Title of Proposal - Port of Broome Channel Optimisation Project

Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

1.1 Project Industry Type

Commercial Development

1.2 Provide a detailed description of the proposed action, including all proposed activities.

The Port of Broome (hereafter the Port) is situated in West Roebuck Bay, ~5 km south west of the township of Broome, Western Australia (WA) (Figure 1.1 of the DEIA attached in Section 1.13.1 of this Referral). Kimberley Ports Authority (KPA) is responsible for the operations of the Port, which is the largest deep-water access servicing the Kimberley region. The Port does not have a marked entrance channel but a 'virtual' entrance channel, as the natural water depths are sufficient for passage of vessels. The virtual entrance channel consists of nominated routes and waypoints issued to each vessel intending to use the Port. KPA has recognised the need to improve accessibility to the Port, given some larger vessels have limited access windows due to the large tidal range (10 m), presence of channel rock and high spots (shoals) in the access channel. In recognition of these access constraints and the growing tourism industry in Broome, the Department of Primary Industries and Regional Development (DPIRD), Tourism Western Australia and KPA have contributed funds to optimise the channel to allow passage of larger vessels, particularly cruise ships. Therefore, KPA propose channel optimisation works (hereafter the Project) requiring: capital dredging of several high spots, a new marked entrance channel and improved access to existing berths.

The proposed channel is based on a 'design ship' that encompasses trends in cruise ship designs and accounts for future growth in the market; a ship with an 8.5 m draft, 50 m beam and 330 m in length. Channel optimisation requires capital dredging of 102 500 m3 (inclusive of the over-dredge volume) of marine sediments from five discrete areas (Figure 2.1 of the DEIA attached in Section 1.13.1 of this Referral). The proposed channel design includes widening the entrance channel to 260 m; with a 190 m wide channel to -10 m lowest astronomical tide (LAT) and a nominally 70 m wide channel with sloping design from -10 m LAT to -7.7 m LAT (Figure 2). Deepening of the turning basin will create a sloping channel depth to -10 m LAT, to suit local current and tidal level conditions, and minimise the dredging volume while maintaining full tidal access for the design ship.

In addition to channel improvements, KPA propose to deepen and widen Berths 11 and 12 to 9.5 m LAT and up to 30 m, respectively; requiring capital dredging of 11 000 m3 (Figure 2.1 of the DEIA attached in Section 1.13.1 of this Referral). The shoal area to the north of the wharf will also be deepened to -6.5 m LAT by dredging 4500 m3 of material; allowing safer navigation to the northern berth pockets (Figure 2.1 of the DEIA attached in Section 1.13.1 of this Referral). Therefore, the entire capital dredging project will require removal of ~120 000 m3 of

material; which equates to 150 000 m3 of material for the purpose of the sea dumping permit application for ocean disposal of dredged material (EPSD Act), to adequately account for over-dredge.

It is anticipated that dredging will be completed by a medium or large cutter suction dredge (CSD), to effectively remove both soft (silty) surface sediments and underlying sandstone of various strength. The CSD will use a rotating cutter head lowered to the seabed to loosen the material that is then lifted through a suction pipe. The CSD is fixed in position by a spud at the stern and the cutter-suction arm is swept back and forth on an arch, controlled by anchors and winches. It is proposed to use a spreader pontoon to control placement of dredged material into the naturally deep channel adjacent to Channel Rock (-40 m LAT channel, adjacent to the hazard marker; Figure 2.1 of the DEIA attached in Section 1.13.1 of this Referral), entirely within Port waters.

1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.

Area	Point	Latitude	Longitude
Dredge and disposal area	1	-17.99746667763	122.21860070737
Dredge and disposal area	2	-17.997385046603	122.21877236875
Dredge and disposal area	3	-17.99746667763	122.21860070737
Dredge and disposal area	4	-17.995344258646	122.22160478147
Dredge and disposal area	5	-17.995997313362	122.22340722592
Dredge and disposal area	6	-17.997874832199	122.2243513635
Dredge and disposal area	7	-18.000813517208	122.22246308835
Dredge and disposal area	8	-18.013057510842	122.21448083432
Dredge and disposal area	9	-18.011016904303	122.21190591367
Dredge and disposal area	10	-18.004486804598	122.2154249719
Dredge and disposal area	11	-17.99746667763	122.21860070737

1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland).

