recreational and traditional fishing communities, coastal tourism communities, traditional owner / indigenous communities and others. As such Boskalis places a high priority on community engagement and consultation and working to prevent and mitigate community impacts, and to respond to their economic, environmental and social needs.

**Governance**: Compliance with the E&S Policy is monitored by the Boskalis Sustainability Department and Compliance Officer and through audits performed by the internal auditor. The Board of Management and the Compliance Officer review the content of the E&S Policy with the Sustainability Department every two years.

Boskalis Code of Conduct 2023:

The Boskalis Code of Conduct applies to all staff and contractors as per the E&S Policy and amongst other requirements reinforces the need to comply with the E&S Policy.

Boskalis Sustainability Report 2023:

The Sustainability Reports are published annually and include quantitative reporting against ambitions and targets aligned against each of the themes in the E&S Policy, with measurable target indicators where relevant, so that performance can be assessed and continuous improvements made.

# 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	83099738333	
Organisation name	BOSKALIS AUSTRALIA PTY LIMITED	
Organisation address	Suite 1, Level 3, 9, Havelock Street, West Perth, WA 6005.	
Proposed designated proponent details		
Name	Peter Boere	
Job title	Director	
Phone	0419987158	
Email	peter.boere@boskalis.com	
Address	Suite 1, Level 3, 9, Havelock Street, West Perth, WA 6005.	

# 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	52794309036
Organisation name	RAAYMAKERS, STEPHEN CRAIG trading as EcoStrategic Consultants
Organisation address	12 Esterina Close, Redlynch QLD 4870
Representative's name	Stephen Raaymakers
Representative's job title	Consultant
Phone	040 9909 422
Email	steve@eco-strategic.com
Address	PO Box 968, Edge Hill, QLD 4870, AUSTRALIA

### 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	83099738333
Organisation name	BOSKALIS AUSTRALIA PTY LIMITED
Organisation address	Suite 1, Level 3, 9, Havelock Street, West Perth, WA 6005.
Representative's name	Peter Boere
Representative's job title	Director
Phone	0419987158
Email	peter.boere@boskalis.com
Address	Suite 1, Level 3, 9, Havelock Street, West Perth, WA 6005.

### Confirmed Proposed designated proponent's identity

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

Same as Person proposing to take the action information.

## 1.4 Payment details: Payment exemption and fee waiver

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

No

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

No

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

No

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

No

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

No

## 1.4 Payment details: Payment allocation

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

Person proposing to take the action

# 2. Location

# 2.1 Project footprint



Project Area: 10157.38 Ha Disturbance Footprint: 10157.38 Ha

## 2.2 Footprint details

#### 2.2.1 What is the address of the proposed action? \*

There is no 'address' for the proposed action. It is located wholly in marine waters in the centre

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

Western Australia

#### 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? \*

**NOTE:** All Referral Reports referenced in the response below are attached in the response to Item 1.2.1 above.

Please see Section 3.1, pages 20 to 22 of <u>EPBC Referral Report No. 1 - Boskalis Cambridge Gulf -</u> <u>Description of Proposed Action & Reg Framework</u> – which includes maps of jurisdictions and tenure in the area.

Please also refer the attached map: Boskalis Cambridge Gulf - Tenure & Jurisdictions Map (PDF).

The seabed within Cambridge Gulf (CG) is located in the Internal Waters of the State of WA (landward of the territorial sea baseline).

The tenure of the seabed is Crown Land owned by the Government of WA. Two Native Title determinations in the area do not include the seabed within CG (Balanggarra to the west of CG and Mirriuwung-Gajerrong to the east of CG).

Boskalis currently holds two adjoining Mining Exploration Tenements in CG under the WA *Mining Act* (E80/5655 and E80/6009), pls refer the attached map: <u>Boskalis Cambridge Gulf - *Location Map* & POA (PDF).</u>

At an appropriate time Boskalis will apply to convert a reduced area of the two Exploration Tenements, equating to the Proposed Operational Area (POA), into a single Mining Tenement under the WA Mining Act, subject to approval by the WA Department of Energy, Mines, Industry Regulation & Safety (DEMIRS), including the comprehensive environmental assessment and management framework under that Act.

# 3. Existing environment

# 3.1 Physical description

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

**NOTE:** All Referral Reports referenced in the response below are attached in the response to Item 1.2.1 above.

For a detailed description of all aspects of the environment in the Cambridge Gulf (CG) area please see <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Setting & Existing Environment</u>.

A summary description is as follows:

Cambridge Gulf (CG) is a large, highly dynamic and highly turbid embayment located on the tropical northeast coast of Western Australia (WA) (see <u>Boskalis Cambridge Gulf - Location Map & POA (PDF)</u>.

Geographically, CG is centered on <u>14o 52.00' S</u> and <u>128o 16.00' E</u>, facing northwards and seawards to the larger Joseph Bonaparte Gulf. The seaward mouth of CG is bounded to the west by Cape Dussejour and to the east by Cape Domett, with Lacrosse Island located centrally, dividing the mouth into a West Entrance and an East Entrance. The main body of CG extends ~40 km from its seaward mouth upstream to Adolphus Island, with the widest point being ~20 km. The mean water depth is approximately 12 m LAT.

There is a complex system of estuarine inlets located on the east side of CG, just inshore from Cape Domett, lined with relatively narrow bands of fringing mangroves and backed by tidal mudflats and salt-flats, known as the 'False Mouths of the Ord River'. This area includes the Ord River Floodplain Ramsar Wetland.

At Adolphus Island, CG splits into West Arm, which extends for another 80 km upstream to the small port town of Wyndham, and East Arm, which is the true lower reach of the Ord River.

CG has a macrotidal environment with semi-diurnal tides and a spring tidal range of 8 m. The large tidal range causes high current velocities, which BKA has measured to exceed 1.5 m/s (3 knots), and the Australian Hydrographic Office (AHO) marks 3 to 4 knots (1.54 to 2.06 m/s) in West Entrance and in the centre of CG on chart AUS32. This causes very high natural turbidity from constant suspension of sediments with every change of the tide, and permanent aphotic conditions at the seabed.

The region has a hot, semi-arid climate. The annual average maximum temperature is 35.6 °C (measured at Wyndham), one of the highest in Australia. The annual average rainfall is 500 mm with the majority of this occurring in the wet season November to March. CG is within the tropical cyclone zone and is regularly hit by severe category cyclones.

Five main rivers discharge into CG, the Durack, Forrest, King, Ord and Pentecost, along with a number of smaller tributaries. The total catchment area for CG is approximately 87,000 km2 with 62% of this being the Ord River catchment. Apart from the Ord, which has two dams and significant areas of irrigated agriculture, all of the other rivers are still 'wild', with very little clearing of natural vegetation or development.

Except for the Ord River, which has an overall length of 650 km, all of the rivers are quite small, but can have very high, acute, short-term flows during the tropical wet season. The wet season river discharges can vary by orders of magnitude year to year. There is also significant daily variability in river flows, with very high flows following tropical cyclones only lasting a matter of days.

The rivers all discharge sediment into CG. Over time, this has formed multiple small deltas and tidal flats. The supply of sediment varies significantly due to the high variability in river discharges. Peaks in sediment supply occur in the wet season, with limited sediment supply during the dry season. The rivers supply a combination of sand and fine-grained silt and clay. The sediment deposited in CG is subject to regular reworking by the strong tidal currents, resulting in well-sorted sands being present in the main channels (which Boskalis is assessing as a resource – the subject of this referral).

The main ecological community in CG is a narrow band of mangroves around the coastline and up the tidal inlets, creeks and rivers, with a total mangrove canopy of 350 km2. The mangroves are naturally highly dynamic with significant changes (both expansions and contractions) being measured over decades, mainly in response to cyclones and changes in river sediment inputs. The mangroves are backed to landward by extensive tidal mudflats and salt-flats.

Due to the extreme environmental conditions including strong tidal currents, very high suspended solids concentrations and turbidity levels, constantly moving seabed substrates and a permanent lack of benthic light, as well as increased sediment and freshwater inputs during the west season, and frequent tropical cyclones, CG does not host significant primary producer communities in the form of seagrass beds, coral reefs, sponge beds, macroalgae communities etc.

The seabed sand areas in CG, which are the subject of Boskalis' interest, are largely devoid of benthic biota. They comprise highly mobile sand waves, formed and constantly moved by the prevailing strong tidal currents. The sand waves have vertical heights ranging from 1 to 8 m and horizontal wavelengths of between 50 and 200 m. Repeat high-resolution hydrographic surveys of two Target Areas in the Proposed Operational Area over a month-long lunar tidal cycle in February-March 2024, measured horizontal migration of the seabed sand-forms by up to 10 m over just 27 days, showing that they are highly dynamic and constantly moving.

As outlined in Section 6, pages 23 to 30 of <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf -</u> <u>*Commonwealth Matters*</u>, a search of the EPBC Act Protected Matters Search Tool (PMST) found that there are EPBC Act-designated MNES in the general area. Cambridge Gulf is within the general biogeographical range of several threatened and migratory species, and is within a designated Biologically Important Area (BIA) for both Snubfin Dolphins (*Natator depressus*) and Flatback Turtles (*Natator depressus*). There is a significant Flatback turtle nesting beach at Cape Domett outside of CG and other Flatback Turtle nesting sites in the area. There is a Ramsar wetland on the eastern side of CG (the Ord River Floodplain), the West Kimberley National Heritage Place is located to the west of Cambridge Gulf and the Commonwealth Joseph Bonaparte Gulf Marine Park is located to seaward of CG. These will not be impacted by the proposed action.

The coastline and hinterland around the main body of CG are completely uninhabited with no road access at all, and no built facilities or infrastructure, except for a small Aid to Navigation (light and RACON) on the peak of Lacrosse Island, owned and operated by the Australian Maritime Safety Authority (AMSA), and

serviced by helicopter.

Overall, the environment of the CG area can be considered to be in a largely natural condition.

