Australian Government
Department of Climate Change, Energy, the Environment and Water

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CC: Lisa.Bradley@nt.gov.au; Sarah.Smith3@nt.gov.au

Dear Ms Fitzpatrick

Comments on the Supplement to the draft Environmental Impact Statement – Australia-ASEAN Power Link, NT

Thank you for your email of 14 December 2022 inviting the Department of Climate Change, Energy, the Environment and Water (DCCEEW/the department) to comment on the Supplement to the draft Environmental Impact Statement (Supplement) for the Australia-Asia PowerLink project proposal. DCCEEW notes that the proposal is being assessed under an accredited assessment by the Northern Territory Environment Protection Authority under the NT *Environment Protection Act 2019*.

The Department has reviewed the Supplement and our comments are provided at Attachment A.

If you have any questions, or require further information, please contact Gisella Marquez by phone on (02) 6274 1529 or email to Gisella.MarquezDonayre@awe.gov.au and cc: EADSAandNTSection@environment.gov.au

Yours sincerely

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A/g Director
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31 January 2023

Attachment A

Comment number	Subject	Supplement section	Addressed?	Review comments
1	The Department notes that the proponent's ACN number and name have changed. This means that the legal identity of the person proposing to take the action has changed and has become a different person for the purposes of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Under section 156F of the EPBC Act, the Department advises the current proponent to notify the Minister for the Environment of these changes in writing. Further detailed information about changing the proponent under the EPBC Act can be found here.	1.4 16.6.1.2	No	1. The department has not received written confirmation of the proponent's name and ACN as indicated in Supplement section 16.6.1.2. The department requests that the proponent provide this information.
2	The Department notes that options for changes and additions to the project components (i.e., Overhead Transmission (OHT) Railway route deviations, addition of ground electrodes, subsea cable system route, and alternative pre-sweeping) have been identified; however, the findings presented in the draft EIS do not cover these changes or additions as the assessment is	15.10.1	Yes	1. The department acknowledges that project refinements have been detailed in Supplement **Chapter 2 – Project refinements**, and that significant impact assessments on MNES presented in the Supplement incorporate these refinements. The adequacy of the significant impact assessments is discussed as relevant to each MNES below.

	still ongoing. The Department notes that future changes to the project design must include a significant impact assessment on Matters of National Environmental Significance (MNES) and recommends presenting this assessment's results in the Supplementary EIS. If appropriate, consider submitting a variation under the EPBC Act.			
3	The Department acknowledges that surveys of threatened species within the OHT Railway and Utilities Corridor are incomplete. Therefore, further surveys and analysis are required to draw final conclusions about the project's significant impacts on EPBC Act protected species. The proponent has committed to conducting targeted field surveys of restricted-range threatened species to confirm their presence, location, and significance within the OHT Railway and Utilities Corridor and to provide the results in the Supplementary EIS. The Department strongly recommends including the following EPBC Act protected species and their respective suitable habitats in the targeted field surveys:	5.6.3 5.12.2	Partially	1. Red Goshawk (*Erythrotriorchis radiatus*) – sections 5.6.3.33, 5.12.2.1 ○ The Supplement acknowledges that there is suitable breeding habitat for Red Goshawk where the OHTL intersects larger rivers, and that the species could be present across the entire project footprint. Surveys were not undertaken to confirm the presence of nests either at the river intersections or in the larger footprint; however, the department is satisfied that the stated mitigation measure to conduct pre-clearance surveys in breeding habitat adequately addresses this issue. ○ The significant impact assessment states, "*Given this expert advice* (re: disturbance)*, there appears to be no justifiable benefit to restricting works near active nests during the species' breeding period unless construction activities involve use of helicopters or sudden noise sources such as pile-driving or blasting. If so, then construction within 100 m of the nest will be undertaken outside of breeding period*." The department considers that tolerance of human activity including vehicle movements by habituated nesting birds does not equate to tolerance of unfamiliar heavy machinery and construction activities. Accordingly, the department considers that a minimum distance of 100 m should be maintained between an active nest and construction activities, and a 300 m buffer should be maintained between an active nest and activities involving use of helicopters or sudden noise sources. The department recommends inclusion of an approval condition requiring implementation of these buffer distances. ○ The stated mitigation measures to ensure breeding is not disrupted include the statement, "*In the event that there are any Red Goshawk nests within the corridor, then all attempts will be made to retain the nest*". This implies that active Red Goshawk nests could be removed if found in an area to be cleared. The department recommends that an approval condition be included requiring that nests be removed only either before nesting activity commences, or after chicks have fully fledged and nesting activity has ceased.