The proposed Project will be completed within Kimberley Ports Authority (KPA) waters, The Port of Broome (the Port) . The Port is situated in West Roebuck Bay, ~5 km south west of the township of Broome, Western Australia (WA).

1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?

Conservatively 77 ha (sum of areas A, B and C as marked by coordinates in Appendix 1 of Section 1.4 above)

1.7 Is the proposed action a street address or lot?

Lot

1.7.2 Describe the lot number and title. Lot 600 on Deposited Plan 410010

1.8 Primary Jurisdiction.

Western Australia

1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?

Yes

1.9.1 Please provide details.

Only State Government funding from the Western Australian Department of Primary Industries and Regional Development (DPIRD), Tourism Western Australia and Kimberley Ports Authority.

1.10 Is the proposed action subject to local government planning approval?

No

1.11 Provide an estimated start and estimated end date for the proposed action.

Start date 09/2018

End date 10/2018

1.12 Provide details of the context, planning framework and State and/or Local government requirements.

An outline of the Commonwealth and State legislation and approvals relevant to the Project are listed below and provided in Section 3 Relevant Environmental Legilsation and Approvals of the Dredging Environemntal Impact Assessment (DEIA), attached below in Section 1.13.1 of this referral.

The following Commonwealth and State legislation were considered during the environmental impact assessment:

· Environmental Protection Act 1986 (Western Australian)

· Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

· Environment Protection (Sea Dumping) Act 1981 (Commonwealth)

· Biodiversity Conservation Act 2016 (Western Australian)

· Aboriginal Heritage Act 1972 (Western Australian)

· Historic Shipwrecks Act 1976 (Commonwealth)

· Maritime Archaeology Act 1973 (Western Australian)

· Biosecurity Act 2016 (Commonwealth)

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.

The following parties have been consulted on the proposed Project prior to referral:

· Cwlth Department of Environment and Energy

· Cwlth Department of Environment and Energy – Queensland South and Sea Dumping Section | Environment Standards Division

· Department of Water and Environmental Regulation – Environmental Protection Authority Services

· Department of Biodiversity, Conservation and Attractions

· Department of Jobs, Tourism, Science and Innovation

· Department of Primary Industries and Regional Development

- Department of Planning, Lands and Heritage
- Nyamba Buru Yawuru
- Shire of Broome
- Roebuck Bay Working Group
- KPA Community Consultation Committee
- Environs Kimberley
- Paspaley
- Pearl Producers Association
- Broome wider community
- Port Logistics Consultative Committee Working Group

A summary of community consultation and supplimetary attachments is provided in Section 7 of the DEIA (Attached below in Section 1.13.1 of this referral).

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.

The Project will be referred to the WA Environmental Protection Authority (EPA) for assessment of the potential Project attributable impacts and associated proposed management and mitigation measures.

An application for a Sea Dumping permit will also be submitted to the Department of Environment and Energy (DoEE) for assessment under the Environment Protection (Sea Dumping) Act 1981.

An environmental impact assessment for this project has been attached above under Section 1.13.1 of this referral. Referral

1.15 Is this action part of a staged development (or a component of a larger project)?

No

1.16 Is the proposed action related to other actions or proposals in the region?

No

Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The interactive map tool can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

• Profiles of relevant species/communities (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;

• Significant Impact Guidelines 1.1 – Matters of National Environmental Significance;

• Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies.

2.1 Is the proposed action likely to have ANY direct or indirect impact on the values of any World Heritage properties?

No

2.2 Is the proposed action likely to have ANY direct or indirect impact on the values of any National Heritage places?

Yes

2.2.1 Impact table

Place	Impact
In 2011, the west Kimberley region was added to the DoEE National Heritage Places register for places of natural, historic and indigenous significance; inclusive of Roebuck Bay. However, the Port and Project areas are not within the boundaries of the West Kimberley National Heritage Plan (pers. comm. M Klug, DoEE, pers. comm., 14 December 2017).	Due to the small scale and short duration of the dredging campaign, it is unlikely that the West Kimberley National Heritage Place will be significantly impacted by the Project.