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

**NOTE:** All Referral Reports referenced in the response below are attached in the response to Item 1.2.1 above.

For a detailed description of all aspects of the environment in the Cambridge Gulf (CG) area please see <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Setting & Existing Environment</u>. Section 11 - Social Surroundings (pages 187 to 189), covers existing and proposed uses of the area.

Existing uses:

- The coastline and hinterland around the main body of CG are completely uninhabited with no road access at all, and no built facilities or infrastructure, except for a small Aid to Navigation (light and RACON) on the peak of Lacrosse Island, owned and operated by the Australian Maritime Safety Authority (AMSA), and serviced by helicopter.
- The closest human habitation is at Wyndham located 80 km upstream of CG.
- Existing use of the area is restricted to vessel-based operations, including:
- Commercial vessels that transit through CG entering and departing the Port of Wyndham located 80 km upstream (an average of 1.3 vessels per week).
- Small private vessels from Wyndham and Kununurra used mainly for recreational fishing along the mangrove coast and up the inlets of CG.
- One commercial gillnet fisherman who is sometimes active in CG. He targets Barramundi (*Lates calcarifer*) and Threadfin Salmon (*Eleutheronema tetradactylum*). He also works the adjacent coast outside CG. He has been well consulted on the proposed action and is comfortable with it and supports it as it will diversify economic opportunities in the area.
- Three commercial gillnet fishermen based in Broome located over 1,000 km by sea to the west are licenced to fish in CG but currently do not, given the long distance and better fishing grounds closer to Broome.
- There are three commercial crab fishermen licenced to fish CG. Two are based in Broome and are not currently active in CG, given the long distance and better crabbing grounds closer to Broome. One is based in Port Headland, over 1,500 km by sea from CG, and their licence is for sale.
- There are no tourism facilities in CG, with the closest resort being the Berkley River Fishing Lodge located 65 km to the west on the seaward coast. However, some of the vessels that transit CG to and

from the Port of Wyndham include small cruise ships that use Wyndham to refuel, resupply, and change passengers.

Proposed uses:

Based on discussions held with a broad range of local and State stakeholders as part of Boskalis' consultation program, it appears that, apart from the Boskalis proposal, there is unlikely to be any other proposed uses in CG in the foreseeable future (see <u>EPBC Referral Report No. 6 - Boskalis</u> <u>Cambridge Gulf – Consultation</u>).

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

**NOTE:** All Referral Reports referenced in the response below are attached in the response to Item 1.2.1 above.

There are two main outstanding natural features in the overall, general area of Cambridge Gulf (but the proposed operational area does not overlap with these) -1) coastal aesthetics and 2) the Ord River Floodplain Ramsar wetland.

#### 1) Coastal aesthetics:

 An outstanding natural feature of the overall CG area is the 'rugged' aesthetic values of the coastline, in the form of wild, natural scenery including rugged limestone cliffs along parts of the coast. The aesthetic value will not be impacted by the proposed action as the Sand Production Vessel (SPV) will operate in the central part of CG away from the coast, and will only be present for one- to two-days every two-weeks. There will be zero operational presence or activity in CG for 86% of the time during the project's 15-year timeframe. The visual effect during the short periods when the SPV will be present in CG will be similar to the commercial cargo ships that transit through CG enroute to and from the Port of Wyndham.

#### 2) Ord River Floodplain Ramsar wetland:

- Details of the Ramsar wetland including maps are presented in sections 9.1 and 9.3 of <u>EPBC</u>
   <u>Referral Report No. 7 Boskalis Cambridge Gulf Commonwealth Matters.</u>
- The Ramsar wetland is located on the eastern side of CG, including the complex system of mangrove-lined tidal inlets known as the 'False Mouths of the Ord'. It also extends southwards on the eastern side of CG to cover the Lower Ord River itself and freshwater wetlands at Parry Lagoons.
- The Ramsar site is protected as the State-designated Ord River Nature Reserve. The site represents the best example of wetlands associated with the floodplain and estuary of a tropical river system in the Kimberley region of WA.
- The closest distance between the Ramsar Site and the Proposed Operational Area (POA) is ~6 km between the western most boundary of the former and the eastern most boundary of the latter. The majority of the POA is >14 km from the western most boundary of the Ramsar site.
- A detailed assessment of potential impacts of the proposed action on the Ramsar site is presented in Section 9.3 (pages 37 to 60) of <u>Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth</u> <u>Matters</u>, in accordance with the EPBC Act Significant Impact Criteria, and finds no significant impact against each criterion. There is no scope for <u>direct</u> impacts as the proposed operation does not overlap with the Ramsar site.

The potential for <u>indirect</u> impacts on the wetland from uptake of sand from within CG, including
potential changes to coastal processes, is supported by detailed 3D numerical modelling in Section 4
(pages 130 to 201) and Section 5 (pages 202 to 275) of <u>EPBC Referral Report No. 8 - Boskalis
Cambridge Gulf - *Full Modelling*. These assessments find no significant impacts, in accordance with
the EPBC Act Significant Impact Criteria.
</u>

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

**NOTE:** All Referral Reports referenced in the response below are attached in the response to Item 1.2.1 above.

The bathymetry and depth contours of Cambridge Gulf, including within the Proposed Operational Area (POA), are shown on the attached map: <u>Boskalis Cambridge Gulf - *Location Map* & POA (PDF).</u>

The mean depth within the POA is - 25m MSL. The spring tidal range is 8 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.
For a detailed description of all aspects of the environment in the CG area please see <u>EPBC Referral</u> <u>Report No. 2 - Boskalis Cambridge Gulf - Setting & Existing Environment</u>. The Proposed Operational Area (POA) is a wholly-marine environment and the flora and fauna both within the POA and throughout CG comprises Benthic Communities & Habitats (BCH) and demersal and pelagic Marine Fauna. Each of these is summarized below.

Benthic Communities & Habitats (BCH):

Section 6 (pages 43 to 124) of <u>Referral Report No. 2</u> provides a detailed description of the BCH throughout CG, including results of comprehensive BCH surveys carried out in the dry-season (Jul-Aug 2023) and wet-season (Feb 2024).

The BCH surveys were carried out throughout a large Local Assessment Unit (LAU) as required by WA EPA Guidance. The boundaries of the LAU extend well beyond the POA and include all of the main body of CG, the mangrove-lined tidal inlets and seaward to include parts of the coast to the east and west of CG. The LAU covers a marine area of >2,800 km2, much larger than the 50 km2 referenced by WA EPA. This does not imply potential for impacts throughout the area, but reflects Boskalis' conservatively precautionary approach to assessment. See attached map <u>Boskalis Cambridge Gulf - Local Assessment Unit & BCH Map.</u>

Section 6 (pages 43 to 124) of <u>Referral Report No. 2</u> should be referred to for details, and summary findings are as follows:

Benthic biota in CG is significantly inhibited by extreme environmental conditions including 8 m tides, strong tidal currents >2 m/s, very high suspended sediment, constantly moving seabed substrates, a permanent aphotic benthic zone and major pulses of freshwater and terrestrial sediment inputs during the wet season, plus frequent tropical cyclones.

Coral, seagrass, macroalgae, sponge-bed and similar significant primary producer communities are not present in the LAU, due to the inhospitable environment. This is one of the reasons why BKA selected CG as the preferred site in the alternatives screening (see alternatives section below and Section 18 'Assessment of Alternatives' (pages 159 to 161) of <u>EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments*).</u>

The highly mobile sand substrate within the POA is largely devoid of benthic biota, with the few examples of biota found in grab samples mainly being small amphipods, isopods and brachyurans.

The most significant benthic community in the LAU is a narrow band of mangroves around most of the coast of CG, with a total area of 350 km2, backed by extensive mudflats and salt-flats. These are located well outside the POA and will not be impacted either directly or indirectly.

#### Marine Fauna:

Section 9 (pages 152 to 185) of <u>EPBC Referral Report No. 2- Boskalis Cambridge Gulf - Setting & Existing</u> <u>Environment</u> provides a detailed description of the Marine Fauna throughout CG, including comprehensive Marine Fauna surveys carried out in both the dry-season (Jul-Aug 2023) and wet-season (Feb 2024) (see <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 14 - Marine Fauna Surveys</u>).

<u>Overall low presence of marine fauna</u>: The extreme environmental conditions are generally not hospitable to marine fauna, as manifested in a low abundance and diversity of species. The types of marine fauna found in CG are limited to species that are specifically adapted to highly dynamic and turbid conditions (see Section 9.3.1 of <u>EPBC Referral Report No. 2</u>).

<u>Whales</u>: While CG is within the general, global geographic range of a number of whale species no whales are found in CG due to the extreme environmental conditions, general lack of food sources and relatively shallow waters see Section 9.3.2 of <u>Referral Report No. 2</u>).

<u>Dolphins</u>: The presence of small numbers of Snubfin Dolphins (*Orcaella heinshoni*) and Humpback Dolphins (*Sousa sahulensis*) in CG is clearly established. Both species are adapted to highly turbid inshore coastal waters in estuaries and gulfs such as CG. A breeding, calving, foraging and resting Biologically Important Area (BIA) for Snubfin Dolphins covers CG (see Section 9.3.2 of <u>Referral Report No. 2</u>).

Because these are species of conservation significance, they are discussed in detail in <u>Section 9.4</u> of <u>EPBC</u> <u>Referral Report No. 2</u>, and potential impacts are assessed in detail in <u>Section 10.3.1</u> of <u>EPBC Referral</u> <u>Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments* and also <u>Section 10.3</u> of <u>EPBC Referral</u> <u>Report No. 7 - Boskalis Cambridge Gulf - *Commonwealth Matters*. No significant impacts are predicted in accordance with both Commonwealth and State significant impact criteria.</u></u>

No other species of dolphin are found in CG due to the unsuitable environmental conditions.