	• Red Goshawk (*Erythrotriorchis radiatus*) • Gouldian Finch (*Erythrura gouldiae*) • Greater Bilby (*Macrotis lagotis*) • Grey Falcon (*Falco hypoleucos*) • Howard River Toadlet (*Uperoleia daviesae*) • Northern Brushtail Possum (*Trichosurus vulpecula arnhemensis*) • Black-footed Tree-rat (*Mesembriomys gouldii gouldii*) • Northern Quoll (*Dasyurus hallucatus*) • Bare-rumped Sheath-tailed bat (*Saccolaimus nudicluniatus nudicluniatus*) • Nabarlek (*Petrogale concinna canescens*) • Fawn Antechinus (*Antechinus bellus*) • Plains Death Adder (*Acanthophis hawkei*) • Partridge Pigeon (eastern subspecies)			2. Gouldian Finch (*Erythrura gouldiae*): See **Review comments** # 5 below. 3. Greater Bilby (*Mactoris lagotis*): See **Review comments** # 7 below. 4. Grey Falcon (*Falco hypoleucos*): See **Review comments** # 6 below. 5. Howard River Toadlet (*Uperoleia daviesae*): Surveys were not carried out (section 5.6.3.25). However, the department is aware of the proponent's commitment to avoid four sites identified as suitable habitat for this species and implement a 50 m buffer around them. The department recommends including an approval condition reflecting this commitment. The department also requests that the proponent provides a map of these sites consistent with the requirements in the Guide for providing maps and boundary data for EPBC Act projects. 6. Northern Brushtail Possum (*Trichosurus vulpecula arnhemensis*): Surveys were not carried out (section 5.6.3.28). However, sufficient records exist to confirm the likely presence of Northern Brushtail Possum within the project footprint, therefore the department considers that further surveys are not necessary. The department is satisfied that stated mitigation measures are acceptable and recommends their inclusion in the Flora and Fauna Management Plan. 7. Northern Quoll (*Dasyurus hallucatus*): Surveys were not carried out (section 5.6.3.11). However, the department is satisfied that the desktop habitat analysis is sufficient to establish likely habitat, and that the stated mitigation measures are acceptable. The department recommends the inclusion of the stated mitigation measures in the Flora and Fauna Management Plan. 8. Black-footed Tree-rat (*Mesembriomys gouldii gouldii*): Surveys were not carried out to establish presence within the OHTL footprint beyond the Gunn Point area, despite the likely presence of suitable habitat (section 5.6.3.3). The department considers that, in the absence of evidence indicating otherwise, a precautionary approach to possible presence of this subspecies in the OHTL corridor should be taken. The department is satisfied that pre-clearance surveys and use of a fauna spotter-catcher are acceptable mitigation measures. The department notes the proponent's intention to avoid removing large hollow-bearing trees in Black-footed Tree-rat habitat "as much as possible" through micro-siting. The department recommends replacement of this ambiguous language with a commitment to remove possible denning trees only when they cannot be avoided by micro-siting. The department recommends the inclusion of an approval condition requiring replacement of possible denning trees in likely Black-footed Tree-rat habitat, with artificial nest boxes suitable for Black-footed Tree-rats, as close as possible to the locations of the removed trees. 9. Bare-rumped Sheath-tailed bat (*Saccolaimus nudicluniatus nudicluniatus*): Surveys were not carried out to establish whether this species was present (section 5.6.3.18). However, given the difficulties with detection of this species, the department is satisfied that the desktop analysis is sufficient to establish

	(*Geophaps smithii smithii*) • Threatened flora species such as *Stylidium ensatum* • *Helicteres macrothrix* The Department advises using the EPBC Act Significant Impact Guidelines 1.1 (significant impact guidelines) to assess the significance of project's impacts on the above-listed species and their habitats, including areas adjacent to the project site. If applicable, please provide avoidance and mitigation measures and if necessary, provide proposed offsets to compensate for residual significant impacts.			likely habitat, and that the stated mitigation measures are acceptable. The department recommends the inclusion of the stated mitigation measures in the Flora and Fauna Management Plan. 10. Nabarlek (*Petrogale concinna canescens*): Surveys were not carried out to determine whether this species was present (section 5.6.3.8). However, given that the current DCCEEW species distribution and aerial imagery indicate suitable habitat in the OHTL Corridor, and the limited target survey effort to identify populations, the department considers that there remains substantial uncertainty regarding the presence/absence of the Nabarlek. The department is satisfied that the stated mitigation measure of pre-clearance surveys will adequately address this uncertainty, and that stated mitigation measures are acceptable. The department recommends the inclusion of the stated mitigation measures in the Flora and Fauna Management Plan. 11. Fawn Antechinus (*Antechinus bellus*): Surveys were not carried out to determine whether this species was present (section 5.6.3.5). However, the department agrees that previous surveys and the desktop habitat assessment indicate the likely presence of the species in the project footprint. The department is satisfied that stated mitigation measures are acceptable if the species is found. The department recommends the inclusion of the stated mitigation measures in the Flora and Fauna Management Plan. 12. Plains Death Adder (*Acanthophis hawkei*): Surveys were not carried out to determine whether this species was present (section 5.6.3.31). However, the project footprint intersects with 575 km^2 of suitable habitat. Given that the exact distribution of the Plains Death Adder is unclear, and that its apparent absence between its areas of known occurrence may be due to low survey effort, the department considers that substantial uncertainty remains regarding its presence. The department recommends the inclusion of an approval condition requiring pre-clearance surveys for Plains Death Adder, and implementation of appropriate actions to protect the species if found. 13. Partridge Pigeon (eastern subspecies) (*Geophaps smithii smithii*): Surveys were not carried out to determine whether this species was present (section 5.6.3.30). However, given the large distances travelled by Partridge Pigeons in search of resources, the department is satisfied that the desktop habitat analysis is sufficient to establish the likelihood of presence. The department is satisfied that stated mitigation measures are acceptable and recommends their inclusion in the Flora and Fauna Management Plan. 14. *Stylidium ensatum*: Adequate targeted field surveys were carried out (section 5.6.3.12). The department is aware of the proponent's commitment to avoiding disturbance of the *S. ensatum* recorded within the OHTL and implement a 50 m buffer. The department requests that field surveys are carried out for *S. ensatum* in Section 572 when access permission is obtained. The department recommends the inclusion of an approval condition requiring the implementation of a 50 m buffer around *S. ensatum* individuals, the translocation of the 12 *S. ensatum* individuals likely to be lost by construction, and monitoring and reporting actions for the species during the construction and operation of the proposed action.

