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Department of
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Our ref: DEPWS2023/0201

Ms Kylie Fitzpatrick
Department of Environment, Parks and Water Security
PO Box 3675
DARWIN NT 0801

Dear Ms Fitzpatrick

Re: Invite to Comment - Vista Gold - Mount Todd Gold Project Alterations referral

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

Flora and Fauna Division

The Yinberrie Hills contains an important breeding location for Gouldian Finches, including areas within the mine lease. The original environmental approval, issued for the removal of 616ha of Gouldian Finch habitat (158ha breeding habitat and 458ha wet season foraging habitat), was considered to pose residual risk to the species and an offset was required under the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*. The changes proposed to the project footprint under this referral will result in the additional clearing of breeding habitat (35.7ha) and wet season foraging habitat (11.4ha) for Gouldian Finches, as outlined in Table 1 (see below).

The loss of additional habitat was quantified against the remaining habitat within the Yinberrie Hills, Site of Conservation Significance, by the proponent. This quantification illustrates that the additional clearing removes a relatively small proportion of the vegetation communities considered habitat across the region. They also assessed the quality of the mapped communities within the footprint as potential breeding sites by assessing the value of individual trees as nesting trees on the ground. Whilst ground-truthing is a good approach, the assessment is limited as it does not consider the dynamic nature of hollow availability that results from fires and termite infestation in the savannah woodland, and the need for future trees to be available for hollow formation.

The value of the important breeding area to the west of the Batman Pit is that it has an unusually high density of potential nesting trees available within a location with easy access to permanent water and year round foraging resources. The current status report in the referral document (Attachment R2: Gouldian Finch Literature Review and Habitat Assessment) stated that foraging resources were available within the breeding habitat and they have reclassified this habitat as foraging. Whilst the grass species present in the understory of the breeding habitat produce seed that is eaten by Gouldian Finches, the issue is the availability of seed all year, including in the early wet season when seed germinates in response to rain, creating a resource gap of Gouldian Finches when they are moulting. This is why the wet season foraging habitat containing early seeding species such as *Alloteropsis semialata* is differentiated and important.

Table 1. A breakdown of the proposed activities increasing the clearing footprint, and the area of Gouldian Finch breeding habitat and wet season foraging habitat removal that would result (Table 6 in the referral report, page 31).

Aspect	Breeding habitat	Wet season foraging habitat	Increase from approval
Approved Clearance (EPBC) (ha)	158	458	-
Batman Pit (ha)	29	-	+29
WRD Footprint (ha)	5.5	5.2	+10.7
Camp access roads (ha)	1.2	1.2	+2.4
Construction camp (ha)	-	5	+5
Total (ha)	194	469.4	47.1

The proponent has determined that these additional increases in habitat loss do not pose a risk to Gouldian Finches. Environmental approvals from the original Environmental Impact Assessment found there was potential for a significant residual impact on the Gouldian Finch population at Mount Todd, and offsets were required. The current referral states that the Gouldian Finch Management Plan and the Offset Strategy will mitigate additional risk posed by these further increases in habitat loss and operational time frame.

The ability of the management plan to adequately deal with risks to Gouldian Finches depends on the effectiveness of the monitoring program. DEPWS has provided comment on the adequacy of the monitoring plan in 2017 and many of the issues raised then are still valid. The referral states that the Technical Advisory Committee will reconvene, review and update the monitoring plan upon project commencement. The monitoring plan states that there will be no control site for the Gouldian Finch monitoring as none could be located, and a comparison with before and after states will be used. However, how the data will be interpreted is not presented in the monitoring plan, nor has the rest of the plan been updated to reflect this.

In addition, it is not clear how the offset strategy mitigates risks of additional habitat removal or operational time frame, or whether this is an acceptable mitigation. An alternative view is that additional clearing poses some additional risk to the species which, even if acceptable, should be reflected in an additional offset commitment.

The Flora and Fauna Division agree that the additional clearing and increased length of operations is not likely to further increase the risk from the Mount Todd Gold mine, noting that the global conservation security appears to be improving. However, there are some concerns about the adequacy of mitigation measures proposed.

The Flora and Fauna Division recommends that:

- The proponent clarify how the offset strategy will mitigate the risk of further habitat loss to Gouldian Finches; and
- The review of the monitoring program is updated, so that it provides adequate information on data analysis, interpretation and triggers for change.

Environment Division

Environmental Operations

Environmental Operations has reviewed the referral documentation, and have provided comment in Attachment 1.

Water Resources Division

The water use requirements for the project are not outlined in the variation. An increase in accommodation onsite would increase the water demand, but the variation indicates that the reduction of the RP1 size and increase in onsite water treatment will decrease water extraction demand.

