

Ms Kylie Fitzpatrick
Department of Environment, Parks and Water Security
GPO Box 3675
Darwin NT 0801

Dear Ms Fitzpatrick

Re: Supplementary environmental report - Paru Road upgrade on Melville Island

The Department of Environment, Parks and Water Security (DEPWS) has assessed the additional information submitted for the above supplementary environmental report (SER) and provides the following comments:

Flora and Fauna Division

The Flora and Fauna Division acknowledges that the proponent has avoided/mitigated direct impacts to threatened species and biodiversity where possible and, overall, risks to biodiversity from the proposal are likely to be low. Some approval conditioning may be required to ensure weed management plans are adequately implemented.

Section of SER	Theme or issue	Comment
Section 3.1	Terrestrial Ecosystems (Butler's Dunnart)	<p>The Flora and Fauna Division refers to its previous comment, and notes that Butler's Dunnart has not been recorded in the southwest of Melville Island previously. These records are ~24km from the nearest known records and are beyond the dispersal distance of the species. As the population structure of the species is unknown it is possible that these new records comprise one large connected population or several disjunct populations in areas of suitable habitat. Previous comments also recommended that the gravel pits are sited in areas where Pale Field-rat and Butler's Dunnart are absent. If impacts are unavoidable, it was recommended that regional surveys be undertaken to clarify the significance of the occurrence of the species.</p> <p>The Flora and Fauna Division reviewed the design and results of the trapping provided in the SER. The review identified that the study design was flawed and inappropriate for addressing the NT Environment Protection Authority's (EPA) request for further information. In particular, the study focused on confirming the presence of the species within the gravel pits rather than surveying more broadly, which would have informed an assessment of the regional status of the species.</p> <p>The SER made the following conclusion: "Finding a suitable area adjacent to Paru Road for gravel extraction that avoids impacts to Butler's Dunnart and</p>

		<p>Pale Field-rat may not be possible, as both species are reasonably common. The proposed gravel pits represent a small portion of suitable habitat available to both species on Melville Island. Gravel extraction would not result in a significant impact to the populations of either species on Melville Island".</p> <p>This statement is true, in relation to the extent of <u>potentially</u> suitable habitat on Melville Island, but it is also likely that all of this habitat is not occupied by Butler's Dunnart. The purpose of recommended broader surveys was to test the extent to which the species occur within such habitat in the vicinity of the gravel pits, and it is unfortunate that the proponent and their consultant did not follow the recommendation, or consult with the Division on the most appropriate survey method and design.</p> <p>When the Division reviewed the referral it was noted that there were three additional records of the species outside the gravel pits. Therefore, the proposal would not be removing all known occurrence of the species within the local region. On balance, but without additional evidence from further surveys to determine the regional importance of the occurrences, the Division considers that the proposal likely poses a low risk to the species on Melville Island, due to the extent of undisturbed woodland that may provide suitable habitat and support the species.</p>
	Terrestrial Ecosystems (Threatened Flora)	<p>The NT EPA requested further information to demonstrate confidence about the absence of the target monsoon forest and riparian rainforest species, taking into consideration the absence of survey information. A lack of encounters of <i>Mitrella tiwiensis</i>, <i>Luisia corrugata</i> and <i>Tarrenoidea wallichii</i> was reported. There was an absence of information, however, about whether the species <i>Dendromyza reinwardtiana</i>, <i>Endiandra limnophila</i>, <i>Freycinetia</i> spp., or <i>Thrixspermum congestum</i> were considered.</p> <p>The SER indicates that ground-truthing survey of the vegetation communities adjacent to Paru Road (within the Creek Road alignment) was undertaken with documentation of the vegetation communities mapped. The proponent notes that no targeted surveys for monsoon forest or riparian rainforest target species were undertaken on the basis that the vegetation communities mapped demonstrate that the habitat is not suitable for the species with potential to occur in this area.</p> <p>The Flora and Fauna Division agree that information has been provided that supports the assessment of habitat not being suitable for the threatened flora.</p>
Figure 1	Terrestrial Ecosystems (Typhonium spp.)	<p>The Flora and Fauna Division previously recommended that the proponent configure gravel pits to avoid areas in GP1-2 that have not been completely surveyed for <i>Typhonium</i> spp.</p> <p>The SER indicates that the configuration of gravel pits in GP1-2 has been changed to avoid areas that have not been completely surveyed for <i>Typhonium</i> species. Significant impact on <i>Typhonium</i> plants within the proposal area is considered unlikely (although some undetected plants may be present).</p>
Chapter 3.2	Terrestrial Ecosystems (Large Hollow)	<p>Comments on the referral recommended that the proponent undertake additional sampling to assess the density of large/very large trees with the potential to support tree hollows within the areas proposed for clearing. The information was to inform a comparison of densities from surrounding habitat</p>