<u>Dugong</u>: While CG is within the general, global geographic range of *Dugong dugong*, they are not found in CG, due to lack of seagrass, their main food (see Section 9.3.2 of <u>Referral Report No. 2</u>).

<u>Marine Turtles</u>: There is a significant Flatback turtle (*Natator depressus*) nesting beach at Cape Domett outside CG, lesser nesting sites in the area, and an inter-nesting buffer BIA for Flatbacks over the area (although extreme environmental conditions in CG, especially strong tidal currents, make it unlikely that Flatbacks would actually use CG for inter-nesting resting. See <u>EPBC Referral Report No. 2 - Boskalis</u> <u>Cambridge Gulf - Annex 14 - Marine Fauna Surveys</u>).</u>

Because Flatbacks are a species of conservation significance, they are discussed in detail in Section 9.4 of <u>EPBC Referral Report No. 2</u>, and potential impacts are assessed in detail in section 10.3.2 of <u>EPBC</u> <u>Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments* and also Section 10.2 of <u>EPBC</u> <u>Referral Report No. 7 - Boskalis Cambridge Gulf - *Commonwealth Matters*</u>. No significant impacts are predicted in accordance with both Commonwealth and State significant impact criteria.</u>

The area within CG is not significant for other marine turtle species.

<u>Saltwater crocodiles</u>: *Crocodylus porosus* inhabit CG, especially up the rivers and inlets, with the highest numbers up the Lower Ord River, over 35 km upstream from the POA. The Boskalis dry-season survey in Jul-Aug 2023 made 6 crocodile sightings, all in coastal areas well away from the POA. The wet-season survey in Feb 2024 made 5 sightings, all in coastal areas well away from the POA, except for one in the POA watching the survey vessel when taking grab samples (see Section 9.3.3 of <u>EPBC Referral Report No.</u> <u>2 - Boskalis Cambridge Gulf - Setting & Existing Environment</u> and Section 10.3.4 of <u>EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - Impact Assessments</u>).

<u>Seasnakes</u>: While CG is within the general geographic range of many of the seasnake species found in northern Australian waters, they are generally not found in CG, due to the inhospitable environmental conditions (see Section 9.3.3 of <u>EPBC Referral Report No. 2</u>).

<u>Sharks & rays</u>: While CG is within the general geographic range of many of the shark species found in northern Australian waters, they are generally not found in CG, due to the inhospitable environmental conditions. Exceptions are River Sharks (*Glyphis spp*) and Sawfish (*Pristis spp*), which are adapted to highly turbid estuarine conditions found in the upstream parts of CG, including the Ord River, but are unlikely to be found in the POA. BKA commissioned eDNA sampling for River Sharks and Sawfish throughout CG in Feb 2024, and found trace DNA evidence of the Narrow Sawfish *Anoxypristis cuspidae* at one site ~8 km upstream in the Lyne River on the western side of CG, but not at other sites, and no evidence of the other species at any sites, including the POA (see <u>EPBC Referral Report No. 2 - Boskalis</u> <u>Cambridge Gulf - Annex 13 - Marine eDNA Report</u> and also Section 9.3.4 of <u>EPBC Referral Report No. 2</u>).

Because River Sharks and Sawfish are a species of conservation significance, they are discussed in detail in Section 9.4 of <u>EPBC Referral Report No. 2</u>, and potential impacts are assessed in detail in Sections 10.3.5 and 10.3.6 of <u>EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments* and also Section 10 of <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - *Commonwealth Matters*. No significant impacts are predicted in accordance with both Commonwealth and State significant impact criteria.</u></u>

<u>Boney fishes</u>: The mangrove-lined coast and inlets of CG provide habitat for a range of fish species including Barramundi (*Lates calcarifer*) and Threadfin Salmon (*Eleutheronema tetradactylum*). Environmental surveys and stakeholder consultations indicate that the POA does not provide suitable habitat for benthic or demersal fishes, due to the nature of the substrate (highly dynamic sand waves), strong tidal currents, lack of benthic light and lack of food sources (see Section 9.3.5 of <u>Referral Report No. 4</u>).

<u>Mud crabs</u>: The mangrove-lined inlets around CG (but not the POA) provide habitat for *Scylla spp*. There are currently two commercial mud-crab licences that cover the CG area. There is currently no active commercial mud crab fishing in CG. The crabs are taken recreationally by locals in accordance with WA recreational fishing regs (see Section 9.3.6 of <u>Referral Report No. 2</u> and Section 10.3.8 of <u>Referral Report No. 4</u>).

<u>Prawns</u>: The mangrove-lined inlets around CG (but not the POA) provide nursery areas for banana prawns (*Penaeus indicus & P. merguiensis*). Juveniles are flushed from the mangroves during wet season rains, and migrate offshore into Joseph Bonaparte Gulf where as adults they reproduce. The multi-staged larvae are carried by currents and larval advection back inshore where they settle in the mangroves and continue the lifecycle. When the adults are approx 100 km offshore they are targeted by the Northern Prawn Fishery (see Section 9.3.7 of <u>Referral Report No. 2</u> and Section 10.3.9 of <u>Referral Report No. 4</u>).

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

For a detailed description of all aspects of the environment in the Cambridge Gulf (CG) area please see <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Setting & Existing Environment</u>.

Section 6 (pages 43 to 124) of EPBC <u>Referral Report No. 2</u> describes Benthic Communities and Habitats (BCH) which includes all sub-tidal and inter-tidal <u>vegetation</u> throughout the Local Assessment Unit (LAU).

The BCH map for the LAU is presented in the attached map <u>Boskalis Cambridge Gulf - Local Assessment</u> <u>Unit & BCH Map (PDF).</u>

The Proposed Operational Area (POA) is a wholly sub-tidal marine environment and there is no 'vegetation' in the POA or in other sub-tidal areas throughout CG - there are no seagrass or macro-algae communities in these areas due to the extreme environmental conditions. The lack of sub-tidal vegetation in both the POA and in CG overall is one of the reasons why Boskalis selected CG as the preferred site in the alternative screening process (see section on alternatives below and Section 18 'Assessment of Alternatives' (pages 159 to 161) of <u>EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments*).</u>

There are areas of turf-algae growing on inter-tidal rock platforms on the seaward sides of Cape Domett, Cape Dussejour and Lacrosse Island, outside of CG. These will not be affected by the proposed action.

The most significant vegetation in the LAU is a narrow band of mangroves found around most of the coast of CG, with a total area of 350 km2, backed by extensive, barren mudflats and salt-flats. These areas are located well outside of the POA and will not be impacted by the proposed action.

A detailed description of the mangrove communities of CG is presented in Section 6.4.5 of <u>EPBC Referral</u> <u>Report No. 2 - Boskalis Cambridge Gulf - Setting & Existing Environment</u>, and a detailed assessment of potential impacts on BCH including mangroves is presented in Section 7 of <u>EPBC Referral Report No. 4 -</u> <u>Boskalis Cambridge Gulf - Impact Assessments</u>.

No significant impacts are predicted in accordance with both Commonwealth and State significant impact criteria.

### 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.

For a detailed description of all Commonwealth protected matters, including Commonwealth heritage places, in the Cambridge Gulf (CG) area, please see <u>EPBC Referral Report No. 7 - Boskalis Cambridge</u> <u>Gulf - Commonwealth Matters</u>.

The Proposed Operational Area (POA) does not overlap with any Commonwealth heritage places or other heritage places.

A search of the EPBC Act Protected Matters Search Tool (PMST) found that the eastern-most boundary of the <u>West Kimberley National Heritage Place</u> (NHP) is located along the west coast of CG, presumably along the high tide mark. This coastline has numerous small inlets with narrow bands of fringing mangroves backed by intertidal mudflats and salt-flats, and outcrops of rocky shore. The NHP is described in Section 9.2 (pages 34 to 36) of <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - *Commonwealth Matters*.</u>

The NHP extends to the west of CG towards Broome (over 700 km distant) and covers a huge area of 420,000 km2. It was inscribed on the National Heritage List in 2011 in recognition of the area's geological, evolutionary, biological, ecological and Aboriginal and European cultural heritage values.

Most of the listed values of the NHP are located in the North Kimberly, Central Kimberly and South-west Kimberly sub-regions of the NHP. These areas have dedicated sections in the Australian Heritage Commission (AHC) Final Assessment Report.

The East Kimberly sub-region, where CG is located, is only occasionally and briefly mentioned in the AHC Report, mainly in passing in relation to cattle ranching history – which is considered to be a heritage value.

The potential for the proposed action to cause significant impacts on the NHP is systematically assessed in <u>section 9</u> of <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - *Commonwealth Matters*, in accordance with the EPBC Act significant impact criteria for this MNES type, as per the Commonwealth Significant Impact Guidelines. This finds that the proposed action does not pose a risk of significant impact on the NHP, as defined by the Commonwealth Significant Impact Guidelines.</u>

There is no overlap between the proposed operation and the NHP and therefore no scope for direct impacts.

The closest distance between the eastern coastal boundary of the NHP and the wholly-marine POA is  $\sim$ 2 km, and most of the POA is located >7 km from the NHP coastal boundary.

There is no mechanism whereby the proposed action, which is a wholly-marine operation, could cause indirect impacts that would result in the loss, degradation, damage, notable alteration, modification or obscuring of any of the NHP's listed National Heritage values.

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

See <u>EPBC Referral Report No. 3 - Boskalis Cambridge Gulf - *Traditional Owner Matters*. This report includes descriptions of:</u>

- The two Traditional Owner (TO) groups in the Cambridge Gulf (CG) area (Balanggarra to the west of CG and Mirriuwung-Gajerrong to the east of CG) (Section 2, pages 9 to 13).
- Native Title in the CG area (Section 3, page 14 and Annexes 1 & 2).
- Indigenous-managed protected areas in the general CG area (Section 4, pages 15 & 16 and Section 5, page 17).
- Land-based Aboriginal cultural heritage in the CG area (Section 6.1, pages 18 & 19 & Annex 3).
- Potential underwater Aboriginal cultural heritage in the CG area (Section 6.2, pages 19 to 26).
- Boskalis engagement and consultation with the two TO groups (Section 7, pages 27 to 29).
- Proposed TO involvement in the proposed action, including benefits sharing, employment and business opportunities (Section 8, page 30).
- Potential impacts of the proposed action on TO interests and values (Section 9, pages 30 and 31).
- Letters of support for the proposed action from both TO groups (Annexes 4 & 5 to EPBC Referral Report No. 3).