The project benefits from water extraction licence 8141014 which has a maximum entitlement of 3,480 ML/yr, extracting from Horseshoe Creek. The licence has an expiry of 1 June 2031.

Rangelands Division

Weed Management Branch

There are no current orders or notices issued under the *Weeds Management Act 2001* (WM Act) for NT Portion 4366.

A desktop assessment of the NT Weeds Database for NT Portion 4366, surrounding areas and adjoining roads has revealed records of the following declared species:

Common Name	Botanical Name	Declared
Gamba grass	*Andropogon gayanus*	Class B
Neem	*Azadirachta indica*	Class B
Hyptis	*Hyptis suaveolens*	Class B
Sida - flannel weed	*Sida cordifolia*	Class B
Sida - spiny head	*Sida acuta*	Class B
Mission grass	*Cenchrus polystachios*	Class B

All land in the Northern Territory is subject to the WM Act. The WM Act describes the legal requirements and responsibilities that apply to all persons, owners and occupiers of land regarding declared and potential weeds. General duties described in Division 1 of the WM Act include the requirement for owners or occupiers of land to take all reasonable measures to prevent land being infested with a declared weed and to prevent a declared weed from spreading.

There are four types of classifications for a declared or potential weed under the WM Act: Class A (to be eradicated); Class B (growth and spread to be controlled); Class C (not to be introduced into the Territory or part of the Territory); and Class D (prevent the growth and spread by actions of persons).

Gamba grass and neem are subject to Statutory Weed Management Plans under the WM Act. Management obligations outlined in the plans must be adhered to by all land holders. Management requirements and copies of the statutory weed management plans are available online[1]. The Weed Management Branch may conduct random inspections at any time to ensure weeds have not been spread or introduced to the site.

[1] https://nt.gov.au/environment/weeds/weed-management-planning

Mining and extractive industries have been recognised as high risk weed spread pathways. 'Preventing Weed Spread is Everybody's Business' is a document highlighting the areas of risk for all activities associated with weed spread. The document available online[2], details the pathways through which weeds are spread and provides actions to reduce weed spread. Proponents seeking to develop land for any purpose should address these actions, specifically, pages 14 and 15 which provides information on weed spread mitigation measures relevant to the mining and extractive industries.

The Weed Management Branch recommends using the NT WeedMate app[3] in conjunction with the Weed Management Plan (3.5 Monitoring program page 15), to collect and record the weed data points for mapping purposes.

The app helps to:

- collect information about the weed species, density and location;
- add extra information such as treatments, chemicals and growth stages; and
- organise your data in a format ready for mapping.

To find out how to download and use the app, go to the DEPWS website[4].

Further information is available online[5] alternatively contact the Weed Management Branch for further advice on (08) 8999 4567.

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

Maria Wauchope
Executive Director Rangelands
20 October 2023

Attachment 1 - Environment Division – Environment Operations comment

[2] https://denr.nt.gov.au/__data/assets/pdf_file/0011/257987/preventing-weed-spread.pdf
[3] https://depws.nt.gov.au/rangelands/publications2/weed-management-publications/contribute-weed-data/weed-data-collection/nt-weedmate-app
[4] https://depws.nt.gov.au/__data/assets/pdf_file/0005/1041872/weedmate-2-user-guide.pdf
[5] http://www.nt.gov.au/environment/weeds

Attachment 1 – Environment Division Submission on the referral

Vista Gold Australia Pty Ltd – Mount Todd Gold Project Alterations

This submission is made under regulation 53 of the Environment Protection Regulations 2020

Government authority: Environmental Operations, Environment Division, Department of Environment, Parks and Water Security

Summary:

The proposed variations have potential to cause additional significant impact. The referral made in response to the NT EPA's call-in notice does not fully address the issues that could impact the environmental factors of interest to the Environmental Operations Branch, being Water (Inland water quality, hydrological process and aquatic ecosystems) and Air Quality.

At the conclusion of the 2014 assessment process, it was noted in Assessment Report 76[6] that there were still "significant information gaps remaining from the environmental impact assessment process", and that the NT EPA's decision was relying on intensive post-assessment data collection, analyses and monitoring to determine the significance and appropriate responses to potential impacts, as well as appropriate management under the *Mining Management Act 2001* and the *Water Act 1992*. The referral submitted in response to the NT EPA's recent call-in notice has not addressed all these concerns.

