

Memorandum

To: Northern Territory Environment Protection Authority
From: Primary Gold Limited
Date: 9 August 2021
Subject: **Rustlers Roost and Quest 29 Open-Cut Mine Redevelopment – Significant Variation Assessment**

Introduction and Purpose

On the 23rd February 2021 the NT EPA released its decision to accept a proponent initiated EIS referral for the Rustlers Roost and Quest 29 Open-Cut Mine Redevelopment. A decision regarding the level of assessment was made on the 11th May 2021, stating that a standard EIS was required, and identified six environmental factors that needed to be considered. The Terms of Reference (ToR) for the assessment were also released on the 11th May 2021.

Primary Gold Limited (PGO) have subsequently commenced the development of an EIS in alignment with the ToR and to facilitate construction in the 2022 dry season (assuming approval to do so), seek to submit the draft EIS in the month of September 2021.

Since the submission of the referral, several components of the Project have been refined due to pit optimisation, engineering analysis and design refinements. The nature of the mining project has in essence not changed however the alterations represent a 23% increase to the development envelope. Primary Gold is also seeking flexibility to process ore at a higher rate and utilise ore that would otherwise be allocated to overburden waste rock dumps, should gold price values make this viable.

The rate of production nominated in the referral was 3 Million tonnes per annum (Mtpa) over an approximately seven-year life of mine (LOM). If the gold price increases, the required ore grade that can be processed decreases. Thus, a higher gold price results in more ore that can be processed from the mine. This allows material previously classed as waste will be classed as ore as the cutoff grade decreases. Therefore, PGO is seeking to formalise the ability to process up to 5 Mtpa.

Under the higher processing rate scenario of 5 Mtpa, the volume of waste rock and material received in the Waste Rock Dumps (WRDs) would decrease and the final height of the WRDs would be approximately 3 m lower per additional 1 Mtpa of ore processed. Conversely, the material processed and received in the Tailings Storage Facility (TSF) would increase resulting in an approximate height increase of 0.5 m per 1 Mtpa of additional ore processed. The spatial extent of the TSF nominated in this significant variation request is sufficient to cater for this material, should it eventuate.

PGO expect that the proposed changes are unlikely to result in significant additional impacts to environmental aspects, and that the existing TOR sufficiently captures the relevant environmental aspects. The same six environmental factors, as defined in the TOR and reflected in the NT EPA's Statement of Reasons (May 2021), remain relevant for the Project context, and no new environmental factors are identified to be influenced by the Project changes.

In recognition of the Significant Variation assessment process, PGO are seeking assessment by the NT EPA of the revised project description and whether the Project can be appropriately assessed under the current Terms of Reference (TOR) for the draft EIS.

Proposed Changes

This section provides a summary of the proposed spatial/physical and volume changes to the Project since referral. The systems for extraction, processing and disposal have not altered from the original referral. The proposed alterations are listed below:

- Amending the nominal rate of production from 3 Mtpa up to 5 Mtpa;
- Life-of-mine (LOM) changed from an anticipated 7 years in the referral to 10 years in the draft EIS;
- Vegetation clearing of 389.4 ha compared to the previous clearing area of 319.4 ha (Table 1);
- New location for the accommodation camp;
- Expansion of the Tailings Storage Facility (TSF);
- Inclusion of an additional Waste Rock Dump (WRD) to the north of the TSF and processing plant;
- Expansion of the existing southern WRD over the historic WRD;
- Expansion of the main pit and two new minor pits at the Rustlers Roost site;
- A new mine laydown area;
- New location of the administration facility; and
- A new landfill.

Refer to Table 2 for more detail of the above changes.

The haul road connecting the two non-contiguous areas was already included in the original referral, and the alignment and width have not altered. However, the condition of the existing haul road bridge crossing Mount Bunday Creek has been subsequently identified as unsuitable for continued use and will be replaced as part of the Project.

In the referral, the processing plant and ROM were two separate areas. In the EIS layout that has been subsequently refined by PGO, these two areas have been combined into a single area.