With regard to <u>Native Title</u>, the coast and hinterland on the western side of CG are Native Title lands of the Balanggarra peoples, which includes marine areas of the State Marine Park out to 3 nm. The coast and hinterland on the eastern side of CG are Native Title lands of the Mirriuwung-Gajerrong peoples, which includes marine areas within the 'False Mouths of the Ord River', which are part of the State Ord River Nature Reserve. There is no Native Title determination over marine waters within the main body of CG, including the Proposed Operational Area (POA). Pls refer the attached map <u>Boskalis Cambridge Gulf - *Tenure & Jurisdictions Map*.</u>

With regard to <u>indigenous-managed protected areas</u>, the Balanggarra Indigenous Protected Area (IPA) is located to the west of CG, with its eastern boundary being located 10 km inland from the west coast of CG. The State-designated Mijing Conservation Park is located 26 km inland on the eastern side of CG, and is co-managed by the State and the Mirriuwung-Gajerrong peoples. Pls refer the attached map (Electronic File Name): <u>Boskalis Cambridge Gulf - *Tenure & Jurisdictions Map* (PDF)</u>. The proposed action will not impact on either protected area. Should the proposed action proceed, Boskalis is offering to support the TO groups in undertaking research and monitoring of marine biodiversity and key marine fauna species, which will enhance protection and management of their marine areas.

With regard to <u>underwater / seabed Aboriginal cultural heritage</u>, Boskalis consulted with the TO groups and undertook an extremely comprehensive survey for potential underwater Aboriginal cultural heritage in the POA and throughout CG, and found no indications (see Section 6.2 of EPBC Referral Report No. 3).

With regard to <u>land-based Aboriginal cultural heritage</u>, there are significant Aboriginal cultural heritage sites on the eastern side of CG, centred on Cape Domett, and on Lacrosse Island – listed on the WA Aboriginal Cultural Heritage Inquiry System (ACHIS). These will not be affected by the proposed action, which does not include any land-based facilities or activities. Never-less, should the proposed action proceed, BKA has offered to work with the TO groups to develop a Joint Aboriginal Cultural Heritage Management Plan for the area.

With regard to proposed <u>TO involvement in the proposed action</u>, Boskalis has been consulting and continues to consult very closely with both TO groups and is developing Memorandums of Understanding (MoUs) with both groups. The MoUs include benefits sharing, employment and business opportunities, and proposed involvement / contracting of their Indigenous Ranger Groups in independent environmental monitoring of the proposed operation, including provision of vessel, equipment, training and other support (see section 8 of EPBC Referral Report No. 3).

Both TO groups in the area, Balanggarra and Miriuwung-Gajerrong, have issued letters of support for the proposed action (included as Annexes 4 & 5 to <u>Referral Report No. 3 - Boskalis Cambridge Gulf -</u> <u>*Traditional Owner Matters*).</u>

### 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. \*

**NOTE:** All Referral Reports referenced in the response below are attached in the response to Item 1.2.1 above.

The proposed action is a 100% vessel-based marine operation with zero land-based components and will therefore not impact on the land-based hydrology of surface water and groundwater flows and catchments.

The hydrodynamics of the marine waters of Cambridge Gulf (CG) are highly relevant to the proposed action and are described in detail in Section 3 (pages 28 to 95) of <u>EPBC Referral Report No. 5 - Boskalis</u> <u>Cambridge Gulf - *Initial Modelling*</u> and in Section 4 (pages 130 to 201) of <u>EPBC Referral Report No. 8 -</u> <u>Boskalis Cambridge Gulf - *Full Modelling*</u>.

As outlined in those reports, the prevailing hydrodynamics in CG are primarily a tidally-driven system with a large tidal range of 8 m and measured tidal currents of up to >4 knots (>2.06 m/s), plus the effects of waves, including influences from the larger Joseph Bonaparte Gulf offshore from CG.

Boskalis commissioned comprehensive, 3-dimensional numerical modelling of both the hydrodynamics and sediment dynamics of CG, calibrated and validated by a comprehensive field data collection campaign. The modelling includes detailed assessment of potential changes to the hydrodynamics, sediment dynamics and coastal processes of CG as a result of the proposed action (sourcing of up to 70 million m3 of sand over up to 15 years). The modelling is reported in detail in Section 4 (pages 130 to 201) of <u>EPBC Referral</u> <u>Report No. 8 - Boskalis Cambridge Gulf - *Full Modelling*. Annex A to that report includes <u>Independent</u> <u>Expert Review</u>, which finds that the modelling is supported by a very comprehensive and extensive set of field data, is very well calibrated and validated and is accurate and reliable.</u>

### 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	No	Yes
S20	Migratory Species	No	Yes
S21	Nuclear	No	Yes
S23	Commonwealth Marine Area	No	Yes
S24B	Great Barrier Reef	No	Yes
S24D	Water resource in relation to large coal mining development or coal seam gas	No	Yes
S26	Commonwealth Land	No	Yes
S27B	Commonwealth Heritage Places Overseas	No	Yes
S28	Commonwealth or Commonwealth Agency	No	Yes

### 4.1.1 World Heritage

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

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

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

# 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.

\*

There are no World Heritage Areas in the vicinity of CG – this protected matter is not relevant to the proposed action.

#### 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.

# 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.

For a detailed description of all Commonwealth protected matters, including National Heritage places, in the Cambridge Gulf (CG) area, please see <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf -</u> <u>Commonwealth Matters</u>.

The Proposed Operational Area (POA) does not overlap with any National Heritage places.

A search of the EPBC Act Protected Matters Search Tool (PMST) (Annex 1 to Referral Report No. 7) found that the eastern-most boundary of the <u>West Kimberley National Heritage Place</u> (NHP) is located along the west coast of CG, presumably along the high tide mark. This coastline has numerous small inlets with narrow bands of fringing mangroves backed by intertidal mudflats and salt-flats, and outcrops of rocky shore. The NHP is described in Section 9.2 (pages 34 to 36) <u>EPBC Referral Report No. 7 - Boskalis</u> <u>Cambridge Gulf - Commonwealth Matters</u>.

The NHP extends to the west of CG towards Broome (over 700 km distant) and covers a huge area of 420,000 km2. It was inscribed on the National Heritage List in 2011 in recognition of the area's geological, evolutionary, biological, ecological and Aboriginal and European cultural heritage values.

Most of the listed values of the NHP are located in the North Kimberly, Central Kimberly and South-west Kimberly sub-regions of the NHP. These areas have dedicated sections in the Australian Heritage Commission (AHC) Final Assessment Report.

The East Kimberly sub-region, where CG is located, is only occasionally and briefly mentioned in the AHC Report, mainly in passing in relation to cattle ranching history – which is considered to be a heritage value.

The potential for the proposed action to cause significant impacts on the NHP is systematically assessed in Section 9.2 (pages 34 to 36) of <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth</u> <u>Matters</u>, in accordance with the EPBC Act significant impact criteria for this MNES type, as per the Commonwealth Significant Impact Guidelines. This finds that the proposed action does not pose a risk of significant impact on the NHP, as defined by the Commonwealth Significant Impact Guidelines.

There is no overlap between the proposed operation and the NHP and therefore no scope for direct impacts.

The closest distance between the eastern coastal boundary of the NHP and the wholly-marine POA is  $\sim$ 2 km, and most of the POA is located >7 km from the NHP coastal boundary.

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

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

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

# 4.1.3.1 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.

There is no overlap between the proposed action and Ramsar wetland.

As outlined in <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth Matters</u>, a search of the EPBC Act Protected Matters Search Tool (PMST) (Annex 1 to Referral Report No. 7) found that the Ord River Floodplain Ramsar wetland is located on the eastern side of Cambridge Gulf. Details of the Ramsar wetland including maps are presented in Section 9.3 (pages 37 to 65) of <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth Matters</u>.

The Ramsar wetland is located on the eastern side of CG, including the complex system of mangrove-lined tidal inlets known as the 'False Mouths of the Ord'. It also extends southwards on the eastern side of CG to cover the Lower Ord River itself and freshwater wetlands at Parry Lagoons.

The Ramsar site is protected as the State-designated Ord River Nature Reserve. The site represents the best example of wetlands associated with the floodplain and estuary of a tropical river system in the Kimberley region of WA.

The closest distance between the Ramsar Site and the Proposed Operational Area (POA) is ~6 km between the western most boundary of the former and the eastern most boundary of the latter. The majority of the POA is >14 km from the western most boundary of the Ramsar site.

A detailed assessment of potential impacts of the proposed action on the Ramsar site is presented in Section 9.3 (pages 37 to 65) <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth</u> <u>Matters</u>, in accordance with the EPBC Act Significant Impact Criteria, and finds no significant impact against each criterion. There is no scope for <u>direct</u> impacts as the proposed operation does not overlap with the Ramsar site.

The potential for <u>indirect</u> impacts on the wetland from uptake of sand from within CG, including potential changes to coastal processes, is supported by detailed 3D numerical modelling in Section 5 (pages 202 to 275) of <u>EPBC Referral Report No. 8 - Boskalis Cambridge Gulf - *Full Modelling*, and summarised in Table 46 in Section 7 of that report (under Objective 2, Item b).</u>

These assessments find no significant impacts, in accordance with the EPBC Act Significant Impact Criteria.