				Additionally, the department highly recommends the inclusion of an approval condition requiring the implementation of offsets to compensate for the loss of *Stylidium ensatum* individuals and suitable habitat areas that cannot be avoided. 15. *Helicteres macrothrix*: Surveys were not carried out to establish presence of this species (section 5.6.3.7). However, the department is satisfied that the desktop habitat analysis is sufficient to establish likely habitat, and that the stated mitigation measures are acceptable. The department recommends the inclusion of the stated mitigation measures in the Flora and Fauna Management Plan. Additionally, the department highly recommends the inclusion of an approval condition requiring the implementation of offsets to compensate for the loss of *Helicteres macrothrix* individuals and suitable habitat areas that cannot be avoided during construction.
4	The Department notes that an inconsistent and very coarse scale has been used for vegetation mapping across the terrestrial components of the project (OHT Railway, Utilities Corridor, Darwin Converter Site and Cable Transition Facilities) except for the Solar Precinct footprint. Vegetation mapping have been described using outdated references (Lynch et al. 2012; Christian and Stewart 1968) and have not been ground-truthed. The Department is of the view that land systems mapping is insufficient to adequately identify threatened ecological communities and threatened species habitat. The Department highly recommends undertaking field vegetation surveys, particularly, along the OHT Railway and Utilities Corridor to confirm the	5.12.1.4	Yes	1. Appendix 5.2 justifies the use of coarse-scale mapping in the OHTL with the assumption that the OHTL will have low impacts on threatened species; this assumption is not supported by evidence in section 5.12.1.4 or by evidence in the Significant Impact Assessment section for several threatened species. The department considers that the field surveys carried out in July 2022 partially address this issue by ground-truthing land units and vegetation types. The department has identified where field surveys are required for individual threatened species (see **Review comments** # 3 and 5) and made recommendations for approval conditions accordingly. 2. The department notes that the likely presence of the Arnhem Plateau Sandstone Shrubland Complex Threatened Ecological Community (TEC) in the OHTL corridor has been modelled. The model showed that the TEC may occur between KP 392 and 393, and KP 402 and 405. Furthermore, the NT Flora and Fauna Division advised the department that it is very likely that this TEC is not occurring within the footprint of the project. On this basis, the department considers that significant impacts caused by the project on the Arnhem Plateau Sandstone Shrubland Complex TEC are unlikely.

	presence, location and significance of the Threatened Ecological Community (TEC) Arnhem Plateau Sandstone Shrubland Complex, threatened flora species and critical or suitable habitat of threatened fauna species.			
5	The Department considers that the estimated loss or clearing of 9.86 ha and 12.45 ha of known core foraging and breeding habitat of Gouldian Finch, respectively, is likely to result in a significant impact on the species due to a real chance to reduce its area of occupancy, disrupt a population's breeding cycle, and adversely affect habitat critical to its survival. The Department highly recommends conducting field vegetation and targeted surveys to confirm the actual quantity of hectares of core foraging and breeding habitat of Gouldian Finch that will be directly impacted by the project. Additionally, the Department requests providing adequate avoidance and mitigation measures for the species, such as considering the timing of works to avoid the Gouldian Finch's breeding season, etc., and if necessary, provide	5.12.1.6 5.6.3.6	No	1. Aerial surveys of breeding habitat were carried out but excluded Salmon Gum (*Eucalyptus tintinnans*) and termite mounds (section 5.6.3.6). As Gouldian Finches will nest in both of these, the department considers that the surveys are inadequate, particularly as Table 5.23 indicates that *E. tintinnans* is present in most areas of the OHTL. Accurate identification of breeding habitat is required for the appropriate application of mitigation measures; therefore, the department recommends the inclusion of an approval condition requiring pre-clearing surveys for breeding habitat which include *E. tintinnans* and termite mounds in addition to *E. leucophloia*. 2. Evidence is not provided for assumptions made regarding the potential/timing of foraging habitat recovery in the OHTL, and no active revegetation measures are proposed. In view of the identification of seed shortages as a key threat in the Recovery Plan, the department recommends the inclusion of an approval condition requiring remediation of foraging habitat disturbed by construction activities or an offset. 3. The management measure "*If clearing of a large area of breeding habitat in the core breeding range of the Gouldian Finch (i.e., Yinberrie Hills) cannot be avoided, then the Proponent will clear that habitat outside of breeding season*" indicates an intention to clear breeding habitat if required for project purposes. The department recommends the inclusion of an approval condition requiring establishment of offsets if any clearing of breeding and foraging habitat cannot be avoided.

