

Our ref: DEPWS2021/0051
Your ref:

Department of Environment, Parks and Water Security
PO Box 3675
Parap NT 0801

Dear :

Re: Referral (Proponent initiated EIS) - Primary Gold - Rustlers Roost and Quest 29 Open-Cut Mine Redevelopment

The Department of Environment, Parks and Water Security has assessed the information contained in the above Referral and provides the following comments:

Flora and Fauna Division

Threatened Species:

From a review of DEPWS flora and fauna databases within 20km of the proposal, expert knowledge of species' habitat requirements and information about habitats occurring within the leases, the Flora and Fauna Division considers that the following threatened species may occur within or adjacent to the proposal area.

Table 1. Threatened species that are known or have potential to occur within the proposal area

Common Name	Scientific Name	TWPC Act	EPBC Act
Gouldian Finch	<i>Erythrura gouldiae</i>	Vulnerable	Endangered
Red Goshawk	<i>Erythrotriorchis radiatus</i>	Vulnerable	Vulnerable
Northern Quoll	<i>Dasyurus hallucatus</i>	Critically Endangered	Endangered
Partridge Pigeon (eastern)	<i>Geophaps smithii smithii</i>		Vulnerable
Pale Field-rat	<i>Rattus tunneyi</i>	Vulnerable	
Yellow-spotted Monitor	<i>Varanus panoptes</i>	Vulnerable	
Mertens' Water Monitor	<i>Varanus mertensi</i>	Vulnerable	
Mitchell's Water Monitor	<i>Varanus mitchelli</i>	Vulnerable	
Yellow-snouted Gecko	<i>Lucasium occultum</i>	Vulnerable	Endangered
Stylidium	<i>Stylidium ensatum</i>	Endangered	Endangered
Helicteres	<i>Helicteres macrothrix</i>	Endangered	Endangered
Schoutenia	<i>Schoutenia ovata</i>	Endangered	

TPWC Act - Territory Parks and Wildlife Conservation Act 1976

EPBC Act - Environment Protection and Biodiversity Conservation Act 1999.

The referral correctly identifies a number of risks from the proposal that may impact on flora and fauna values in the area. However the referral provides a limited assessment of the proposal’s risks to threatened species, particularly fauna. In the absence of a detailed impact assessment, the Flora and Fauna Division considers that there is sufficient uncertainty to warrant further assessment of the proposal’s risks/impacts to threatened species in the Environmental Impact Statement (EIS). This assessment should not be limited to *Helicteres macrothrix* and *Stylidium ensatum* but include all threatened species that are known to occur or have the potential to occur onsite (Table 1).

Significant and Sensitive Vegetation:

Aerial imagery and vegetation mapping suggests that waterways within the proposal area are likely to support riparian vegetation. Riparian vegetation is considered to be a significant and sensitive vegetation type in the Northern Territory and impacts to this vegetation should be avoided where possible. The proponent has identified the potential for significant impacts to riparian vegetation due to groundwater drawdown during dewatering of existing pits. Other impacts include a deterioration of water quality during mining operations.

The draft Terms of Reference (ToR) identifies the required avoidance and mitigation measures that are to be outlined in the EIS for avoiding or reducing impacts to the receiving environment. The Flora and Fauna Division supports the scope of the ToR, but recommends that more detailed operational procedures and management strategies are provided in the EIS. These measures are necessary to evaluate whether the mitigation actions are appropriate to avoid or reduce impacts to these vegetation types.

Aquatic Ecosystems

The Rustlers Roost and Q29 mine sites are located in the headwaters of Mount Bundey Creek, Marrakai Creek and the Mary River systems. The streams onsite have been identified as ephemeral with no natural permanent waterbodies within the proposal area. Rustlers Roost and Q29 also contain pit lakes which are known to support at least one threatened species, the Mertens’ Water Monitor.

The proponent has identified the potential for significant impacts to aquatic ecosystems from water discharges from the mine site. In particular, indirect impacts to off-site water quality are considered possible due to erosion and the movement of sediment, pit water discharges and/or Acid Mine Drainage. The Flora and Fauna Division agrees with the proponent’s assessment and considers that it would be appropriate to assess the risks/potential impacts to ‘Aquatic Ecosystems’ in the EIS.

Recommendation

Based on the information provided in the referral, the Flora and Fauna Division agrees there is potential for the proposal to have significant impacts on values associated with Terrestrial Ecosystems and Aquatic Ecosystems. Comments have been provided on the draft ToR in Table 2.

Table 2. Comments on the draft Terms of Reference

Section	Comment	Flora & Fauna recommendation
Table 2-4 – Environmental values – first 2 dot points underneath point 1 (Describe and map the extent and current condition of the following values in the proposal area and surrounding areas that could experience impacts).	This method is supported, however it should stipulate the guidelines followed (i.e. Brocklehurst et al 2007, Land Clearing Guidelines, DENR 2019).	Plot-based records, plus vegetation community mapping should be made available for the EIS.
Table 2-4 – Environmental values – dot point 1.2	This method is supported, however it should stipulate	Rather than NVIS database, this should be NVIS classification, used to describe