### 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	Aipysurus foliosquama	Leaf-scaled Sea Snake, Leaf-scaled Seasnake
No	No	Balaenoptera musculus	Blue Whale
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris canutus	Red Knot, Knot
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Carcharodon carcharias	White Shark, Great White Shark
No	No	Caretta caretta	Loggerhead Turtle
No	No	Chelonia mydas	Green Turtle
No	No	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	No	Eretmochelys imbricata	Hawksbill Turtle
No	No	Glyphis garricki	Northern River Shark, New Guinea River Shark
No	No	Lepidochelys olivacea	Olive Ridley Turtle, Pacific Ridley Turtle
No	No	Natator depressus	Flatback Turtle
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Phaethon rubricauda westralis	Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird
No	No	Pristis clavata	Dwarf Sawfish, Queensland Sawfish
No	No	Pristis pristis	Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish
No	No	Pristis zijsron	Green Sawfish, Dindagubba, Narrowsnout Sawfish
No	No	Rhincodon typus	Whale Shark
No	No	Sphyrna lewini	Scalloped Hammerhead

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

No

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

There are <u>no Threatened Ecological Communities</u> in the POA or in Cambridge Gulf (CG) overall. With regard to <u>Threatened Species</u>, as outlined in Section 10 (pages 71 to 124) of <u>Referral Report No. 7</u> - <u>Boskalis Cambridge Gulf</u> - *Commonwealth Matters* the PMST search (Annex 1 to Referral Report No. 7) found that the POA is located within the general biological range of 22 Threatened Species. The PMST search also found that the 10 km buffer around the POA overlaps with the general biological range of an additional 13 Threatened Species. These 34 Threatened Species in total are all listed in Section 10 (pages 71 to 124) of <u>Referral Report No. 7</u>.

As outlined in Section 6.1 (page 23) of <u>EPBC Referral Report No. 7</u>, due to the low resolution of the biogeographical range data that supports the PMST, most of the species listed as 'potentially' present in both the POA and the 10 km buffer are actually highly unlikely to be or are certainly not present in those areas. For example, the PMST search lists 6 species of shorebirds, 5 species of land birds, 7 species of small land mammals, 2 species of land-based bats and 1 species of land snake, when it is almost impossible that these would be found in the open marine waters of the POA . The PMST also lists the giant Blue Whale (*Balaenoptera musculus*), the large Whale Shark (*Rhincodon typus*) and the Great White Shark (*Carcharodon carcharias*) as being potentially present in the shallow, turbid waters of CG, when this is extremely unlikely given their normal range and habitat preferences. The low resolution of the PMST biogeographical range data means that search results must always be treated with caution, and verified by local-scale data and consideration of the environment in the area versus the requirements of each species.

The issue of lack of biogeographical range resolution in the PMST results is addressed for each of the 34 Threatened Species from the PMST search in <u>Section 10.4 - Threatened Species Assessment Tables</u> of <u>EPBC Referral Report No. 7</u>. The number of Threatened Species from the PMST search that are actually potentially present in the POA and the 10 km buffer is only 5, comprising 1 marine turtle, 1 river shark and 3 sawfish species, as listed below, much less than the 34 identified by the PMST. Even these 5 species are assessed as unlikely to be present in the POA, as described for each species below.

The 5 Threatened Species from the PMST search that are actually 'potentially' present in the POA are as follows (as reported in Section 9 of <u>EPBC Referral Report No. 2</u> - <u>Boskalis Cambridge Gulf - Setting &</u> <u>Existing Environment</u>):

<u>Flatback turtles (Natator depressus</u>) (EPBC Act Vulnerable) There is a significant Flatback nesting beach on the seaward side of Cape Domett, outside of CG (outside the 10 km buffer), lesser nesting sites in the area, and an inter-nesting buffer BIA for Flatbacks declared over a 60 km radius around Caper Domett, which includes the POA. However, the extreme environmental conditions inside CG, especially strong tidal currents, make it highly unlikely that Flatbacks would actually use waters inside CG for inter-nesting resting (see Section 10.2.2 of <u>EPBC Referral Report No. 7</u>). On-water sightings during dedicated dry- and wet-season surveys were extremely low, as reported in <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 14 - Marine Fauna Surveys</u>.

Flatback turtles that nest at Cape Domett are much more likely to use the more hospitable waters of the inner Joseph Bonaparte Gulf, located immediately off the Cape Domett Beach, for inter-nesting resting. It would be extremely difficult for a turtle to rest on the seabed inside CG with tidal currents in excess of 4 knots at times, requiring significant expenditure of energy, and thus negating the purpose of inter-nesting resting.

The area within CG is not significant for other marine turtle species, as reported in Section 9.3.3 of <u>EPBC</u> <u>Referral Report No. 2.</u>

<u>Northern River Shark (*Glyphis garricki*)</u> (EPBC Act Endangered) The PMST search states that the species or its habitat is known to occur in the POA, however supporting data is for upstream rivers – not in the POA (another example of the geo-resolution issues with PMST). Kyne et al (2020 & 2021) reports this species upstream in the Lower Ord, Durack and Pentecost Rivers. Population numbers throughout its range in northern Australia are estimated between 2,500 and 10,000 adults. Bravington et al (2019) indicate its range to be more widespread and recommend downlisting from 'endangered' to 'vulnerable' (see Section 9.3.4 of <u>EPBC Referral Report No. 2</u> and Section 10 of <u>EPBC Referral Report No. 7</u>).

Marine eDNA sampling commissioned by Boskalis in 2024 did not detect evidence of River Sharks in the POA, at any sites in CG (see <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 13 - Marine eDNA Report</u>).

Throughout its range the Northern River Shark inhabits large rivers, estuaries, and coastal bays, all of which are characterized by high turbidity, silty or muddy bottoms and large tides. The most sensitive birthing and juvenile growth phases occur in fresher upstream areas, however the sharks migrate to more saline marine waters as they mature to adulthood. The occasional River Shark may therefore potentially pass through the POA during such movements.

<u>Dwarf Sawfish (*Pristis clavata*)</u> (EPBC Act Vulnerable) The PMST search states that this species or its habitat is known to occur in the POA, however there is no supporting data in the project area itself (another example of the geo-resolution issues with PMST). Literature search did not find any record of this species in CG.

Marine eDNA sampling commissioned by Boskalis in 2024 did not detect evidence of this species in the POA r at any sites in CG (see <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 13 - Marine eDNA Report</u>).

The Dwarf Sawfish usually inhabits shallow (2–3 m) coastal waters and upstream estuarine habitats. They may move into shallow coastal waters after the wet season, and during the wet season enter estuarine and more-fresh waters to breed (Peverell 2005). Stevens et al (2008) reported that Dwarf Sawfish appear to move only small distances and occupy restricted areas.

It is therefore highly unlikely that the Dwarf Sawfish would be found in the deeper, open marine waters of the POA (>20m deep LAT) with strong tidal currents and permanent aphotic zone near the seabed - it is not their preferred habitat.

<u>Freshwater Sawfish (*Pristis pristis*)</u> (EPBC Act Vulnerable) The PMST search states that this species or its habitat is likely to occur in the POA. In northern Australia, this species appears to be confined to freshwater drainages and the upper reaches of estuaries, occasionally being found as far as 400 km upstream from the sea (Thorburn et al. 2007; Whitty et al. 2008). In the CG area it probably only occurs in the Durack, Lower Ord and Pentecost Rivers (DCCEEW).

Marine eDNA sampling commissioned by Boskalis in 2024 did not detect evidence of this species in the POA or at any sites in CG (see <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 13 - Marine eDNA Report</u>). It is therefore highly unlikely that the Freshwater Sawfish would be found in the deeper,

open marine waters of the POA (>20m deep LAT) with strong tidal currents and permanent aphotic zone near the seabed - it is not their preferred habitat.

<u>Green Sawfish (*Pristis zijsron*)</u> (EPBC Act Vulnerable) The PMST search states that this species or its habitat is known to occur in the POA, however there is no supporting data in the project area itself (another example of the geo-resolution issues with PMST).

The Green Sawfish is the most marine of the Sawfish species. They mainly inhabit coastal marine waters and while individuals have been recorded in estuaries the species does not penetrate into freshwater. There are records of Green Sawfish hundreds of kilometres offshore in relatively deep water (Stevens et al., 2005).

They could therefore potentially be present in the POA, however they generally feed on shoaling fish such as mullet, baitfish and prawns, in shallow waters, stunning them with by sideswipes of the saw, and molluscs and small crustaceans can be swept out of seabed sediments by the saw (Allen 1982; Cliff & Wilson 1994) (Poganoski et al. 2002). Such foods resources are not present in the POA, due to water depth (~20m LAT), aphotic conditions and high current velocities near the seabed.

Literature search did not find any record of this species in CG. Marine eDNA sampling commissioned by Boskalis in 2024 did not detect evidence of this species in the POA or at any sites in CG (see <u>EPBC</u> <u>Referral Report No. 2 - Boskalis Cambridge Gulf - *Annex 13 - Marine eDNA Report*). It is therefore unlikely that the Green Sawfish would be found in the POA, although they could potentially occasionally pass through.</u>

<u>Section 10</u> of <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth</u> <u>Matters</u> systematically assesses the potential for the proposed action to cause significant impacts on each and every Threatened Species identified in the PMST search out to the 10 km buffer.

The assessment was conducted accordance with the EPBC Act significant impact criteria for Threatened Species and the application of the impact mitigation hierarchy of avoid, mitigate, offset and rehabilitate impacts. The assessment finds that it is unlikely that the proposed action will cause significant impacts on Threatened Species as defined by the EPBC Significant Impact criteria.

Proposed impact avoidance, mitigation, offset and rehabilitation measures for Threatened Species are presented in the response to question 4.1.4.10 below, and detailed in <u>Section 10.4 - Application of the Mitigation Hierarchy & Assessment of Residual Impacts</u> of <u>Referral Report No. 4 - Boskalis Cambridge Gulf</u> - <u>Impact Assessments</u>.