Table 1 Vegetation Clearing Comparison

	Referral Disturbance (Ha)	EIS Disturbance (Ha) ¹	Net Cleared Vegetation (Ha)	Total Difference (Ha)	Notes
Rustlers Roost	Additional clearing of <u>274.8</u> ha of native vegetation within a <u>497</u> ha mine development envelope	Additional clearing of <u>333.4</u> ha of native vegetation within a <u>611</u> ha mine development envelope (vegetation clearance based on development envelope)	333.4	+58.2	-
Quest 29	Additional clearing of no more than <u>44.6</u> ha of native vegetation within a <u>139.6</u> ha development envelope	Additional clearing of <u>46.7</u> ha of native vegetation within a <u>139.6</u> ha development envelope (vegetation clearance based on development envelope)	46.7	+2.1	Whilst no changes have been made to the Quest 29 component, revised analysis of the disturbance areas against the existing vegetation layer provides a value that is 2.1 ha greater. It is also noted that the referral stated 160.7 ha for the development envelope. This value accounted for the accommodation camp development envelope north of Quest 29 in the referral, which has been identified separately below.
Accommodation Camp	Clearing of <u>7.3</u> ha of native vegetation within a <u>21.2</u> ha development envelope	Clearing of <u>7.3</u> ha of native vegetation within an <u>18</u> ha development envelope (vegetation clearance based on disturbance footprint)	7.3	0	The development envelope has been reduced to be wholly contained within ML29814. The clearance area is based on the disturbance footprint which adjoins the access road and contains sufficient area to accommodate the camp. The previous referral combined the development envelope for the accommodation camp with Quest 29 and accounted for this entire area in clearance. As noted, the clearance area for the accommodation camp is now contained to the footprint rather than the envelope.
Haul Road	Total disturbance of 22 ha. No nominated clearing extent.	Additional clearing of <u>2</u> ha of native vegetation within a <u>21.9</u> ha Haul Road disturbance (vegetation clearance based on development envelope)	2.0	-	The referral did not nominate a clearing extent for the haul road. The haul road Project area has since been analysed against existing disturbance and intact vegetation layers to determine the haul would result in a maximum 2.0 ha clearance of mapped vegetation.
Total			389.4	60.3	

1 – Clearing extent it based on the existing disturbance and intact vegetation layers in NVIS 2007. The values for the Rustlers Roost and Quest 29 Project areas have been derived utilising the Project development envelope with is defined as the maximum area within which the activity could occur. While this may not represent the ultimate disturbance footprint (which will be less), it presents the maximum (worst-case) extent of potential disturbance.

Table 2 Rustlers Roost Old Infrastructure Layout and New Infrastructure Layout Disturbance Comparison

Proposed Changes		Referral Disturbance (Ha)	EIS Disturbance (Ha)	Total Difference in Disturbance area (Ha)	% of Change (Area/Volume)	Effect of Change on Environmental Aspects
<p>The accommodation camp has been shifted from ML29782 north of Quest 29 to ML29814 in close proximity to the Toms Gully Mine and the Arnhem Highway (refer to Figure 3 and Figure 4). This allows for more direct access to the primary external transportation route and enables connection to mains power, thus removing the requirement for diesel generators.</p>		7.3 ha	7.3 ha	0	0%	<p>Although the location of the accommodation camp has changed, the spatial extent has not been altered. The new proposed location will be included within the draft EIS which will provide consideration of the camp's potential impact to environment factors. However, CDM Smith and PGO do not expect the new location of the accommodation camp to cause any significant impact to additional environmental factors not previously identified during in the referral and reflected in the TOR.</p> <p>The site of the accommodation camp was included in ecological surveys undertaken by Low Ecological in 2016 and 2017. Vegetation in this area is mapped as Eucalyptus with grass understorey (open forest and woodland (vegetation units 4 and 15). The vegetation type is consistent with the previous site north of Quest 29. To the east is the Mary River Site of Conservation Significance (SoCS).</p> <p>Table 2 of the current TOR requires details of the accommodation facility. It is considered that the six environmental factors identified in the current ToR are sufficient to address potential impacts from the accommodation camp in the proposed EIS location. Noting, the revision is considered a change that will reduce overall Project impacts through removing diesel generators, resultant air emissions and reduced heavy vehicle movements for fuel supply.</p>
<p>A new waste rock dump (WRD) has been introduced to the north of the TSF and</p>	Southern WRD	29.4	43.2	62.7	113%	<p>The total WRD area has expanded by 62.7 ha, and disposal volume has increased to 74.3 Mt which represents an increase of 150%. The layout has increased to include the historical WRD area to the west of the current pit. The southern WRD is wholly within the development</p>