	Bearing Trees)	<p>and contextualise the potential impacts from the loss of large trees on habitat availability for threatened species. Areas with relatively high densities of large hollow-bearing trees were recommended to be avoided where possible.</p> <p>The SER provides counts of the total number of large trees (DBH >40cm) and very large trees (DBH >50cm) inside and outside the proposed gravel pits. The results demonstrate that the number of trees inside and outside of the pits is similar. The Flora and Fauna Division does note however, that there is considerable variability in counts across the 30 sites reported within and outside the proposed gravel pit areas.</p> <p>Information on tree density was not provided in the SER. Further analysis by the Division suggests that the densities within the proposed impact areas (0.151km²) are 517 trees/km⁻² and 1,180 trees/km⁻² respectively. The density of trees outside of the gravel pits appears to be statistically similar. The proposed clearing equates to the loss of more than 78 very large and 178 large trees within the impact area of the gravel pits. While the proposal would result in a loss of large/very large trees the data shows that surrounding area also provides similar habitat or threatened species.</p>
Summary – Chapter 6	Terrestrial Ecosystems (General Comments)	The conclusion in the SER states: "The woodland habitat that will be impacted by the Paru Road upgrade represents a small portion of the terrestrial ecosystems that occur on Melville Island; therefore the project will have significant deleterious impacts to the environment provided effective mitigation measures are implemented." This appears to be a typographic error.

Water Resources Division

There are no water control districts, water allocation plans or Declarations of Beneficial Use within the proposed development footprint on NT Portion 1644.

Section of SER	Section/topic	Comment
1	Water use and impact	<p>In 2012, the Tiwi Island Water Resource Strategy (TIWRS) was established by the Tiwi Land Council and endorsed by the Northern Territory Government. The strategy recommends that a maximum volume extracted per year should be no more than 20% of the recharge rate for the specified catchment and annual flow of surface water.</p> <p>The Department notes that the development is not subject to statutory requirements under the TIWRS, however recommends for the development to consider the Strategy for surface water management and erosion and sediment control.</p> <p>In alignment with the TIWRS, the Department recommends considering impacts to groundwater dependent ecosystems when extracting groundwater for the proposed development.</p>
2	Groundwater	Water Usage/Source - Total expected groundwater volume required for the proposed works is not identified. Total estimated aquifer storage of the Van Diemen Sandstone is also not identified. If option 2 or 3 is enacted (as per Water Supply Investigation report attached Appendix E), groundwater extraction must not exceed 20% of annual recharge to the Van Diemen Sandstone aquifer as per the Northern Territory Water Allocation Planning Framework and TIWRS.

		Estimated total volume of groundwater likely to be required for the project is required to be identified, ensuring value falls below the 20% threshold.
3	Water extraction licensing	<p>The project benefits from an exemption to the <i>Water Act 1992</i>, gazetted 28 November 2008, which specifies that the take of surface water or groundwater for road works does not require an extraction licence.</p> <p>The project also benefits from an exemption to the <i>Water Act 1992</i>, gazetted 30 June 1992, which exempts the requirement to obtain a permit to interfere with a waterway for road drainage works.</p>

Rangelands Division

Land Management Unit

Appendix B Gravel Pit Rehabilitation Plan states the Contractor will be required to submit a Gravel Pit Management Plan to the Department of Infrastructure, Planning and Logistics (DIPL) for assessment and endorsement and the Gravel Pit Management Plan will be required to meet the standards of Clause 35 (Rehabilitation of extraction areas, detours and access tracks) of NT Government Standard Specification for Environmental Management.