#### 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	No	Actitis hypoleucos	Common Sandpiper
No	No	Anous stolidus	Common Noddy
No	No	Anoxypristis cuspidata	Narrow Sawfish, Knifetooth Sawfish
No	No	Apus pacificus	Fork-tailed Swift
No	No	Balaenoptera edeni	Bryde's Whale
No	No	Balaenoptera musculus	Blue Whale
No	No	Calidris acuminata	Sharp-tailed Sandpiper
No	No	Calidris canutus	Red Knot, Knot
No	No	Calidris ferruginea	Curlew Sandpiper
No	No	Calidris melanotos	Pectoral Sandpiper
No	No	Calonectris leucomelas	Streaked Shearwater
No	No	Carcharhinus longimanus	Oceanic Whitetip Shark
No	No	Carcharias taurus	Grey Nurse Shark
No	No	Carcharodon carcharias	White Shark, Great White Shark
No	No	Caretta caretta	Loggerhead Turtle
No	No	Chelonia mydas	Green Turtle
No	No	Crocodylus porosus	Salt-water Crocodile, Estuarine Crocodile
No	No	Dermochelys coriacea	Leatherback Turtle, Leathery Turtle, Luth
No	No	Dugong dugon	Dugong
No	No	Eretmochelys imbricata	Hawksbill Turtle
No	No	Fregata ariel	Lesser Frigatebird, Least Frigatebird
No	No	Fregata minor	Great Frigatebird, Greater Frigatebird
No	No	Lepidochelys olivacea	Olive Ridley Turtle, Pacific Ridley Turtle

Direct impact	Indirect impact	Species	Common name
No	No	Megaptera novaeangliae	Humpback Whale
No	No	Mobula alfredi	Reef Manta Ray, Coastal Manta Ray
No	No	Mobula birostris	Giant Manta Ray
No	No	Natator depressus	Flatback Turtle
No	No	Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew
No	No	Orcaella heinsohni	Australian Snubfin Dolphin
No	No	Orcinus orca	Killer Whale, Orca
No	No	Phaethon lepturus	White-tailed Tropicbird
No	No	Pristis clavata	Dwarf Sawfish, Queensland Sawfish
No	No	Pristis pristis	Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish
No	No	Pristis zijsron	Green Sawfish, Dindagubba, Narrowsnout Sawfish
No	No	Rhincodon typus	Whale Shark
No	No	Sousa sahulensis	Australian Humpback Dolphin
No	No	Tursiops aduncus (Arafura/Timor Sea populations)	Spotted Bottlenose Dolphin (Arafura/Timor Sea populations)

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

No

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

\*

As outlined in <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth Matters</u>, a search of the Protected Matters Search Tool (PMST) (Annex 1 to Referral Report No. 7), including a 10 km buffer found that the POA is located within the general biological range of 45 Migratory Species. The PMST search also found that the 10 km buffer overlaps with the general biological range of an additional 5 Migratory Species. These 50 Migratory Species in total are all listed in Section 10 of <u>Referral Report No. 7</u>.

It should be noted that many of the listed Migratory Species are also listed as Threatened Species (e.g. all of the turtle species, the 3 sawfish species, Blue Whale, Great White Shark and Whale Shark and many of the bird species). This means that the actual number of species identified by the PMST is less than the sum of species in both categories.

It should also be noted that the PMST results for Migratory Species suffer from the same low resolution of range data as for Threatened Species described above, as outlined in Section 6.1 of <u>Referral Report No.</u> <u>7</u>). As a result, most of the Migratory Species listed as being 'potentially' present by PMST are almost certainly not present in CG, as their habitat preferences versus environmental conditions in CG are not aligned. For example, in addition to those species that are repeated in both lists, the following Migratory Species from the PMST search are also almost certainly not present in the marine waters of CG:

- 11 species of shore birds and land birds.
- Brydes Whale (*Balaenoptera edeni*), Humpback Whale (*Megaptera novaeangliae*) and Orcas (*Orcinus orca*).
- Bottlenose Dolphin (*Tursiops aduncus*) not found in highly turbid estuarine areas and never sighted in CG.
- Dugong (Dugong dugon) not found in CG due to lack of seagrass .
- Oceanic White Tip Shark (Carcharhinus longimanus) wholly open-ocean pelagic species.
- Manta Rays (*Mobula alfredi* and *M. birostris*) not found in highly turbid estuarine areas and never sighted in CG.

The issue of lack of biogeographical range resolution in the PMST results is addressed for each of the Migratory Species in <u>Section 10.5 - Migratory Species Assessment Tables</u> of <u>Referral Report No. 7</u>. The number of Migratory Species from the PMST search that are actually 'potentially' present in the POA and the 10 km buffer is only 8, comprising 4 species that are also listed in the Threatened Species results (Flatback Turtles and 3 Sawfish species), plus Narrow Sawfish (*Anoxypristis cuspidata*), Australian Snubfin Dolphin (*Orcaella heinshoni*), Australian Humpback Dolphin (*Sousa sahulensis*) and Saltwater Crocodile (*Crocodylus porosus*).

It should be noted that while the EPBC Act lists these 8 species as 'Migratory', this might actually be incorrect. The definition of migratory species under the EPBC Act is derived from the international *Convention on Migratory Species*, and comprises species where:

'the entire population or any geographically separate part of the population of any species or lower taxon of wild animals, a significant proportion of whose members <u>cyclically and predictably cross one or more</u> <u>national jurisdictional boundaries</u>' (with 'national jurisdictional boundaries' meaning international borders).

No biological evidence could be found that *a significant proportion of* populations of Flatback Turtles, the 4 Sawfish species, Australian Snubfin Dolphin, Australian Humpback Dolphin and Saltwater Crocodile in the CG area <u>cyclically and predictably cross one or more national jurisdictional boundaries.</u> On the contrary, the biological evidence including DNA mapping indicates that populations of these species across northern Australia have distinct, localised populations and do not migrate large distances even within Australian jurisdiction, let alone cross international borders. These species may therefore not actually meet the EPBC definition of 'migratory, which gives them MNES status. The assessment for Flatback Turtles and the 3 Sawfish species that are also Threatened Species are already summarized in the response to Threatened Species above, and are not repeated here. The assessments for the Narrow Sawfish, Australian Snubfin Dolphin, Australian Humpback Dolphin and Saltwater Crocodile are summarized below. Detailed assessments are presented in:

- Section 9 (Marine Fauna) of <u>EPBC Referral Report No. 2</u> <u>Boskalis Cambridge Gulf Setting &</u> <u>Existing Environment</u>,
- Section 10 (Marine Fauna) of <u>EPBC Referral Report No. 4 Boskalis Cambridge Gulf *Impact* <u>Assessments;</u> and
  </u>
- Section 10.5 Migratory Species Assessment Tables of <u>EPBC Referral Report No. 7 Boskalis</u> <u>Cambridge Gulf - Commonwealth Matters</u>.

<u>Narrow Sawfish (Anoxypristis cuspidata</u>) (migratory / not threatened under EPBC Act): The PMST search states that the species or its habitat is likely to occur in the POA, although conditions in the area would seem to make this unlikely. The Narrow Sawfish is found across a broad swathe of the Indo-Pacific. Like most Sawfish it prefers soft bottom-substrate. It can tolerate low salinity levels and is found in inshore waters, including bays and estuaries.

Like most Sawfish, they undergo an ontogenetic shift in habitat, with smaller juveniles usually found in upstream areas while larger adults are usually found in deeper waters offshore. Narrow Sawfish might therefore occasionally pass through the POA as part of this movement.

Like most Sawfish, the Narrow Sawfish feeds on small fish, squid and invertebrates on and near the seabed. It uses its rostrum in a side-to-side thrashing action to stir up the sediment and uncover prey. It can also use its rostrum among schools of fish to incapacitate fish. Given the very strong currents, aphotic conditions, dynamic seabed and lack of benthic biota in the POA, they are unlikely to remain and feed there. Feeding areas are likely to be upstream in estuarine inlets for the juveniles and offshore for larger adults.

Literature search did not find any record of this species in CG. Marine eDNA sampling commissioned by Boskalis in 2024 detected very low traces of DNA evidence of this species at one site located 8 km upstream in the Lyne River on the west side of CG (see <u>EPBC Referral Report No. 2 - Boskalis Cambridge</u> <u>Gulf - Annex 13 - Marine eDNA Report</u>).

Overall, it is unlikely that the Narrow Sawfish would be found in the POA, although they could potentially occasionally pass through this area.

<u>Australian Snubfin Dolphin (*Orcaella heinshoni*)</u> (migratory / not threatened under EPBC Act): The PMST search states that breeding of this species is known to occur within in the POA, and the the Commonwealth has designated a breeding, calving, feeding and resting BIA for this species over CG.

The presence of a small population of Snubfin Dolphins in CG overall, comprising perhaps few individuals to a few tens of individuals, has been confirmed by Boskalis' marine fauna surveys in July 2023 and Feb 2024 and by previous surveys by Brown et al (2017, 2016). Most sightings for all surveys were outside the POA (mainly in the southern part of CG around Adolphus Island and at the NW side of CG near Cape Dussejour), with only five sightings in the POA over all surveys conducted from 2016 to date (noting that repeat sightings can be the same individuals). See <u>Section 9 (Marine Fauna)</u> of <u>Referral Report No. 2 - Boskalis Cambridge Gulf - Setting & Existing Environment</u> and <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 14 - Marine Mega-fauna Surveys Report</u>.

Section 10.3 of <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth Matters</u> presents a specific assessment of potential impacts of the proposed action on Snubfin Dolphins and finds no significant impacts in accordance with EPBC Significant Impact criteria.

<u>Australian Humpback Dolphin (Sousa sahulensis)</u> (migratory / not threatened under EPBC Act): The PMST search states that the species or its habitat is known to occur in the POA. Previous surveys by Brown et al (2017, 2016) observed small numbers of Humpback Dolphins in CG, mainly at the north-western side of CG near Cape Dussejour and none in the POA. The Boskalis' marine fauna survey in July 2023 did not observe any Humpback Dolphins and the Boskalis' marine fauna survey in Feb 2024 made one unconfirmed sighting in the POA (see <u>EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 14 - Marine Fauna Surveys</u>).