Proposed Changes		Referral Disturbance (Ha)	EIS Disturbance (Ha)	Total Difference in Disturbance area (Ha)	% of Change (Area/Volume)	Effect of Change on Environmental Aspects
processing plant. The southern WRD identified in the referral has been expanded to include the historic WRD north-west of the current pit. Waste rock disposal volume has changed from 29.71 Mt for the Life-of-Mine (LOM) to 74.3 Mt.	Northern WRD	0	48.9			envelope nominated in the referral; however, the northern WRD is only partially within the previous referral development envelope. The northern WRD is outside mapped potential <i>Stylidium ensatum</i> habitat but is within modelled potential habitat for <i>Helicteres macrothrix</i> . Additional surveys have been commissioned within the northern WRD to confirm presence / absence of the <i>Helicteres macrothrix</i> . Section 3.2 of the TOR (terrestrial ecosystems) already requires PGO to consider these species, among others. The northern WRD expands the project footprint for the entire upper catchment of an unnamed watercourse flowing north in Mount Bunday Creek and thus increases risks associated with surface water runoff. Nevertheless, hydrology and potential impacts through surface water runoff are a primary area of consideration for the current TOR and the new northern WRD and additional volumes are not anticipated to cause any significant impact to additional environmental factors not previously identified in the referral and accounted for in the TOR. Therefore, it is considered that this proposed change may be adequately assessed through the current draft EIS process and TOR.