The Request for Tender (RFT), Contract and Pit Management Plans should also require compliance with Section 19. MATERIALS EXTRACTION APPROVAL/CLEARANCE of the NT Government Standard Specification for Environmental Management.

As previously stated given the extent of disturbance proposed and the potential high risk of erosion the Land Management Unit recommends that the Pit Management Plans and Erosion and Sediment Control Plan (ESCP) must be developed prior to undertaking any clearing or ground disturbing activities.

Additional to that required under Sections 19 and 35 of the NT Government Standard Specification for Environmental Management the Pit Management Plan should include but not be limited to:

- Identifying the locations, accesses, slope gradient, number and dimensions of pits;
- Clearing plans including timing and staging of works and clearing method(s);
- Minimum requirements for retained native vegetation buffers between pits;
- Details regarding the maximum allowable slope for gravel extraction areas;
- Application of buffers as per the NT Planning Scheme Land Clearing Guidelines (LCG).
- Rehabilitation requirements including information regarding the proposed final landform, timing of works, maintenance and monitoring requirements, contingency planning should proposed assisted natural revegetation (ANR) fail to provide adequate vegetation cover and rehabilitation completion criteria. The Pit Management Plan should reference and interface with the Erosion and Sediment Control Plan (ESCP) developed for the project;
- The RFT should ensure it includes re-seeding where required, monitoring of the re-establishment of vegetative cover, triggers and seeding requirements for all disturbed areas.
- The RFT, Contract and Pit Management Plans should identify HOLD POINTS where DIPL officers must, prior to clearing inspect and verify proposed pit locations, pit extent (1ha maximum), retained vegetation buffers between pits, maximum slope and compliance with buffers as per the NT Land Clearing Guidelines.

The SER identifies an ESCP will be developed by a Certified Professional in Erosion and Sediment Control (CPESC). It is also recommended that the ESCP developed by the CPESC include an inspection schedule where the CPESC must attend the works/disturbed areas to ensure implementation of the ESCP and that effective erosion and sediment controls have been implemented and at the completion of works certify rehabilitation and re-vegetation works are satisfactory to mitigate erosion.

Vegetation Assessment Unit

Clearing on unzoned land is regulated under the *Planning Act 1999*.

The former advice provided by the Vegetation Assessment Unit for this project remains valid. However, it is further noted that consent under the *Planning Act 1999* for the clearing of native vegetation may not be required where it is located in the Native Vegetation Clearing Overlay and the following applies to the proposed clearing:

'This Overlay does not apply if the clearing of native vegetation is required or controlled under any Act in force in the Territory, or is for the purpose of:

- a) a firebreak as specified by the Bushfires Management Act 2016 or the Fire and Emergency Act 1996, up to 5m wide along a boundary of a lot having an area of 8ha or less, up to 10m wide on a lot having an area greater than 8ha unless otherwise specified by a Regional Fire Control Committee;
- b) an internal fence line up to 10m wide on a lot having an area greater than 8ha;
- c) a road to access the land or other land; or
- d) the maintenance and repair of public infrastructure.

Editor's note: examples of legislation that may have effect under subclause 4 may include Territory Parks and Wildlife Conservation Act 1976, the Mining Management Act 2001, the Pastoral Land Act 1992, and the Environment Protection and Biodiversity Conservation Act 1999 (Cth)'.

Environment Division

Please note that the Environment Division provides support to the Northern Territory Environment Protection Authority (NT EPA) and the Minister for Environment in administering the *Environment Protection Act 2019*. Officers in the Environment Division support the NT EPA to identify, assess and mitigate the risk of significant environmental impacts and also enforce environmental approvals that are approved by the Minister. In that regard, this Departmental submission does not reflect all Departmental assistance provided to the NT EPA.

Should you have any further queries regarding these comments, please contact the Development Coordination Branch by email DevelopmentAssessment.DEPWS@nt.gov.au or phone (08) 8999 4446.

Yours sincerely



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30 March 2022