2.2.2 Do you consider this impact to be significant?

No

2.3 Is the proposed action likely to have ANY direct or indirect impact on the ecological character of a Ramsar wetland?

Yes

2.3.1 Impact table

Wetlands	Impact
The Port area is ~10 km to the west of the Roebuck Bay Wetland of International Importance (declared as a Ramsar wetland of significance in 1990 under the Ramsar Convention), which is one of the most important stopover areas for non-breeding migratory shorebirds within Australia and globally (Bennelogia et al. 2009). A search of the online EPBC Act Protected Matters Reporting Tool revealed three critically endangered, four endangered, one vulnerable and 53 migratory species of birds—most of which are listed in all or one of the following international treaties for migratory birds: the Japan-Australia Migratory Bird Agreement, the China-Australia Migratory Bird Agreement and Republic of Korea-Australia Migratory Bird Agreement (Appendix A of the DEIA; Attached in Section 1.13.1 of this Referral). Shorebirds and waterbirds inhabit the tidal mudflats and roost during periods of higher tides when the mudflats are inundated (Bennelogia et al. 2009). Roebuck Bay is a rich wader feeding ground; supporting a high macro-invertebrate community and a significant nursery for marine fishes and crustaceans. The surrounding vegetation formations are also important for roosting and protection, including: low closed-forest to open-scrub (mangrove) east and south of Roebuck Bay; low samphire shrubland inland of the mangroves, inland low open-woodland over grassland (RIS 2009).	Some of the birds in Appendix A of the DEIA (Attached in Section 1.13.1 of this Referral) known to roost in the nearby area have also been recorded in the Port area (grey plover [Pluvialis squatarola], grey-tailed tattler [Tringa brevipes], terek sandpiper [Xenus cinereus] and pacific fulva [Pluvialis fulva]; Chris Hassell, 2010, pers comm.; cited in Oceanica 2010). Most of the birds listed are associated with the intertidal mudflats and adjacent nearshore and onshore vegetation, and it is unlikely that dredging and disposal of material adjacent to the Port will impact birds, particularly given the short (2–4 weeks) duration of the works. Further, operation of a CSD for the duration of the Project is similar in scale to current Port operations/activities, and will not cause any additional significant risks to avifauna. Turbidity generated by the Project is also not anticipated to impact marine invertebrates prevalent in the intertidal areas of Roebuck Bay that are an important food source for avifauna.

2.3.2 Do you consider this impact to be significant?

No

2.4 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

Yes

2.4.1 Impact table

Species	Impact
A search of the EPBC Act's Protected Matters Search Tool (see Appendix A of DEIA Attached in Section 1.13.1 of this Referral) identified the presence of one Threatened Ecological Community; monsoon vine thickets on the coastal sand dunes of Dampier Peninsula. Vine thickets in the region occur behind the swales and coastal dunes, well outside the Project area, and are not expected to be impacted by the Project. The marine waters adjacent to the Port support a variety of fauna, several of which are significant and protected under the EPBC Act. A search of the online EPBC Act Protected Matters Reporting Tool identified 28 listed threatened species and 65 listed migratory species that may occur in the Project area. The listed marine species include: seven marine reptiles (five turtles, freshwater and saltwater crocodiles); eight elasmobranch fish (four sawfish, two sharks and two manta rays); and eight marine mammals (see Appendix A to Attachment 2 of this Referral). Additional marine fauna species listed as possibly occurring within the Project area included pipefishes (22) and seahorses (5) and seasnakes (16) (see Appendix A to Attachment 2 of this Referral). The DBCA NatureMaps tool also identified snubfin dolphin as a priority 4 species that occurs in the area (see Appendix A of DEIA Attached in Section 1.13.1 of this Referral). Only marine mammals, reptiles and shark species are likely to interact with the Project; as such, terrestrial species were excluded from the impact assessment.	The potential impacts to threatened marine fauna were considered low by the DEIA, and further reduced as a result or proposed management and mitigation measures. Refer to the Section 4.2.2 of the DEIA (Attached in Section 1.13.1 of this Referral) for an overview of threatened marine fauna interaction with the Project; and Section 5.2.3 of the DEIA (Attached in Section 1.13.1 of this Referral) for details of the environmental impact assessment and significance of the Project to matters of national significance (MNES). The proposed management and mitigation measure for marine fauna are provided Section 6 of the DEIA (Attached in Section 1.13.1 of this Referral).

2.4.2 Do you consider this impact to be significant?

No

2.5 Is the proposed action likely to have ANY direct or indirect impact on the members of any listed migratory species, or their habitat?