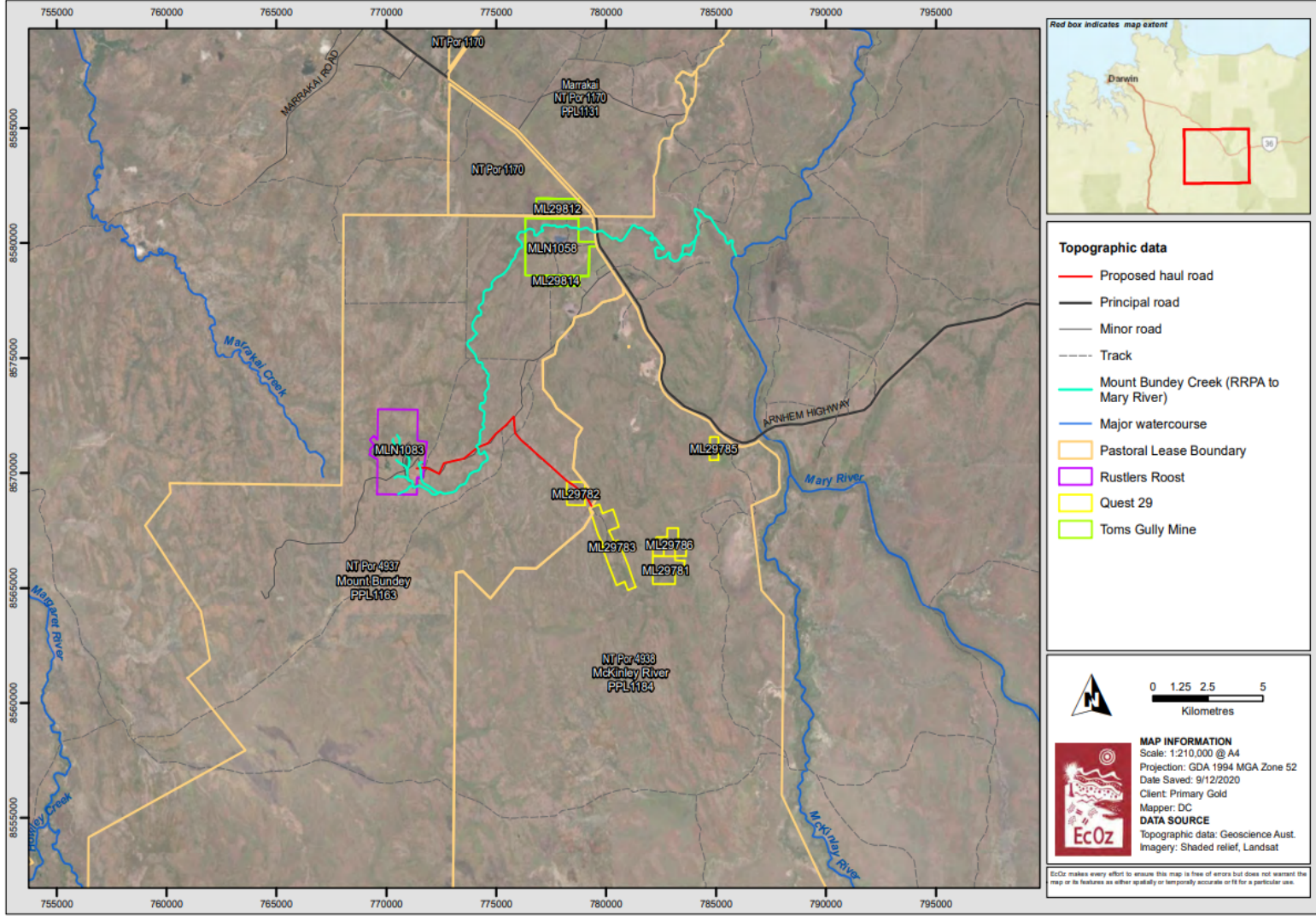
Proposed Changes		Referral Disturbance (Ha)	EIS Disturbance (Ha)	Total Difference in Disturbance area (Ha)	% of Change (Area/Volume)	Effect of Change on Environmental Aspects
<p>The TSF has been expanded north of Annie's Dam to utilise the existing landform contours to assist with the impoundment and reduce earthworks (refer to Figure 2 and Figure 4). Tailings disposal volume has been changed from 3 Mt per annum to 4 Mt per annum.</p>		165.1	257.1	92	56%	<p>Although the proposed new TSF area has increased in 56% and tailing disposal volume to 4 Mtpa, the proposed new area is largely within the development envelope identified in the referral and will be located in an area which will require less earthworks due to its favourable contours. The revised layout consumes the artificial Annie's Dam and will incorporate the entire upper catchment feeding Annie's Dam thus allowing for easier runoff management. While the size and tailings volume increases, details around the TSF design and potential impacts to hydrological processes and inland waters were accounted for in the draft EIS TOR. The expanded footprint does not intersect any known cultural heritage site, will not introduce additional impacts to air and risks to human health are being considered through the existing Key Environmental Factors. Further, the existing TOR already requires information on design criteria and risk assessments (e.g. ANCOLD). It is considered the expanded TSF and storage volume will not cause any significant impact to additional environmental factors not previously identified during in the referral and therefore, it is considered this proposed change may be adequately assessed through the current draft EIS process and TOR.</p>
<p>Expanded main pit and two new small pits are now proposed at the Rustlers Roost site (Annie's Oakley Pit and Annie's Dam Pit*) (refer</p>	Main Pit	44.6	69.9	31.5	70%	<p>To access ore that has been recently identified through drilling, and prevent future sterilisation through placement of the TSF over and immediately adjacent these areas, PGO is now proposing to mine two small additional pits (Annie's Oakley and Annie's Dam Pits). Annie's Dam pit is proposed within the TSF area, and following extraction will be utilised for placement of overburden from the main pit and will</p>