	proposed offsets to compensate for residual significant impacts.			
6	The draft EIS states that there "is no current evidence of nest occurrence" of Grey Falcon within, or close to the Solar Precinct access roads, however, this evidence has not been ground-truthed. The Department requests including management measures for this vulnerable species such as the involvement of a specialist for preclearing searches to identify potential suitable nesting trees and avoid them during the unsealed road construction.	5.12.1.8 5.6.3.24	Yes	1. Adequate targeted field surveys were carried out (section 5.6.3.24). There is potential for disturbance of active nests in the region of the Solar Precinct access road; however, the department considers that the stated mitigation measures are acceptable and recommends their inclusion in the Flora and Fauna Management Plan.
7	The Greater Bilby occurs in a wide range of habitat in the NT. The National recovery plan for the Greater Bilby considers the Tanami bioregion (west of the Stuart Highway) as potential critical habitat of the species and the NT Fauna Atlas indicates that this species can be present in Ashburton land systems, which are present in the unsurveyed Solar Precinct unsealed road located just west of the Stuart Highway. Therefore, to verify the presence/absence of this species, the Department highly recommends conducting a targeted ground survey for the	5.12.1.10 5.6.3.23	Yes	1. Targeted ground surveys were not carried out (section 5.6.3.23). In the absence of ground surveys for tracks, scat and foraging diggings, and without ground checks of burrows to confirm use by Greater Bilbies, the department considers that uncertainty remains regarding the presence or absence of Greater Bilbies. However, the department is satisfied that the stated mitigation measures take a precautionary approach and are acceptable.

	Greater Bilby in the unsealed road area.			
8	The Department considers that the temporary disturbance of approximately 25 ha of important intertidal habitat for migratory shorebirds to construct the Cable Transition Facility at Gunn Point Beach is likely to have significant impacts on migratory shorebirds. This reasoning is based on the size of important habitat that will be disturbed and the lack of information on successful reinstatement of intertidal habitats after installing underground electric cables. Therefore, please provide scientific information and/or examples of successful intertidal habitat recovery, recovery timing and analysis of the permanent thermal radiation and electromagnetic fields' effects on the recovery of intertidal habitats. Please provide further avoidance and mitigation measures for migratory shorebirds' important habitat (e.g., construction should occur during the off-season for migratory shorebirds, etc.). If, after providing avoidance and mitigation measures for migratory shorebirds, there are still residual significant impacts	5.12.1.12 9.5.3.2	Partially	1. The wording "*It is envisaged that all construction works within the shoreline crossing location can be scheduled and completed during the Austral winter season (end of May through to end of August)*" does not constitute a firm commitment to avoid construction outside this period. The department recommends an approval condition limiting activities at the site of the shorebird roost to outside the peak shorebird presence period. 2. The requested scientific evidence/examples of successful intertidal habitat recovery and recovery timing has not been provided. The Supplement refers to "*multiple examples of successful habitat restoration for migratory shorebirds using primarily tidal influence, with minimal other interference or remediative action from both Australia and internationally*"; however, this is a broad statement and references/details are not provided. In particular, in the absence of a recovery timeframe it is possible that prey species abundance will not recover in time for the following migratory shorebird peak presence period, thus reducing available foraging habitat for an extended period. The department requests that further information is provided defining expected recovery timeframes. 3. Discussion of thermal radiation in Supplement **Chapter 5 – Terrestrial Ecosystems** is limited; however, **Chapter 9 – Marine Ecosystems** indicates that seabed surface temperature for High Voltage Direct Current (HVDC) cables buried 0.5m beneath the seabed is expected to be around 25°C, and that heat from cables on the seafloor is expected to be rapidly dissipated by water flow. The department is satisfied that thermal radiation impacts on migratory shorebird habitat at the shore crossing site are unlikely to be significant. 4. Due to the depth of cable burial and the use of HVDC cables, the department is satisfied that EMF impacts, although permanent, are likely to have limited effects on the abundance or behaviour of macroinvertebrates at the shore crossing site. The department is satisfied that the effects of EMF on macroinvertebrates at the shore crossing site are adequately addressed.