<u>Saltwater Crocodile (Crocodylus porosus)</u> (migratory / not threatened under EPBC Act): The PMST search states that the species or its habitat is likely to occur in the POA. There are significant numbers of crocodiles present throughout CG, however they mainly inhabit shoreline areas and up the mangrove-lined inlets, with most being found well upstream in the Ord River (Kay 2004). The occasional crocodile might transit through the POA – e.g if moving from one side of the Gulf to the other – but this is likely to be a very low frequency occurrence.

#### Section 10 of EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth

<u>Matters</u> systematically assesses the potential for the proposed action to cause significant impacts on each and every Migratory Species identified in the PMST search out to the 10 km buffer. The assessment was conducted accordance with the EPBC Act significant impact criteria for Migratory Species, and the application of the impact mitigation hierarchy of avoid, mitigate, offset and rehabilitate impacts.

The assessment finds that it is unlikely that the proposed action will cause significant impacts on Migratory Species as defined by the EPBC Significant Impact criteria for Migratory Species.

Proposed impact avoidance, mitigation, offset and rehabilitation measures for Migratory Species are presented in <u>Section 10.4 - Application of the Mitigation Hierarchy & Assessment of Residual Impacts</u> of <u>EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - Impact Assessments</u>.

#### 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.

\*

This protected matter is not relevant to the proposed action - it does not involve any nuclear activities.

### 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.

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

No

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

**NOTE:** All Referral Reports referenced in the response below are attached in the response to Item 1.2.1 above.

For detailed assessment of the Commonwealth Marine Area please refer <u>Section 14.2</u> (page 150) of <u>EPBC</u> <u>Referral Report No. 4 - Boskalis Cambridge Gulf - *Impact Assessments* and Section 9.4 (pages 66 to 70) of <u>EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - Commonwealth Matters.</u></u>

The Joseph Bonaparte Gulf Marine Park covers Commonwealth waters seaward of the State North Kimberley Marine Park to seaward of Cambridge Gulf (CG). The closest distance from the Proposed Operational Area (POA) to the Marine Park is ~8 km from the northern boundary of the former to the southern boundary of the latter.

The Commonwealth Marine Park Zone immediately offshore from CG is a Multiple Use Zone and normal vessel transits are permitted. The Sand Production Vessel (SPV) will transit through the Commonwealth Marine Park when arriving at and departing from CG, as per the commercial vessels that routinely enter and depart CG to service the Port of Wyndham. The SPV will comply with all relevant maritime laws and regulations when transiting the Marine Park.

Given these factors, it is assessed that the proposal will not cause any significant direct or indirect impacts on the Commonwealth Marine Area or Marine Park.

#### 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.

This protected matter is not relevant to the proposed action – the closest part of the Great Barrier Reef is located over 1,600 km from Cambridge Gulf.

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.

\*

This protected matter is not relevant to the proposed action – it does not involve large coal mining or coal seam gas.

#### 4.1.10 Commonwealth Land

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

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

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

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

No

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

This protected matter is not relevant to the proposed action – there is no Commonwealth Land in the area. Pls refer the attached map (Electronic File Name): <u>Boskalis Cambridge Gulf - *Tenure & Jurisdictions Map* (PDF).</u>

#### 4.1.11 Commonwealth Heritage Places Overseas

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

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

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

\_\_\_\_\_

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

No

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

\*

This protected matter is not relevant to the proposed action – it will not affect any Commonwealth Heritage Places Overseas.

### 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. \*

Please refer <u>Section 18 - Assessment of Alternatives</u> (pages 159 to 161) of <u>EPBC Referral Report No. 4 -</u> <u>Boskalis Cambridge Gulf - *Impact Assessments*</u>, which includes maps locating the sites that were assessed in the alternatives screening process.

Currently most construction sand in Australia comes from land-based sources, which can cause relatively high environmental impacts including clearing of terrestrial vegetation and habitat, impacts on terrestrial fauna, potential impacts on freshwater courses and groundwater, high aesthetic impacts, high rehabilitation costs with mixed success rates, and high transport costs and carbon footprint including reliance on trucking and a need for multi-handling.

Boskalis is seeking to develop marine sands as a more sustainable alternative to land-based sands, because:

- 1. there is no requirement to clear vegetation/habitat,
- 2. there are no impacts on freshwater courses or groundwater,
- 3. there are no aesthetic impacts,
- 4. there is natural replenishment from catchment sources; and
- 5. there are much lower transport cost and carbon footprint through the use of a marine vessel with no need for multi-handling.

Boskalis has undertaken a screening of potential alternative marine sand sites including:

- Other potential sites across the north of WA such as, from west to east; Admiralty Bay, Vansittart Bay, Napier Broome Bay and Unsurveyed Bay, as shown on Figure 50 on page 160 in <u>Section 18 Assessment of Alternatives</u> of <u>EPBC Referral Report No. 4 Boskalis Cambridge Gulf Impact Assessments</u>. These sites were screened out as they have lower suspended sediment regimes / clearer water and more significant environmental values including coral and seagrass communities, which are not present in CG (the Balanggarra people referred to CG as 'brown water country' and the coastal waters west of CG as 'blue water country' Boskalis wishes to avoid blue water country).
- Blocks 1, 2, 2A and 3 offshore from CG as shown on Figure 51 on page 161 in <u>Section 18 Assessment of Alternatives</u> of <u>Referral Report No. 4 Boskalis Cambridge Gulf Impact</u>
   <u>Assessments</u>. Based on analysis of existing data Blocks 1 and 3 appear to have very significant sand resources, but were screened out as they are in the Commonwealth Joseph Bonaparte Gulf Marine Park, as was Block 2. While sand sourcing can be permitted in the Multiple Use Zone Marine Park subject to assessment and conditions, as an environmentally-responsible company BKA prefers not to seek to undertake developments in protected areas where suitable alternatives exist.
- Block 2A is outside of the Commonwealth Marine Park but was screened out as, based on analysis of existing data, it does not appear to have a significant sand resource.

There are also two are possible alternative sand sources in the immediate vicinity to seaward of CG as shown on Figure 52 on page 161 in <u>Section 18 - Assessment of Alternatives</u> of <u>EPBC Referral Report No. 4</u> - <u>Boskalis Cambridge Gulf - *Impact Assessments*:</u>

- 1. King Shoals on the western side; and
- 2. Medusa Banks on the eastern side.

Based on analysis of existing data both of these areas contain sand resources that are likely to be orders of magnitude greater than within CG.

However, despite its abundant sand resource, King Shoals were screened out as they are located within a Sanctuary Zone of the State North Kimberley Marine Park (even though benthic surveys indicate that they do not support significant benthic communities (see <u>Section 6.4.4</u>, pages 78 to 95) of <u>EPBC Referral Report</u> <u>No. 2 - Boskalis Cambridge Gulf - Setting & Existing Environment</u>).

Medusa Banks were screened out as they are located immediately offshore from the Cape Domett turtle nesting beach and protecting that beach is an extremely high priority for BKA.

The screening process has therefore arrived at Blocks 4 and 4A within CG, equating to DEMIRS Exploration Tenements E80/5655 and E80/6009, as being the preferred site, as show on the attached map "Boskalis Cambridge Gulf - *Location Map & POA.* 

Overall, the net environmental outcomes of the site within CG are significanly better than the screened alternative sites. Benefits of the site within CG include:

- There is a very significant sand resource in CG with ongoing natural inputs from the catchment.
- There is an existing operational port at Wyndham with commercial shipping traffic through CG, whereas alternatives are 'greenfield' sites with no existing operational activity.
- There is very low potential for impacts on other uses and users of the area, as there is very limited use of CG by other marine users, including:
  - only one active gillnet fisherman (currently not active and supportive of the proposal),
  - a focus of recreational fishing on areas near the coast and up inlets, and not in the proposed operational area where strong currents make conditions unworkable for fishing (the sector has been consulted and is not concerned about the proposal); and
  - no tourism sector in CG (although cruise vessels do pass through CG to access the Port of Wyndham for fuelling and resupply, and there are two recreational fishing tour operators based in Wyndham, who target upstream areas and whos' vessels are not certified to operate in CG).
- The area is highly dynamic with strong tidal currents (>2 m/s), a constantly moving seabed, a permanently dark aphotic resuspension layer at the seabed, and extremely high natural suspended sediment and turbidity levels.
- There are no significant benthic communities in CG that could potentially be impacted by the proposed action.

# 5. Lodgement

### 5.1 Attachments

	Туре	Name	Date	Sensitivity	Confidence
#1.	Document	0. List of EPBC Referral Reports - Boskalis Cambridge Gulf .pdf Lists all supporting reports and documents submitted in support of this referral.	21/05/2025	No	High
#2.	Document	1. EPBC Report No. 1 - Boskalis Cambridge Gulf - DESCRIPTION OF PROPOSED ACTION & REG FRAMEWORK.pdf Provides a technical description of the proposed action and the applicable State, Commonwealth & International environmental regulatory framework	21/01/2025	No	High
#3.	Document	10. EPBC Ref Report No. 2 - Boskalis Cambridge Gulf - Annex 14 - App 5 - Species Data - Wet.xlsx Appendix 5 to Annex 14 of Referral Report No. 2. Presents raw data from wet-season marine mega-fauna survey in accordance with DCCEEW Excel Template	21/05/2025	No	High
#4.	Document	11. EPBC Referral Report No. 3 - Boskalis Cambridge Gulf - TRADITIONAL OWNER MATTERS.pdf Supports BKA's self-referral by identifying and describing the two TO groups in the area, Native Title, Aboriginal cultural heritage and other TO values and interests in the area, how BKA has engaged with the TO groups to date and proposes to continue to engage moving forward, the proposed involvement of TOs in the proposed action should it proceed, including benefits; and the potential impacts of the proposed action on TO values and interests. Includes letters of support from bot TO groups in Annexes 4 and 5.	21/01/2025	No	High
#5.	Document	12. EPBC Referral Report No. 4 - Boskalis Cambridge Gulf - IMPACT ASSESSMENTS.pdf Provides systematic impact assessment of the proposed action on benthic communities, coastal processes, marine environmental quality, marine fauna, air quality, social surroundings and	21/01/2025	No	High

protected areas, presented in accordance with WA EPA Environmental Factor Guidelines, significabt impact criteria and impact mitigation hierarchy, with proposed impact avoidance and reduction measures for each environmental factor.