Proposed Changes		Referral Disturbance (Ha)	EIS Disturbance (Ha)	Total Difference in Disturbance area (Ha)	% of Change (Area/Volume)	Effect of Change on Environmental Aspects
to Figure 2 and Figure 4). These have been introduced to avoid sterilisation of the ore resource.	Annie's Oakley and Annie's Dam Pit	0	6.2			eventually be encapsulated within the TSF. The main pit area has increased by 57% to the east and west, but it is still proposed to be wholly within the disturbance envelope. The main pit expansion directly results in increased overburden, thus requiring the additional northern WRD. Given the location of Annie's Dam pit within the TSF, Annie's Oakley Pit is considered to pose the greatest risk of additional environmental impacts. Annie's Oakley Pit is located adjacent to the western boundary of the Project area and next to an unnamed drainage line discharging to Marrakai Creek. The existing TOR accounts for hydrological processes, inland water and aquatic ecosystems, and it is considered the additional pits and expansion of the main pit will not cause any significant impact to additional environmental factors not previously identified during the referral.
A mine laydown area has been introduced to the east of the processing plant and ROM (refer to Figure 2 and Figure 4).		0	6.0	6.0	100%	Although no new laydown area was required in the referral as the existing laydown area was to be utilised, however the proposed laydown will now be located partially within the previous disturbance envelope and will only occupy an area of 6.0 ha. It is anticipated the proposed laydown area will not cause any significant impact to additional environmental factors not previously identified during the referral.
The administration facility has been shifted from the southern portion of the disturbance envelope, to be in proximity of the laydown area and processing facility in the north of Rustlers Roost (refer to Figure 2 and Figure 4).		0.25	0.42	0.17	68%	Although the location of the administration facility has changed and has a 68% spatial extent increase, the area of increase is considered minor (0.17 ha). The new location is outside mapped potential habitat for the <i>Styloidium ensatum</i> and <i>Helicteres macrothrix</i> . The revised location of the administration facility is not expected to cause any significant impact to additional environmental factors not previously identified during the referral.