	on their habitat, please provide a proposed offset strategy for migratory shorebirds.			
9	The Conservation Advice of the Ghost bat indicates that this species is easily disturbed when roosting and may abandon sites where unregulated human visitation occurs. Currently, one of the largest colonies is located in Kohinoor Adit at Pine Creek. The Kohinoor Adit is a permanent maternity roost for the Ghost bat and is located approximately 400m to the west of the OHT Railway. The Department recommends reviewing updated information for the species to provide mitigation measures to minimise vibration and human disturbances during construction (e.g. defining exclusion/buffer zones surrounding the Kohoonir Adit, to avoid disturbance by human visitation to the cave during construction, imposing vibration limits, etc). Additionally, please clarify if temporary or permanent barbed fences will be utilised during the construction of the OHT Railway. If barbed fences will be used in the project, please provide mitigation measures to	5.12.1.14 5.6.3.22	Partially	1. The department acknowledges that no barbed wire will be used during construction or operations. 2. The Kohinoor adit roost is a category 1 maternal/diurnal roost site with permanent ghost bat occupancy, and therefore critical habitat. Current best practice to protect critical habitat roosts from public access disturbance is to define exclusion zones. Experience from other sites suggests that a 200 to 250 m radius around category 1 roost caves is adequate to limit interference (https://www.dcceew.gov.au/sites/default/files/documents/review-ghostbat-ecology-threats.pdf). The department acknowledges the stated mitigation measure to implement an exclusion zone, the size of which is undefined in the Supplement. The department recommends the inclusion of an approval condition stipulating a minimum 200 m exclusion zone around the roost. 3. Current best practice to avoid sound disturbance of Ghost Bats is to limit sound pressure levels to below 70 dB(Z) at roost entrances (after Bullen and Creese 2014) (https://www.dcceew.gov.au/environment/epbc/publications/review-ghost-bat). As noise levels will vary according to the equipment used, the department requests that the proponent determine the distance at which noise generated by construction activities will be below this threshold at the roost entrance. The department recommends the inclusion of an approval condition limiting construction to beyond this distance. 4. As Ghost Bats are sensitive to noise, the department requests that the proponent provide sound modelling for the cables and OHTL towers, as this infrastructure will be permanent and close to the Kohinoor Adit (critical habitat for the species).

	avoid the collision of Ghost bats on the barbed fences.			
10	The project's operation will generate permanent electromagnetic fields (EMF) for approximately 70 years all along the terrestrial and marine components of the transmission lines. The Department considers that the effects of EMF's on EPBC Act threatened, and migratory species have not been sufficiently addressed in the draft EIS. Therefore, the Department requires further analysis and discussion about the quantity, intensity, and distance of the emissions, long-term effects of these emissions on fauna behaviour, and cumulative impacts of the subsea cables on EPBC protected species. Please justify the conclusions with relevant scientific information and, if necessary, provide mitigation measures to reduce these impacts (e.g., suitable types of cables to reduce the emission of EMF).	5.12.1.16 5.12.1.12 9.5.3.2 9.10.9.1	Partially	1. The department is satisfied that EMF from the cables is unlikely to have significant impacts on the navigation of migratory shorebirds, given the planned burial depth of HVDC cables at the shore crossing site and the fact that birds will not be in transit whilst near the cables. 2. The work of the International Commission on Non-Ionising Radiation Protection is focussed on the effects of non-ionising radiation on the human body, and guidelines written in a human context are not necessarily applicable to animals. Section 9.5.3.2 refers to a number of major reviews and field studies with findings relevant to the impacts of EMF on other species but does not provide details of these studies, and the results as stated indicate that substantial uncertainty remains regarding the effects of EMF on threatened and migratory marine species. The department considers that insufficient information has been provided to enable an assessment of the long-term and cumulative impacts on threatened and migratory species including EMF-sensitive species such as sawfish, bats, and whales, and requests further detailed scientific information. If this information cannot be provided, the department recommends the inclusion of an approval condition requiring that the proponent monitor the impacts of EMF from the cables and undersea cables on threatened and migratory species and commit to undertake adaptive management measure to address possible future significant impacts to EPBC Act threatened and migratory species and EPBC Act and NT protected marine species.
11	Due to the lack of knowledge of thermal radiation impacts, its long-term effects and cumulative impacts nearshore and offshore. The Department takes a precautionary approach	9.10.9.1 9.10.21.1	Yes	1. The department is satisfied that nearshore and offshore thermal radiation impacts are unlikely to be significant.