Yes

2.5.1 Impact table

Species	Impact
A search of the EPBC Act's Protected Matters Search Tool (see Section 4.2.2 and Appendix A of the DEIA attached in Section 1.13.1 of this Referral) identified the presence of 65 listed migratory species; many of which are avifauna associated with the Ramsar wetlands (see Section 2.3 above). The listed migratory species likely to interact with the Project include: nine marine mammals (whales, dolphins and dugongs), five marine reptiles (turtles), and eight elasmobranch fish (sharks, sawfish and manta rays). The marine mammals identified for the project area include dugongs, whales and dolphins. The EPBC Act provides special protection for migratory species of national environmental significance. Humpback and blue whales are known to move through the region during their annual migration, north from April–August for calving in tropical waters and south from August–October for feeding, and are generally found in deeper waters offshore from Entry Point around July–September. Cow and calf pods can use inshore waters for resting, and humpback whales breed and calf in an area from Broome to Camden Sound (IFWA 2011). Migrating killer and bryde's whales are most often seen in relatively deeper waters and in Australia are most commonly seen along the continental slope and shelf areas (IFWA 2011, Chevron Australia 2013). The dolphins identified in the area are migratory, with the Indo-Pacific humpback dolphins, bottlenose dolphin and	The potential impacts to threatened marine fauna were considered negligent or low during preparation of the DEIA and after implementation of appropriate management and mitigation measures. Refer to the Section 5.2.3 of the DEIA (attached in Section 1.13.1 of this Referral) for an impact assessment of threatened marine fauna interaction with the Project area. The proposed management and mitigation measure for marine fauna are provided Section 6 of the DEIA (attached in Section 1.13.1 of this Referral).

Species	Impact
Australian snubfin dolphin known to congregate in Roebuck Bay, due to their preference for nearshore waters and the importance of this habitat for breeding, feeding and/or calving (IFWA 2011, Brown et al. 2014a). The Australian snubfin dolphin is an endemic species to Australia and Brown et al. (2014a) suggests that Roebuck Bay supports the highest density and largest population of snubfin dolphins recorded in the published literature to date. Incidental sightings of snubfin dolphins have been recorded further south (i.e. Port Hedland, Montebello Islands and the Exmouth Gulf) but Roebuck Bay is considered critical habitat for this species (IFWA 2011, Allen et al. 2012); and the local community is likely a discrete population, separate to snubfin dolphins found in other regions of north-west WA (Brown et al. 2014b). Snubfin dolphins were observed frequently in the Inner Anchorage and the shallow subtidal mud flats in the eastern region of Roebuck Bay in 2013. There is concern that snubfin dolphins are susceptible to disturbance by recreational vessels, fishing nets and increased shipping with loss of habitat one of the largest threats to the species (IFWA 2011, Allen et al. 2012). Dugongs are known to be present within Roebuck Bay (Bennelongia et al. 2009, Brown et al. 2014a). The aerial survey completed by RPS (2009; as cited in McKenzie et al. 2017) estimated the dugong population of Roebuck Bay to be between 500 and 700 animals, dependant on the season. More recently, Brown et al. (2014a) opportunistically sighted 44 dugongs between 4 October and 05 November 2013, though some of these sightings may be re-sights. The population in Roebuck Bay was recorded feeding on seagrass beds in the northern areas of Roebuck Bay, often within the intertidal zone close to the township of Broome (Bennelongia et al. 2009, McKenzie & Yoshida 2009, McKenzie et al. 2017) but are a highly mobile species that move in and out of the bay dependant on resource availability (DPaW	