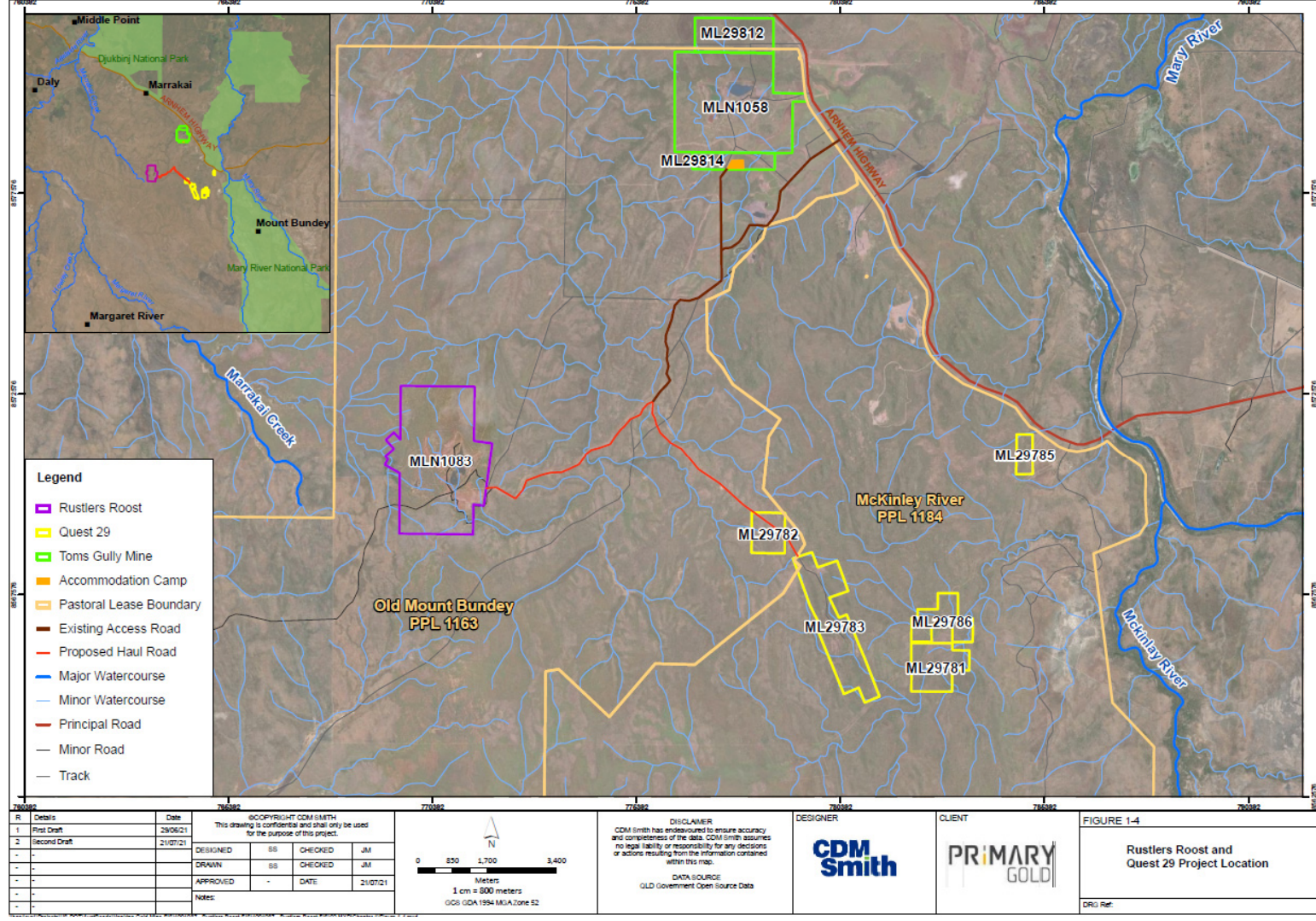
Proposed Changes	Referral Disturbance (Ha)	EIS Disturbance (Ha)	Total Difference in Disturbance area (Ha)	% of Change (Area/Volume)	Effect of Change on Environmental Aspects
A site landfill has been introduced in a predominantly disturbed area between the eastern TSF embankment and the western edge of the main pit (refer to Figure 2 and Figure 4).	0	4	4	100%	<p>Although no landfill was proposed in the referral, the proposed landfill will be located within a highly disturbed area and it is expected only minimal waste from the mining operation to be disposed in the landfill.</p> <p>The landfill will be constructed over 4 ha to a depth of 5 m and be utilised for the 10 year Project period. The landfill will be designed and constructed in accordance with the NT EPA Guidelines for the Siting, Design and Management of Solid Waste Disposal Sites in the Northern Territory. Solid waste materials including non-putrescible commercial and industrial (C&I) waste, non-putrescible construction and demolition (C&D) waste, green waste and limited hazardous waste in the form of contaminated soils will be placed in the landfill. Other hazardous wastes will not be landfilled onsite and will be taken from site by a licensed contractor to an authorised collection or licensed waste disposal facility.</p> <p>It is not expected the proposed landfill will not cause any significant impact to additional environmental factors not previously identified during the referral and can be adequately assessed utilising the current draft EIS ToR.</p>
Overall water demand estimate for the operations has changed from 3.3 GL/yr to 6.5 GL/yr.	NA	NA	NA	96%	<p>The overall water demand for the Project has increased; however, a large volume of this water will come from onsite water (e.g. pit water and TSF decant water) which will be re-used for the processing plant.</p> <p>Groundwater may be sourced from a bore field. The bore field will supply potable water and raw water as required. Potable water supply will be required for the accommodation village, offices, ablutions and safety showers. A camp water supply bore is within proximity to the accommodation village at Tom's Gully.</p>
Total	246.65	443.02	196.37	80%	
Development Envelope	497.50	611.00	113.50	23%	

* The 4.5 ha of Annie's Dam pit is wholly within the TSF disturbance area and therefore the disturbance of the Annie's Pits only accounts for Annie's Oakley Pit.