Additional information is required to be able to determine whether mitigation measures would be able to manage the probable impacts to Water and Air Quality Environmental Factors at acceptable levels. Details are provided below:

Item	Section of Referral	Theme or issue	Comment
1.	Referral form	Additional significant impact to environmental factors	The proponent has advised that terrestrial ecosystems are the only environmental factor likely to be further impacted by this variation (above the existing proposed impacts, previously assessed in 2013/2014 – Assessment Report 76). However, it is very likely that the proposed variation to the action will cause additional impact to the following environmental factors: • water – inland water quality, hydrological processes and aquatic ecosystems; and • air quality.

[6] https://ntepa.nt.gov.au/your-business/public-registers/environmental-impact-assessments-register/completed-assessments/register/mt-todd-gold-mine-project

Item	Section of Referral	Theme or issue	Comment
2.	Referral	Impact to Water environmental factors	The waste rock dump (WRD) will be increased in terms of elevation and footprint. This will abut and cover natural surface drainage on the site, and will extend across most of the current surface area of Retention Pond 1 (RP1). It is known that the current WRD has surface and probable groundwater seepage to Edith River. The current WRD is not lined at the base, and the surface is permeable to rainfall infiltration. There is a risk that this will increase the rate of release of contaminants as neutral and acid mine drainage (Non Acid Forming (NAF) and Potentially Acid Forming (PAF)) to groundwater beyond the mineral lease and to the Edith River, and potentially further alter groundwater hydrology. Release of contaminants and changes in groundwater hydrology from the tailings storage and legacy features including the old heap leach pad, and dewatering of Batman Pit need to be assessed.
3.	Referral	Acceptable discharge quality, noting Referral Appendix N – Water Treatment Plant	A waste discharge licence under the *Water Act 1992* will be required, and the proponent must note that this will only authorise controlled discharge to the Edith River. For all other discharges of contaminants in surface water and groundwater beyond the boundary of the mineral leases, the proponent is risking offences against both the *Water Act 1992* and the *Waste Management and Pollution Control Act 1998*. The proponent has a duty to demonstrate that the discharges have not been, and will not have an adverse impact on surface and ground waters and associated aquatic ecosystems and other community values of the waterway and groundwater as defined under the National Water Quality Management Strategy hosted on the Water Quality Australia webpages[7]. Baseline and ongoing monitoring must be capable of detecting impacts if there are any. The site environmental management plan must include procedures for early warning of pending impacts with appropriate corrective actions to avoid adverse impacts. All baseline and ongoing monitoring must be designed properly using appropriate environmental risk assessment procedures and conceptual models to identify actual hazards, stressors and pressures with any exposure pathways to sensitive receptors. Guidance is provided by:

[7] https://www.waterquality.gov.au/

Item	Section of Referral	Theme or issue	Comment
			• Australian and New Zealand guidelines for fresh and marine water quality (ANZG 2018[8]); and • National Environment Protection (Assessment of Site Contamination) Measure[9]. The concentration of toxicants in discharge water quality should not exceed the values calculated to protect 95% of species modelled in the species sensitivity distribution as published in ANZG2018. Where a default guideline value is an order of magnitude, or higher than the normal value expected for non-impacted freshwaters upstream of the mine or relevant reference sites for equivalent stream order of the Edith River near the boundary of the mineral lease, then the likely impact must be determined. Load-based impact of all discharges must be assessed, including groundwater expression and other surface water drainage from the premises to the Edith River, especially for sulfate, calcium, magnesium, cadmium, cobalt, chromium, copper, zinc, mercury, total organic carbon, total nitrogen, total suspended solids, filtered (0.45µm) iron, aluminium and manganese. The proponent should assess the likelihood of discharging colloidal forms of aluminium, iron, manganese and other elements as a result of possible carryover of the solid/colloidal fractions from the water treatment plant, and the probability of the discharge to form precipitates that could smother the aquatic ecosystem downstream of the discharge during the drying phase of the waterway.
4.	Referral Figure 6	Additional information – gas fired power stations	Figure 6 (referral report page 29) indicates that the power generation yard will be located at the intersection of the Edith River Falls Rd with the Amadeus Gas Pipeline. Details regarding the design, construction and operation of the power station, ancillary infrastructure and identity of the power station owner and operator is required. Requirements for design of new stationary fuel burning equipment, and for assessing and measuring emissions to air are provided below.