Species	Impact
2016). Information on dugongs in the Kimberley region is limited and the Western Australian Marine Science Institute is currently completing a program that will integrate indigenous knowledge, aerial surveys and tagging to develop a baseline dugong management plan for the region. Five species of turtle frequent the Roebuck Bay area as a seasonal feeding ground and as a transit area during migration, including the loggerhead, green, olive ridley, hawksbill and flatback turtles (Bennelongia et al. 2009). Similar to dugongs, the seagrass meadows north of the Port are an important food source for these species (Bennelogia et al. 2009). Cable Beach to the north and Cape Villaret and Jacks Creek in the south of Roebuck Bay (~20 km from the Port) are known nesting areas for flatback turtles during summer (October–February) (RIS 2009, DPaW 2016), but not the beaches directly adjacent to the Project. Four of the elasmobranch fish with habitat or breeding known to occur in the area were species of sawfish. Sawfish tracking surveys by Stevens et al. (2005) indicated that sawfish prefer very shallow water over mudflats and sandbanks, where they can rest during slack tide, when water movement is low. The tidal creeks, mangroves and adjacent mudflats within Roebuck Bay, including those within the Ramsar boundary, north and east of the Project footprint, are nursery areas and refuge for the dwarf sawfish (Pristis clavata) (RIS 2009). It is thought that areas in north-west Australia may be contain some of the last significant populations of sawfish, with protected areas like Roebuck Bay representing important foraging, pupping (January–May) and nursing for some species (DSEWPC 2008). Net and gillnet fishing were identified as the main threat for both the freshwater and green sawfish?as the saw is entangled in the nets—and was banned in 2013 (ABC Kimberley 2013). Manta rays range from Geraldton through to the tropics and are commonly sighted along productive coastlines where regular upwelling occurs, around shallow reefs and in sandy bottom areas so are likely to	

Species	Impact
be present within the Project area. Roebuck Bay may also be considered regionally significant for devil rays and eagle rays (DPaW 2016). It is unlikely that whale sharks would access the shallower waters of Roebuck Bay and are unlikely to be affected by the Project.	

2.5.2 Do you consider this impact to be significant?

No

2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?

Yes

2.6.1 Is the proposed action likely to have ANY direct or indirect impact on the Commonwealth marine environment?

No

2.6.2 Describe the nature and extent of the likely impact on the whole of the environment.

Due to the small scale and short duration of the dredging campaign, it is unlikely that the marine (or terrestrial) environment will be significantly impacted by the Project. Please refer to the DEIA (attached in Section1.13.1 of this Referral) for the full environmental impact assessment.

2.6.3 Do you consider this impact to be significant?

No

2.7 Is the proposed action to be taken on or near Commonwealth land?

No

2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?

No

2.9 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?

No

2.10 Is the proposed action a nuclear action?

No

2.11 Is the proposed action to be taken by the Commonwealth agency?

No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?

No

2.13 Is the proposed action likely to have ANY direct or indirect impact on a water resource related to coal/gas/mining?

No

Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

3.1 Describe the flora and fauna relevant to the project area.

The proposed action will not impact flora and fauna.

3.2 Describe the hydrology relevant to the project area (including water flows).

The proposed action will not impact hydrology, including water flows.

3.3 Describe the soil and vegetation characteristics relevant to the project area.

The proposed action will not interact with the terrestrial environment except for an increased number of cruise vessels will come to Port in Broome (increased from 11 to ~35 by 2021/2022 season) and an increase in the number of days (increased from 11 to ~35 by 2021/2022 season) passengers with access to the Broome township (refer to DEIA attached in Section 1.13.1 of this Referral). The infrastructure for cruise ships and passenger transfers already exist and are adequate for the proposed changes to the Port as a result of the Project (i.e. passenger jetty, bus parking facilities). Therefore, the proposed action will not impact soil and vegetation characteristics.

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.

A search of the EPBC Act Protected Matters Search Tool (Appendix A to the DEIA attached in Section 1.13.1 of this Referral) did not identify any Key Ecological Features (KEFs) located within or overlapping the Project area.

3.5 Describe the status of native vegetation relevant to the project area.

The proposed action will not impact remnant vegetation.

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

The proposed action involves removing high spots within the existing channel; Roebuck Deep (Refer to Figure 1.1 of the DEIA attached in Section 1.13.1 of this Referral). Therefore, water depths range from ~-6 m to -40 m Lowest Astronomical Tide in the area the proposed action with take place.

3.7 Describe the current condition of the environment relevant to the project area.

The Port waters are slightly disturbed due to the presence of Port infrastructure.

Kimberley Ports Authority is part of a state-wide invasive marine species (IMS) surveillance program. During the deployment of settlement arrays between October 2014 and May 2015, the colonial ascidian *Didemnum perlucidum* was detected on arrays deployed at Berths 2/3. *Didemnum perlucidum* are widely established throughout Western Australia; mainly in Ports and marinas.

3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.