#6.	Document	13. EPBC Referral Report No. 5 - Boskalis Cambridge Gulf- INITIAL MODELLING.pdf Presents an analysis of hydrodynamics, sediment transport and coastal processes in Cambridge Gulf, outlines 3D numerical model set-ups, calibration and validation for these factors and presents initial modelling outcomes and impact assessments, as well as a conceptual model of Cambridge Gulf.	21/01/2025 No	High
<b>#7</b> .	Document	14. EPBC Referral Report No. 5 - Boskalis Cambridge Gulf - Annex 2 - FACTUAL DATA REPORT.pdf Presents all metocean and sediment dynamics data used to support the analysis and modelling in Referral Report No. 5 - Initial Modelling.	21/01/2025 No	High
#8.	Document	15. EPBC Referral Report No. 6 - Boskalis Cambridge Gulf - CONSULTATION.pdf Presents BKA's stakeholder analysis and the outcomes of the comprehensive consultation process carried out by BKA to date - including the positions, views and issues raised by stakeholders.	21/01/2025 No	High
<b>#</b> 9.	Document	16. EPBC Referral Report No. 7 - Boskalis Cambridge Gulf - COMMONWEALTH MATTERS.pdf Presents the findings from the EPBC Act Protected Matters Search Tool (PMST) for the area around the proposed action and assesses potential impacts of the proposed action on all identified Commonwealth protected matters within a 10 k m buffer around tghe proposed operational area, following the EPBC Significant Impact Criteria, and applying best practice impact avoidance and mitigation measures.	21/01/2025 No	High
#10.	Document	17. EPBC Referral Report No. 8 - Boskalis Cambridge Gulf - FULL MODELLING.pdf Presents the full analysis of hydrodynamics, sediment transport and coastal processes in Cambridge Gulf, and the full 3D numerical model set- ups, calibration and validation for these factors and presents full modelling outcomes and impact assessments. Supported by separate Appendices (A,B ,C & D with the various modelling outputs) and two Annexes. Annex A includes Independent Expert Review of the modelling, as required by WA EPA guidelines. Annex B is the Updated Factual Data Report.	21/01/2025 No	High
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#11.	Document	<ul> <li>18. EPBC Referral Report No. 8 -</li> <li>Boskalis Cambridge Gulf -</li> <li>APPENDICES.pdf</li> <li>Supports Referral Report No. 8 - Full</li> <li>Modelling. Appendix A - Model</li> <li>Calibration and Validation Plots,</li> <li>Appendix B - Hydrodynamic and Wave</li> <li>Impact Plots, Appendix C - Sediment</li> <li>Transport Impact Plots, Appendix D -</li> <li>Sediment Plume Modelling Results</li> </ul>	21/01/2025 No	High
#12.	Document	19. EPBC Referral Report No. 8 - Boskalis Cambridge Gulf - ANNEXES.pdf Supports Referral Report No. 8 - Full Modelling. Annex A includes Independent Expert Review of the modelling, as required by WA EPA guidelines. Annex B is the Updated Factual Data Report.	21/01/2025 No	High
#13.	Document	2. EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - SETTING & EXISTING ENVIRONMENT.pdf Provides the bases for impact assessment by describing the existing environment in the Cambridge Gulf area including benthic communities, coastal processes, marine environmental quality, marine fauna, air quality, social surroundings and protected areas, presented in accordance with WA EPA Environmental Factor Guidelines. Includes the results of extensive and comprehensive field studies and	21/01/2025 No	High

sampling programs, including various supporting sub-reports in annexes.

#14.	Document	3. EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 1 - SAND ASSESSMENT .pdf Annex 1 to Referral Report No. 2. Describes the seabed sand resource in the proposed operational area, which is proposed to be exported by the proposed action, based on sand exploration surveys using sub-bottom profiler, vibro-cores, grab sampling and multi-beam echo-sounder bathymetric surveys.	21/01/2025 No	High
#15.	Document	4. EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 2 - MSCIENCE BCH METHODS .pdf Annex 2 to Referral Report No. 2. Describes the methods used by consultants MScience to develop the GIS benthic communities & habitats (BCH) for the Local Assessment Unit (LAU) in and around Cambridge Gulf, including use of field data and other data provided by the lead consultant EcoStrategic	21/01/2025 No	High
#16.	Document	5. EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 10 - AERIAL DRONE LIDAR REPORT .pdf Annex 10 to Referral Report No. 2. Reports on the aerial drone LiDAR and photographic / video surveys undertaken over turtle nesting beaches and intertidal habitats by remote sensing consultants Sensorem Pty Ltd, to support environmental descriptions and impact assessment of those areas. PDF is interactive to show outputs of LiDAR Point Cloud, Digital Elevation Models and orthomosaics of the subject areas.	21/01/2025 No	High
#17.	Document	6. EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 12 - CAPE DOMETT TURTLE REPORT.pdf ns (DBCA) at the Cape Domett Seaward Beach, near but outside of Cambridge Gulf. Data was provided to the proponent (Boskalis Australia) by DBCA under a data sharing agreement, the data analysis was undertaken	21/01/2025 No	High

EcoStrategic Consultants for Boskalis & DBCA and DBCA reviewed and approved the report. Used to support assessment of potential impacts of the proposed action on Flatback Turtle nesting at Cape Domett.

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#18.	Document	7. EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 13 - MARINE eDNA REPORT.pdf Annex 13 to Referral Report No. 2. Presents the results of eDNA sampling undertaken throughout Cambridge Gulf by the University of Canberra, National eDNA Reference Centre, in Feb 2024 to survey for EPBC-listed River Shark and Sawfish species, and support the assessment of potential impacts of the proposed action on these species.	21/01/2025 No	High
#19.	Document	8.EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 14 - MARINE FAUNA SURVEYS REPORT.pdf Annex 14 to Referral Report No. 2. Presents the results of comprehensive and systematic marine mega-fauna surveys undertaken by EcoStrategic Consultants for the proponent (Boskalis Australia) throughout Cambridge Gulf using best-practice boat-based marine- mega fauna survey methods, in both the dry-season (Jul 2023) and wet season (Feb 2024). Covered all species of large (mega) marine fauna including cetaceans, dugong, marine turtles, crocodiles, seasnakes and sharks and rays. Special focus on Snubfin Dolphins and humpback Dolphins. Used to support assessment of potential impacts on marine mega-fauna species. Raw data is also submitted in accordance with DCCEEW Excel Template as files 9. EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 14 - Appendix 4 - Species Data - Dry Season (Excel) and 10. EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 14 - Appendix 5 - Species Data - Wet Season (Excel).	21/01/2025 No	High
#20.	Document	9. EPBC Referral Report No. 2 - Boskalis Cambridge Gulf - Annex 14 -	21/01/2025 No	High

App 4 - Species Data - Dry.xlsx Appendix 4 to Annex 14 of Referral Report No. 2. Presents raw data from dry-season marine mega-fauna survey in accordance with DCCEEW Excel

## Template

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#21.	Document	Boskalis Cambridge Gulf - Local Assessment Unit & BCH Map .pdf Shows the boundaries of the Local Assessment Unit (LAU) around the proposed action, as per WA EPA requirements, and Benthic Communities & Habitats in the LAU	21/01/2025 No	High
#22.	Document	Boskalis Cambridge Gulf - Location Map & POA.pdf Map showing location of the proposed action & proposed operational area (POA)	21/01/2025 No	High
#23.	Document	Boskalis Cambridge Gulf - Tenure & Jurisdictions Map .pdf Shows land tenure and jurisdictions in the vicinity of the proposed action.	21/01/2025 No	High

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

	Туре	Name	Date	Sensitivity	Confidence
#1.	Document	Boskalis Code of Conduct 2023.pdf Contains the company's code of conduct that applies to all staff and contractors.	31/12/2022	No	High
#2.	Document	Boskalis Environment & Social Policy 2023.pdf Contains the company's environment & social policy.	31/12/2022	No	High
#3.	Document	Boskalis Sustainability Report 2023.pdf Presents the company's latest sustainability report (2023) (20024 is currently in prep).	31/12/2022		High

# 5.2 Declarations

#### Completed Referring party's declaration

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

ABN/ACN	52794309036
Organisation name	RAAYMAKERS, STEPHEN CRAIG trading as EcoStrategic Consultants
Organisation address	12 Esterina Close, Redlynch QLD 4870
Representative's name	Stephen Raaymakers
Representative's job title	Consultant
Phone	040 9909 422
Email	steve@eco-strategic.com
Address	PO Box 968, Edge Hill, QLD 4870, AUSTRALIA

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, **Stephen Raaymakers of RAAYMAKERS, STEPHEN CRAIG trading as EcoStrategic Consultants**, 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	83099738333
Organisation name	BOSKALIS AUSTRALIA PTY LIMITED
Organisation address	Suite 1, Level 3, 9, Havelock Street, West Perth, WA 6005.
Representative's name	Peter Boere

Representative's job title	Director
Phone	0419987158
Email	peter.boere@boskalis.com
Address	Suite 1, Level 3, 9, Havelock Street, West Perth, WA 6005.

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, Peter Boere of BOSKALIS AUSTRALIA PTY LIMITED, 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, Peter Boere of BOSKALIS AUSTRALIA PTY LIMITED, 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. \*