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(Vegetation communities and habitats present using the National Vegetation Information System (NVIS) database)	the guidelines followed (i.e. Brocklehurst et al 2007, Land Clearing Guidelines, DENR 2019).	the vegetation communities at a level 5 or higher of the NVIS Vegetation Hierarchy.
Table 2-4 – Environmental values – dot point 3 (Detail the outcomes of targeted surveys undertaken for the threatened plant species <i>Helicteres macrothrix</i> and <i>Stylidium ensatum</i>).	This is supported.	Point-source records and herbarium specimens to be provided to the Flora and Fauna Division for inclusion to corporate database systems.
Table 2-4 – Environmental values – dot points 4 and 5 4 – (Provide details of survey program timing, locations and methodology to demonstrate appropriate and statistically sufficient survey designs). 5 – (Surveys are to be undertaken at an appropriate time of year by a suitably qualified person that has demonstrated experience in surveying for and the identification of threatened species in the Northern Territory).	This is supported.	Reference the guidelines followed to undertake the targeted surveys (i.e. Cuff et al, in prep).
Table 2-4 – Environmental values dot point 2 – (Provide an assessment of NT and /or EPBC listed threatened species (both flora and fauna) presence, or likely occurrence, based on the results field studies).	The likelihood of occurrence should be assessed for NT and /or EPBC listed threatened species (both flora and fauna). An assessment of the regional significance and risks posed to any species that have a likelihood of occurrence of moderate or above should be provided. Field surveys will be required for species where likelihood of occurrence or regional significance is uncertain.	The Flora and Fauna Division recommends the ToR are amended to require an assessment of the likelihood of occurrence for NT and/or EPBC listed threatened species. Any species that have a likelihood of occurrence of moderate or above require further assessment of the regional significance of the species and risks posed by the project. Results for any surveys should be presented in the EIS including survey effort and absence records.
Table 2-4 – Environmental values dot point 6 – (If targeted surveys find <i>S. ensatum</i> , potential impacts should be evaluated and consideration	Potential impacts should be evaluated and consideration given to referral under the EPBC Act for all EPBC listed species likely to occur on site.	No changes to the ToR are proposed.

Section	Comment	Flora & Fauna recommendation
given to referral under the EPBC Act).		
Table 2-4 – Avoidance, mitigation and management	The current request for information does not require the EIS to identify any avoidance measures for significant and sensitive vegetation.	The Flora and Fauna Division recommends the ToR are amended to require information on how buffers to significant and sensitive vegetation would be adopted as recommended in the Land Clearing Guidelines (DENR 2019). If the minimum buffer width is unable to be adopted, the EIS should identify other appropriate mitigation/management measures.
Table 2-4 proposes to describe and map the extent and current condition of the following values in the proposal area and surrounding areas that could experience impacts: <ul style="list-style-type: none"> • Vegetation communities and habitats present using the National Vegetation Information System (NVIS) database. • Riparian vegetation and any other significant vegetation communities. 	The Flora and Fauna Division supports the proponent's commitment to map vegetation communities across the proposed areas.	If sensitive and significant vegetation is identified, it is recommended these communities are buffered adequately in accordance with the Land Clearing Guidelines (DENR, 2019).
Section 1.3 of the ToR states: 'This proposal has not been referred under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) because the activities do not have potential for a significant impact on any Matters of National Environmental Significance (MNES) protected under Part 3 of the Act'.	<p>Page 45 of the referral states: 'Targeted surveys for this species [<i>Styliidium ensatum</i>] are planned for early dry season 2021 to confirm the species presence/absence, in accordance with prescribed methodologies'.</p> <p>The wording in the ToR does not acknowledge the uncertainty around the potential presence of <i>S. ensatum</i> within modelled habitat.</p> <p>The Flora and Fauna Division note that <i>S. ensatum</i> is listed as a threatened species under the EPBC Act. In the absence of targeted surveys for this species there is still</p>	<p>The wording in the ToR should state that currently, the proposal has not been referred under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act). Further consideration will be given to referring the proposal once surveys for <i>S. ensatum</i> have been completed.</p> <p>In addition, appropriate justification of why the activities do not have potential for a significant impact on any MNES is required in the EIS.</p>

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	<p>potential for an important population to occur on site and be significantly impacted by the activity.</p> <p>The referral does not clearly provide justification of why the activities do not have potential for a significant impact on any MNES (such as listed threatened species) that have potential to occur on site.</p>	
<p>Table 2-4 – Potential impacts and risks – dot point 2.1 (Consideration of potential cumulative impacts to riparian vegetation associated with existing land uses and other mining/extractives activities in the region).</p>	<p>It is unclear why the ToR only discusses cumulative impacts to riparian vegetation. The assessment of cumulative impacts should apply to all vegetation types and biodiversity values.</p>	<p>To address the requirements of Regulation 79(1) of the Environment Protection Regulations, the Flora and Fauna Division recommends that the ToR require the proponent to quantify in the EIS the cumulative impacts on natural values across the following scales:</p> <ul style="list-style-type: none"> • Property perspective • Catchment • Regional perspective • Bioregional perspective. <p>The cumulative impact assessment should consider the effects of multiple actions or impacts on the natural environment, including habitats for threatened species, vegetation types and natural features identified as being important under the Land Clearing Guidelines.</p> <p>The cumulative impact assessment should consider all actions/impacts across each spatial scale including (but not be limited to) existing, approved or planned mining/pastoral/agricultural activities.</p>

Water Resources Division

The draft ToR are considered comprehensive, and adequately cover the relevant themes and includes mention of the *Water Act 1992*. It is considered important that the EIS also assess requirements to obtain licences and permits under the *Water Act 1992*.

The subject land is outside of a water control district and water plan area. However, any bore work undertaken as part of the groundwater monitoring and modelling program to inform the EIS is likely to

require a bore work permit as the relevant exemption is soon to be removed for the beneficial use of mining activity.

The referral indicates that there are at least two unregistered bores on the proposed development sites. The known unregistered bores are located at Rustlers Roost (MLN1083, MB01) and Quest 29 (ML29783, GWB02). It is the duty of the proponent to register any known unregistered bores with the Water Resources Division.

Should you have any further queries regarding these comments, please contact I _____ by email

Yours sincerely

Executive Director, Rangelands

15 April 2021