	and suggests that the proponent commits to monitoring these impacts along the subsea cables and implementing adaptive management measures to reinstate and recover the surrounding habitats that could be negatively impacted. Additionally, appropriate mitigation measures should be provided to minimise thermal radiation impacts such as cables buried at an appropriate distance from the seabed, etc.			
12	The offshore component of the project sits within Commonwealth marine waters. This means that a whole of environment assessment is required, and this assessment must include any relevant marine species not only EPBC Act protected species within Commonwealth waters. Therefore, the Department requires a discussion about substantial adverse effects of the project on populations of any NT listed marine species (if any) that also occur within Commonwealth waters.	9.10.1.1	Yes	1. Potential impacts to listed marine species which occur within Commonwealth waters have been broadly discussed in Table 15-3: Marine and Migratory Species Listed under the EPBC Act – Potential Impacts, of **Chapter 15 – Matter(s) of National Environmental Significance**. The department considers that potential adverse effects to listed marine species have been adequately addressed.
13	In Chapter 10 – Marine Ecosystems, several "impact mitigations and monitoring measures" reference a Marine	9.10.2.1	No	1. The department notes that the requested Marine Environment Management Plan (MEMP) has not been provided in the Supplement. In response to this request, the Supplement reiterates the commitment to preparation of several environmental management sub-plans, including a MEMP, noting that further

	Environment Management Plan. The effectiveness of these mitigation and monitoring measures cannot be adequately assessed without reviewing the Plan. The Department requests that this Plan be included in the Supplementary EIS for review and must not be inconsistent with the North Marine Parks Network Management Plan 2018.			decisions will be required to draft an effective MEMP. The department recommends the inclusion of an approval condition requiring the implementation of an effective MEMP.
14	The project crosses biologically important areas for the Pygmy Blue Whale (*Balaenoptera musculus brevicauda*), Whale Shark (*Rhincodon typus*) and the Flatback Turtle (*Natator depressus*). Therefore, the Department expects to see adequate avoidance and mitigation measures for these species in the Marine Environment Management Plan.	9.10.3.1	No	1. The Supplement states that avoidance and mitigation measures for all significant and listed marine species (including but not limited to Pygmy Blue Whale, Whale Shark, and Flatback Turtle are detailed in Table 15-3 in Chapter 15 in Table 10-7 of Chapter 10 in the Draft EIS and in Table 17-7 of Chapter 17 in the Draft EIS and will be included in the Environmental Management Framework. 2. The department notes the following: ○ The requested Marine Environment Management Plan (MEMP) has not been provided in the Supplement. ○ Table 15-3 does not provide avoidance and mitigation measures, but rather details potential impacts. ○ Table 10-7 and 17-7 provide general avoidance and mitigation measures, including reference to measures that will be included in the MEMP. 3. The department considers that insufficient detail has been provided to adequately assess the proposed avoidance and mitigation measures. 4. The department recommends the inclusion of an approval condition requiring the implementation of an effective MEMP, which must contain adequate avoidance and mitigation measures for EPBC Act and NT protected marine species.
15	The Australian Snubfin Dolphin (*Orcaella heinsohni*), Indo-Pacific Bottlenose Dolphin (*Tursiops aduncus*) and Indo-Pacific Humpback Dolphin (*Sousa chinensis*) are EPBC Act	9.10.4.1	No	1. **Review comments** as per point 14.

	migratory species expected to be present and foraging in the Gunn Point region and Shoal area. Therefore, the Department expects to see adequate avoidance and mitigation measures for these species in the Marine Environment Management Plan.			
16	In table 10-7 of Chapter 10, it is unclear what is meant by areas of higher habitat value. Please define and expand on it in the context of habitat loss and degradation.	9.10.5.1	Yes	1. The department considers that "areas of higher habitat value" have been sufficient defined and contextualised in Section 9.10.5.1 of the Supplement.
17	The Key Ecological Features which are located within and outside of the Ocean Shoals Marine Park are mentioned in section 10.3.2.2 Offshore Environmental values (Chapter 10); however, the potential impacts to these Key Ecological Features haven't been addressed in the avoidance, mitigation and monitoring section. The Department requests that consideration is given to these features.	9.10.6.1	No	1. The Supplement states that avoidance, mitigation and monitoring relevant to Key Ecological Features (KEFs) have been detailed in Table 10-7 of the Draft EIS. 2. The department notes that these measures are general for habitat loss and degradation and do not specifically address impacts to KEFs. That is, the EIS does not discuss how these measures will adequately avoid adversely affecting the values of KEFs. 3. The department considers that further justification is required to describe the values of the Oceanic Shoals Marine Park, and demonstrate the adequacy of avoidance, mitigation and monitoring measures proposed to reduce impacts to KEFs below significance, in accordance with the North Marine Parks Network Management Plan 2018. For example, further information should be provided to justify why the proposed action will not impact biologically important areas for marine turtles within the marine park.
18	The Department notes that there are no avoidance measures listed for direct fauna mortality/collision with vessels. The Department requests that further consideration is given to	9.10.7.1	No	1. No additional avoidance or mitigation measures have been proposed in the Supplement. 2. The Supplement states that no avoidance measures relevant to vessel collision are proposed, but references Table 10-7 as detailing relevant mitigation and monitoring measures.