[8] https://www.waterquality.gov.au/anz-guidelines
[9] https://www.nepc.gov.au/nepms/assessment-site-contamination

Item	Section of Referral	Theme or issue	Comment
5.	Referral	Impact to Air Quality environmental factor from point source emissions (e.g. power station, diesel generators) and dust	Additional information is required about the likely impact of air emissions from the power station, diesel generators and dust from the site. Assessment of dispersion of emissions of air pollutants must be done in accordance with guidance from the NT EPA. Design standards for any point source emissions must comply with the NSW Protection of the Environment Operations (Clean Air) Regulation, available online[10]. Sampling and analysis air pollutants from point source emissions must be carried out in accordance with the latest version of Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales. Monitoring of ambient air quality must be carried out in accordance with relevant Australian Standards.
6.	Other generic comments		The proponent should note that all persons are required to comply at all times with the General Environmental Duty under section 12 of the *Waste Management and Pollution Control Act 1998* (NT) (WMPC Act). To help satisfy the General Environmental Duty, the proponent is advised to take notice of the list of environmental considerations below. The list is not exhaustive and the proponent is responsible for ensuring their activities do not result in non-compliance with NT laws. A non-exhaustive list of environmental issues that should be considered to meet requirements under NT law are listed below: 1. **Dust**: The proposed activities have the potential to generate dust, particularly during the dry season. The proponent must ensure that nuisance dust and/or nuisance airborne particles are not discharged or emitted beyond the boundaries of the premises. 2. **Noise**: The proponent is to ensure that the noise levels from the proposed premises comply with the latest version of the NT EPA Northern Territory Noise Management Framework Guideline available online at[11].

[10] https://legislation.nsw.gov.au/view/html/inforce/current/sl-2022-0811
[11] https://ntepa.nt.gov.au/__data/assets/pdf_file/0004/566356/noise_management_framework_guideline.pdf

Item	Section of Referral	Theme or issue	Comment
			3. **Erosion and Sediment Control (ESC):** The proponent must ensure that pollution and/or environment harm do not result from soil erosion. The ESC measures should be employed prior to and throughout the construction stage of the development. Larger projects should plan, install and maintain ESC measures in accordance with the current International Erosion and Sediment Control Association (IECA) Australia guidelines and specifications. Where sediment basins are required by the development, the NT EPA recommends the use of at least Type B basins, unless prevented by site specific topography or other physical constraints. 4. **Storage:** The proponent should store liquids only in secure bunded areas in accordance with VIC EPA Publication 1698: Liquid storage and handling guidelines, June 2018, as amended. Where these guidelines are not relevant, the storage should be at least 110% of the total capacity of the largest vessel in the area. 5. **Waste Management - Import and Export of Fill**: The proposed activities have the potential to generate fill and/or involve the importation of fill for use on-site. Untested fill material may already be present on the site. All fill imported or generated and exported as part of the activity must either be certified virgin excavated natural material (VENM) or be sampled and tested in line with the most relevant guideline listed below and be shown to meet at least one of the applicable standards below: • NSW EPA Sampling design part 1 - application - Contaminated Land Guideline[12] or • NSW EPA Sampling design part 2 - Interpretation - Contaminated Land[13] or

[12] https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/contaminated-land/22p3915-sampling-design-guidelines-part1.pdf?la=en&hash=C12162FBB9438F9BF59782EE4E4A953AE569913

[13] Guideline https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/contaminated-land/22p3916-sampling-design-guidelines-part2.pdf?la=en&hash=56F1C2DB8A6DAC3303C676F679719A661DAA97D2

Item	Section of Referral	Theme or issue	Comment
			• NSW EPA Excavated Natural Material (ENM) Order 2014 (the excavated natural material order 2014[14] or • NSW EPA Recovered Aggregate Order 2014 (The recovered aggregate order 2014[15] or • The definition of Waste fill detailed in the South Australian EPA Current criteria for the classification of waste—including Industrial and Commercial Waste (Listed) and Waste Soil, 2009 (Solid waste disposal)[16]. All imported fill material must be accompanied by details of its nature, origin, volume, testing and transportation details. All records must be retained and made available to authorised officers, upon request. The proponent should also consider the following NT EPA fact sheets: How to avoid the dangers of accepting illegal fill onto your land[17], and Illegal Dumping - What You Need to Know[18]. 6. **Odour or Smoke:** The proposed activities may have the potential to create odours and/or smoke. The proponent must ensure that nuisance odours or smoke are not emitted beyond the boundaries of the premises.

[14] https://www.epa.nsw.gov.au/~/media/EPA/Corporate%20Site/resources/waste/rro14-excavated-natural-material.ashx
[15] https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/waste/rro14-aggregate.pdf?la=en&hash=24FDF5D724F45D65BECDF2BB1AA0791A41B3E6C8
[16] https://www.epa.sa.gov.au/files/4771346_current_waste_criteria.pdf
[17] https://ntepa.nt.gov.au/__data/assets/pdf_file/0005/285728/factsheet_avoid_danger_accepting_illegal_fill_to_your_land.pdf
[18] https://ntepa.nt.gov.au/__data/assets/pdf_file/0008/285740/factsheet_illegal_dumping_what_you_need_know.pdf