In 2011, the west Kimberley region was added to the DoEE National Heritage Places register for places of natural, historic and indigenous significance; inclusive of Roebuck Bay. However, the Port and Project areas are not within the boundaries of the West Kimberley National Heritage Plan (Figure 4.7 of the DEIA attached to Section 1.13.1 of this Referral; M Klug, DoEE, pers. comm., 14 December 2017).

3.9 Describe any Indigenous heritage values relevant to the project area.

Roebuck Bay is of cultural significance to the Yawuru traditional owners; their connection to the land is important for spiritual and cultural practices and also for access to food and ceremonial fauna species (i.e. turtles and dugongs). A search of the Department of Aboriginal Affairs Aboriginal Heritage inquiry system (http://maps.dia.wa.gov.au/AHIS2/) identified one registered aboriginal site that overlaps the project area (Entrance Pont/Yinara 12873; Figure 4.8 of the DEIA attached to Section 1.13.1 of this Referral), attributed to: artefacts; shell middens; mythological; camp. Early consultation with Nyamba Buru Yawuru management team and Western Australian Department of Planning, Lands and Heritage has confirmed that there are no registered sites or heritage related issues associated with the proposed action; however, these stakeholders will continue to be consulted as the Project progresses.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.

The proposed actions will take place entirely within Port of Broome waters. The works

proposed will be completed within waters and seabed vested in KPA under Section 24 of the Western Australian Port Authority Act 1999. The land title relevant to the works is Lot 600 on Deposited Plan 410010.

3.11 Describe any existing or any proposed uses relevant to the project area.

The proposed Channel Optimisation Project will take place entirely within active Port of Broome waters.

Section 4 - Measures to avoid or reduce impacts

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.

It is anticipated the Project is unlikely to have a significant impact on matters protected under the EPBC Act. To reduce the risk of any potential environmental impact, the potential environmental risks associated with the proposed Project have been identified and assessed within the Environmental Risk Assessment and DEIA (attached in Section 1.13.1 of this Referral), and specific measures to avoid or reduce environmental effects will be implemented through a Dredging Environmental Management Plan. Details of proposed management and mitigation measures are provided in Table 6.1 of the DEIA (attached in Section 1.13.1 of this Referral).

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.

It is anticipated the Project is unlikely to have a significant impact on matters protected under the EPBC Act. To reduce the risk of any potential environmental impact, the potential environmental risks associated with the proposed Project have been identified and assessed within the Environmental Risk Assessment (ERA) and DEIA, and specific measures to avoid or reduce environmental effects will be implemented through a Dredging Environmental Management Plan (Table 6.1 of the DEIA attached in Section 1.13.1 of this Referral).

Performance criteria for matters protected under the EPBC Act are as follows:

-Ensure that benthic communities and habitat outside of the Project footprint are not impacted as a result of the Project

-No impacts to marine environmental quality as a result of the Project

-Ensure the risk of harm to susceptible marine fauna from all aspects of the Project (including noise, collision, entrainment, introduced marine species) is acceptably low

-No impact to known heritage sites

Section 5 – Conclusion on the likelihood of significant impacts

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

5.1.1 World Heritage Properties

No

5.1.2 National Heritage Places

No

5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)

No

5.1.4 Listed threatened species or any threatened ecological community

No

5.1.5 Listed migratory species

No

5.1.6 Commonwealth marine environment

No

5.1.7 Protection of the environment from actions involving Commonwealth land

No

5.1.8 Great Barrier Reef Marine Park

No

5.1.9 A water resource, in relation to coal/gas/mining

No

5.1.10 Protection of the environment from nuclear actions

No

5.1.11 Protection of the environment from Commonwealth actions

No

5.1.12 Commonwealth Heritage places overseas

No

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.

The Proponent has commissioned BMT to undertake a DEIA with the inclusion of stakeholder consultation processes. The DEIA outlines measurable and/or auditable environmental commitments to manage the potential environmental impacts associated with the Project (Section 6 of the DEIA attached in Section 1.13.1 of this Referral). Following implementation of the Dredging Environmental Management Plan and Kimberley Ports Authority's Environmental Management Systems, the proposed Project is deemed to be ‘not a controlled action’. The Project has a low potential for environmental impact given its duration, timing, location, area and the management measures that will be applied to all aspects of Project activities.

All Project phases will be completed in accordance with relevant Acts and regulations to meet the requirements of the EPBC Act.

Section 6 – Environmental record of the person proposing to take the action

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.