	measures to avoid species which are known to occur in the area, including Flatback Turtle, Loggerhead Turtle, Olive Ridley Turtle, Pygmy Blue Whale and Whale Shark.			3. The department notes that the proposed mitigation and monitoring measures do not provide sufficient detail to adequately assess their efficacy in reducing impacts to MNES. For example, there is a measure proposed to reduce vessel speeds to below 6 knots until spotted marine fauna has passed, however no trained marine mammal observer (MMO) has been proposed, the applicable species of marine mammal is not defined, and the distance from vessels at which action is taken is not defined. 4. The department considers that insufficient detail has been provided to adequately assess the proposed avoidance and mitigation measures. 5. The department recommends the inclusion of an approval condition requiring the implementation of an effective MEMP, which must contain adequate avoidance and mitigation measures for EPBC Act and NT protected marine species, including requirements for MMO's on board vessels that pose a risk of direct fauna mortality or collision.
19	The Department notes that there are currently nil reporting requirements relating to incidents within the Oceanic Shoals Marine Park where marine fauna are impacted. Thus, the Department requests that measures are put in place to notify the Director of any incidents while the activity is undertaken. Suggested reporting: Where a 'listed species' as defined by the *Environment Protection and Biodiversity Conservation Regulations 2000*, is injured or killed in undertaking the Activities, the proponent must notify the Director's Duty Officer on 0419 293 465, as soon as practicable, and in any case no longer than 72 hours, following that event. If a listed species is injured or	9.10.8.1	Yes	1. The department considers that the Oceanic Shoals Marine Park reporting procedure detailed in Table 9-9 in Supplement **Chapter 9 – Marine Ecosystems** is compliant with the department's requirements.

	killed, the proponent must ensure that: a) all use of the equipment that injured or killed the listed species ceases immediately; and b) the activity does not resume without the written permission of the Director.			
20	The Department notes that the list of sub-plans included in the Construction Environmental Management Plan (CEMP) can change based on the project approval conditions, detailed design and micro-siting activities. However, based on the project's proposed activities, the CEMP should include the following sub-plans: • Environmental Emergency and Spill Response Plan • Air Quality Management Plan • Hazardous Materials and Waste Management Plan • Surface water and Groundwater Management Plan • Weed Management Plan • Flora and Fauna Management Plan • Reinstatement Plan, considering reinstating biologically important foraging area for the Flatback Turtle (*Natator*	16.6.1.2	Partially	1. The department acknowledges that the Weed Management Plan (**Appendix 05.3**) provided in the Supplement is adequate. 2. The department considers that some avoidance and mitigation measures that will be part of the CEMP and its sub-plans have been provided. The department expresses its interest to be consulted on the adequacy of the CEMP including its sub-plans before granting their approval. Particularly, the department would like to review the adequacy of the Flora and Fauna Management Plan, Reinstatement Management Plan, Decommission and Rehabilitation Management Plan, Marine Environment Management Plan, Bushfire Management Plan and the Spill Response Plan for marine areas.

	depressus), Logger Turtle (*Caretta caretta*) and Olive Ridley (*Lepidochelys olivacea*). • Marine Environment Management Plan • Bushfire Management Plan • Erosion Sediment Control Plans, including sediment control measures for construction of the Shore Crossing Site, which will be regularly underwater due to tidal movements. • Acid Sulfate Soil (ASS) Management Plans, particularly in the Adelaide River, Burrell Creek, Edith River and Katherine River sections of the OHT Railway, and the section of high probability potential ASS just offshore of the beach. The Department requests that the CEMP and Operations Environmental Management Plans with their respective subplans be included in the Supplementary EIS to review their adequacy.			
21	The Department notes that some avoidance and mitigation measures are not expressed as clear commitments. For example, when stating "Avoiding clearing large hollow-	16.6.1.6	No	1. A constraints planning procedure has been created to address uncertainties. However, this procedure does not remove the need for management plans to be written and approved. The department recommends that adaptive management techniques relevant to each MNES are included in the management plans requested at **Review comment** # 20.

	bearing trees where possible", "The final route selection process for the Solar Precinct access roads will avoid crossing locations that hold water for extended periods, riparian vegetation and aquatic vegetation, where possible", etc. The Department strongly recommends avoiding ambiguous language such as "where possible" when proposing avoidance and mitigation measures in the Management Plans specially in relation to EPBC protected species and their habitats.			2. The department again strongly recommends avoiding ambiguous language such as “where possible” and “our priority is”, which creates uncertainty about the proponent’s commitment to avoiding impacts to MNES.
22	In **Appendix C – Other Matters Required by Schedule 4 of the EPBC Regulations**, the Department recommends reviewing and amending cross-referencing to ensure sections align with the relevant information required. For example, in section 1 ‘General information’ of Appendix C (page 1), letter (b) indicates that the designated proponent’s full information can be found in Chapter 1, Section 1.7. However, Chapter 1, section 1.7, provides information on stakeholder engagement instead of the designated proponent’s full information.	16.6.1.4	Yes	1. The department is satisfied that the issues identified in **Appendix C – Other Matters Required by Schedule 4 of the EPBC Regulations** have been addressed in Appendix **15.1 Checklist for Schedule 4 of EPBC Regulations** in the Supplement. Sections are aligned with relevant information in the Supplement.