Yes,

Kimberley Ports Authority (KPA) has a very good record of responsible environmental management for past and present development projects. KPA has a corporate Environmental Management System (EMS) and Environmental Policy (see attached in Section 6.3.2 of this Referral), which meet the requirements of AS/NZS ISO 14001:2004.

KPA engaged BMT Oceanica as an independent marine environmental specialist consultant to undertake an ERA and DEIA for the Project.

KPA has undertaken best practice community consultation for the Project (Section 7 of the DEIA attached in Section 1.13.1 of this Referral).

6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.

There are none, not applicable.

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

Yes

6.3.1 If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework.

The proposed action will be taken in accordance with KPA's corporate Environmental Management System (EMS) and Environmental Policy

(see attached in Section 6.3.2 of this Referral), which meet the requirements of AS/NZS ISO 14001:2004.

This Environmental Policy applies to all personnel, contractors and joint ventures engaged in activities under KPA's control, thereby allowing KPA to systematically identify and manage environmental risks, while value adding to business, stakeholders and the broader environment.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

No

Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
• ABC (2013) ABC Kimberley: Commercial fishing to be removed from Broome's Roebuck Bay. Available at <http://www.abc.net.au/local/stories/2013/11/05/3884584.htm> [accessed 15 August 2017] • Allen SJ, Cagnazzi DD, Hodgson AJ, Loneragan NR, Bejder L (2012) Tropical inshore dolphins of north-western Australia: Unknown populations in a rapidly changing region. Pac. Conserv. Biol. 18: 56–63 • Bennelongia, DHI, WRM (2009) Ecological Character Description for Roebuck Bay. Prepared for Department of Environment and Conservation by Bennelongia Pty Ltd and DHI Water & Environment Pty Ltd, Wetland Research & Management, Perth, Western Australia, April 2009 • Brown AM, Bejder L, Pollock KH, Allen SJ (2014a) Abundance of coastal dolphins in Roebuck Bay, Western Australia. Report to WWF-Australia. Murdoch University Cetacean Research Unit, Murdoch University, Western Australia, 25pp. • Brown AM, Kopps AM, Allen SJ, Bejder L, Littleford-Colquhoun B, et al.	Reliable	None

Reference Source	Reliability	Uncertainties

(2014) Population Differentiation and Hybridisation of Australian Snubfin (Orcaella heinsohni) and Indo-Pacific Humpback (Sousa chinensis) Dolphins in North-Western Australia. PLoS One 9(7) • Chevron Australia (2013) Wheatstone Project: Oil Spill Operational and Scientific Monitoring Program – OPS6 Marine Megafauna Rapid Assessment. Chevron Australia Pty Ltd, Report No. WS0-0000-HES-RPT-CVX-000-00145-000, Revision 1, Perth, Western Australia, October 2013 • DPaW (2016) Yawuru Nagulagun / Roebuck Bay Marine Park Joint Management Plan 2016, Management Plan 86. Department of Parks and Wildlife, Perth, Western Australia, 2016 • DSEWPC (2008) Marine Bioregional Plan for the North-west Marine Region. Department of Sustainability, Environment, Water, Population and Communities, Canberra, New South Wales • GoWA (2011) Kimberley Science and Conservation Strategy. Government of Western Australia, Perth, Western Australia, 2011 • IFAW (2011) Australia's Last Great Whale Haven: cetacean distribution and conservation needs in the north-west marine region. International Fund for Animal Welfare, Western Australia, November 2011 • McKenzie LJ, Yoshida RL (2009) Seagrass-Watch. In: Proceedings of a Workshop for

Reference Source	Reliability	Uncertainties
Monitoring Seagrass Habitats in the Kimberley Region, Western Australia, Department of Environment & Conservation, Broome, Western Australia • McKenzie LJ, Yoshida RL, Langlois L, Rau J, Weatherall K, Bishop F, Bain D, Ferguson S, Lindsay M (2017) Long?term seagrass monitoring in Roebuck Bay, Broome: report on the first 10 years. A report for the Broome Community Seagrass Monitoring Project, Environs Kimberley. Centre for Tropical Water & Aquatic Ecosystem Research (TropWATER), Report No. 17/35. James Cook University, Cairns, Australia. 44 pp • Oceanica (2010) Broome Boating Facility at West Roebuck Bay – Desktop Assessment of Environmental Issues. Prepared for Department of Transport by Oceanica Consulting Pty Ltd, Report No. 178_003/1, Perth, Western Australia, November 2010 • RIS (2009) Roebuck Bay Ramsar information sheet. Department of Conservation and Land Management. Available at https://www.dpaw.wa.gov.au/images/documents/conservation-management/wetlands/ramsar/information_sheets/RIS_Roebuck_Bay_2009.pdf [accessed 15 August 2017] • Stevens JD, Pillans RD, Salini JP (2005) Conservation assessment of Glyphis glyphis (speartooth shark), Glyphis garricki (northern river shark), Pristis microdon (freshwater sawfish) and Pristis zijsron		

Reference Source	Reliability	Uncertainties
(green sawfish). Report to Department of Environment and Heritage. Canberra. Australia. 84 pp		

Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

8.0 Provide a description of the feasible alternative?

No alternatives , without Port optimisation works (removing high spots within the entrance channel) large vessels (like cruise vessels) would continue to have restricted access to the Port, during short tidal windows. The channel design and dredging disposal methods were selected to minimise interactions with matters of national environmental significance (MNES), Aboriginal heritage sites, the Ramsar wetland and Yawuru Nagulagun / Roebuck Bay Marine Park that surround the Port,and other sensitive benthic communities.

8.1 Select the relevant alternatives related to your proposed action.

8.27 Do you have another alternative?

No

Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

9.2 Organisation

9.2.1 Job Title

Chief Executive Officer

9.2.2 First Name

Kevin

9.2.3 Last Name

Schellack

9.2.4 E-mail

ceo@kimberleyports.wa.gov.au

9.2.5 Postal Address

PO Box 46
Broome WA 6725
Australia

9.2.6 ABN/ACN

ABN

56780427150 - KIMBERLEY PORTS AUTHORITY

9.2.7 Organisation Telephone

61 08 9194 3100

9.2.8 Organisation E-mail

info@kimberleyports.wa.gov.au

9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

Not applicable

Small Business Declaration

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature:…… Date: ……

9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations

No

9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made

Person proposing the action - Declaration

I, Kevin Schellack, 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 of or for the benefit of any other person or entity.

Signature…… Date: 20.02.2018

I, _____, the person proposing the action, consent to the designation of _____ as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature:…… Date: ……

9.3 Is the Proposed Designated Proponent an Organisation or Individual?

Organisation

9.5 Organisation

9.5.1 Job Title

Chief Executive Officer

9.5.2 First Name

Kevin

9.5.3 Last Name

Schellack

9.5.4 E-mail

ceo@kimberleyports.wa.gov.au

9.5.5 Postal Address

PO Box 46
Broome WA 6725
Australia

9.5.6 ABN/ACN

ABN

56780427150 - KIMBERLEY PORTS AUTHORITY

9.5.7 Organisation Telephone

61 08 9194 3100

9.5.8 Organisation E-mail

info@kimberleyports.wa.gov.au

Proposed designated proponent - Declaration

I, _Kevin Schellack_____, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.

Signature:  Date: 19.02.2018

9.6 Is the Referring Party an Organisation or Individual?

Organisation

9.8 Organisation

9.8.1 Job Title

Senior Consultant, Marine Ecologist

9.8.2 First Name

Adelaide

9.8.3 Last Name

Bevilaqua

9.8.4 E-mail

bmtoceanica@bmtoceanica.com.au

9.8.5 Postal Address

PO Box 2305
Churchlands WA 6018
Australia

9.8.6 ABN/ACN

ABN

89093752811 - BMT WESTERN AUSTRALIA PTY LTD

9.8.7 Organisation Telephone

61 08 6163 4900

9.8.8 Organisation E-mail

bmtoceanica@bmtoceanica.com.au

Referring Party - Declaration

I, Adelaide Bevilaqua, I 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.

Signature:..... Date: 16/02/18

Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. appendix1_footprintcoords_datasupply_20180209.zip
2. appendix3_kpaems_policy.pdf
3. figure1_conservationleasebourndaries.pdf
4. figure2_capitaldredgefootprintdisposalarea.pdf
5. portbroome_deia_1382000032_rev0_20180213_noappendix.pdf
6. portbroome_deia_appendixa-b.pdf
7. portbroome_deia_appendixc.pdf
8. portbroome_deia_appendixd-f.pdf