23	In **Appendix J – Social Impact Management Plan** section headings for 2.3 and 3.1 are missing from the document. The Department recommends inserting these section headings in the document including the missing content, or update Table of Contents.	3.8.2.1	Yes	1. The department is satisfied the identified issues with the section headings, contents and table of contents have been resolved, duplication has been removed and all section headings are in consecutive numeric order.
24	In **Appendix J – Social Impact Management Plan** section 7 headings need adjustments. The Department recommends removing duplicate 7.2 and ensure all section headings are in consecutive numerical order, and update Table of Contents.	3.8.2.1	Yes	1. The department is satisfied the identified issues with the section headings, contents and table of contents have been resolved.
25	In **Appendix V – Heritage Impact Assessment (HIA) – Solar Precinct** four separate HIA documents are identified as being included in the HIA components of the EIS. However, only three HIA documents are included (Appendices V, W-1/W-2, and X). For transparency in the accredited assessment process, the Department recommends providing the HIA for OHTL from the Solar Precinct to the Livingstone Chainage Corridor (Chainage 0 to 722) (as per (2) in the list of documents on page 4 of Appendix V) in the Supplementary EIS.	13.9.1.2	Yes	1. The Heritage Impact Assessment for OHTL Chainage 0 to 722 has not been finalised for submission of the Supplement. In the interim the proponent has provided a Cultural Heritage Desktop Assessment Database - OHTL (Chainage 0 to 722), (**Appendix 13.1 - Desktop Cultural Heritage Survey**) which discusses the notable heritage features of this section of the project area. The department's request for a Heritage Impact Assessment for OHTL Chainage 0 to 722 remains outstanding for transparency in the accredited assessment process. The department will not assess this document (because heritage and cultural items and places are not Matters of National Environmental Significance (MNES)), this may be a matter the Northern Territory EPA wishes to consider further.

26	To complement the recommendations on cultural heritage set in **Appendix V, W-1, W-2 and X (HIAs)**, the Department proposes including the following inclusions: having an archaeologist on site during construction to monitor ground disturbing activities at locations where undetected archaeological materials are likely to be present. outcropping sedimentary rocks within the project area should be subject to a 100% sample survey, because the Archaeological Predictive Model predicts that this type of sediment contains high likelihood of archaeological materials. The Department suggests considering the above recommendations when preparing the Cultural Heritage Management Plan.	13.9.1.2	Yes	1. The proponent has not included in their supplement submission, but has committed to developing, site specific Cultural Heritage Management Plans (CHMP) for high-risk sites identified in the Archaeological Predictive Model, which are properly considered, and construction activity is planned for accordingly. 2. The proponent considers it unnecessary to have an archaeologist present for all ground disturbance activities in high-risk areas but will consider on a site-by-site basis pre-construction clearance surveys with an archaeologist and cultural managers. 3. The proponent has committed to develop CHMPs for sites with outcropping sedimentary rocks to ensure that they are subject to a 100% survey sample size, or a sample size deemed sufficient on advice from an archaeologist. 4. The department considers that the Cultural Heritage Management Plan (CHMP) including site specific management plans for identified high-risk sites, site-by-site basis pre-construction clearance surveys with an archaeologist and cultural managers and 100% sample survey of outcropping sedimentary rocks, is an important document that the NT EPA assessment may wish to consider.
27	The Department recommends assessing the possible impacts of vibration caused by construction and operation of the project (Solar Precinct, OHTL, and Subsea Cable System) near archaeological and	13.9.2.1	Yes	1. The department believes the proponent's response to this comment does not adequately address the possible impacts of vibration caused by construction and operation of the project on nearby archaeological and cultural heritage sites. They have provided some information in their supplement submission including: ○ **(Appendix 4.1 – Constraints Planning and Field Development Procedure)** which discusses that the vibration impacts to residences (including heritage structures) have not been directly accounted for citing that separation distances for noise and air quality are more conservative.

	cultural heritage sites, particularly on historic structures, World War II infrastructure, rock outcroppings potentially containing archaeological material, possible unexploded ordnance, and submerged cultural landscapes.			○ The impact of low-level humming or buzzing noise on human health from the operation of the OHTL, (supplement submission **Chapter 14 – Human Health)**. 2. The department suggests that the possible impacts of vibration caused by construction and operation of the project on nearby archaeological and cultural heritage sites may be a matter considered in the NT EPA assessment.