- Figure 1** Project Location Comparison
- Figure 2** Rustlers Roost Referral and EIS Project Layout Comparison
- Figure 3** Quest 29 Referral and EIS Project Layout Comparison
- Figure 4** Rustlers Roost Referral and EIS Disturbance Envelope and Infrastructure Overlaid



Referral Project Location Layout



EIS Project Location Layout

Figure 1 Project Location

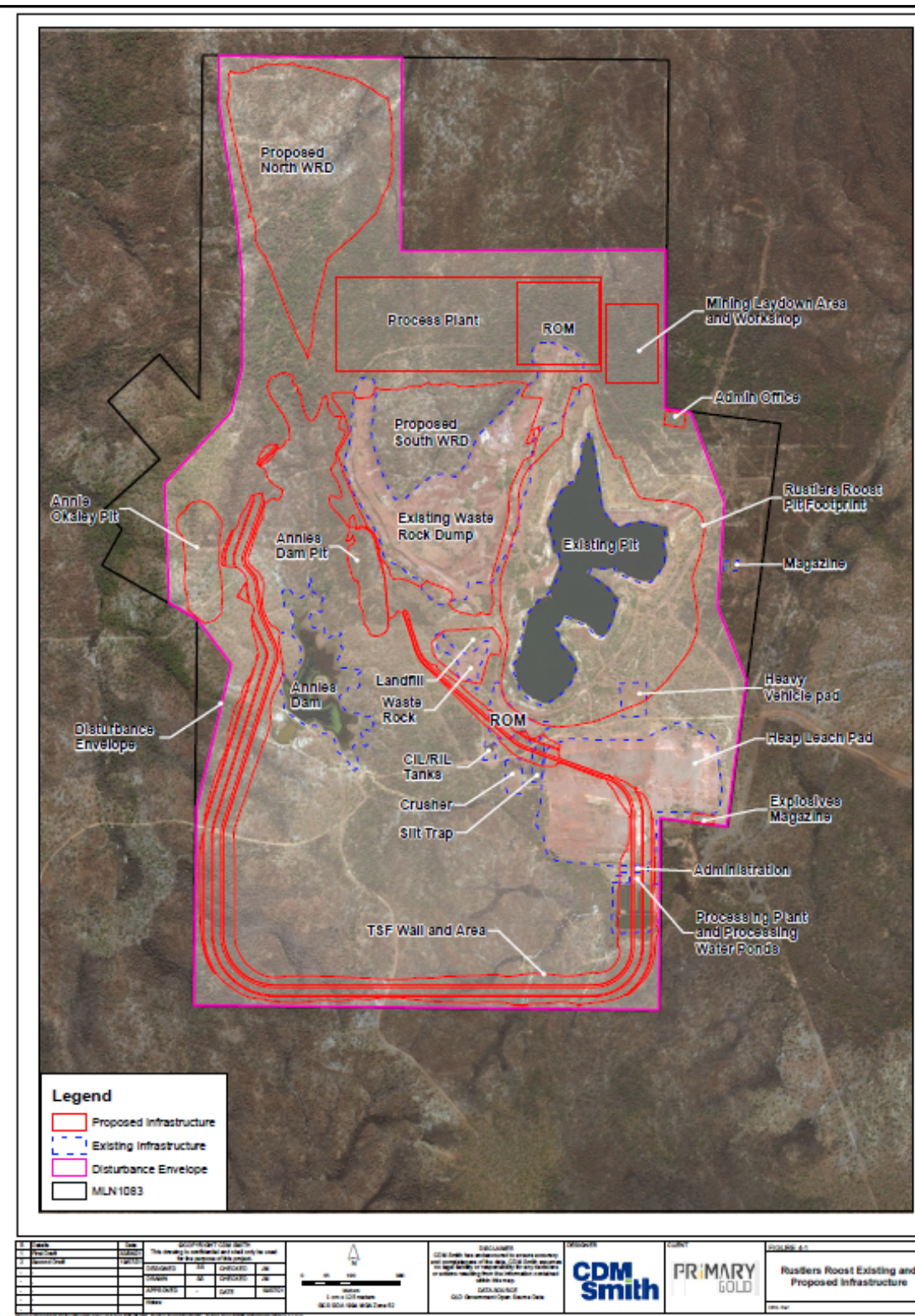
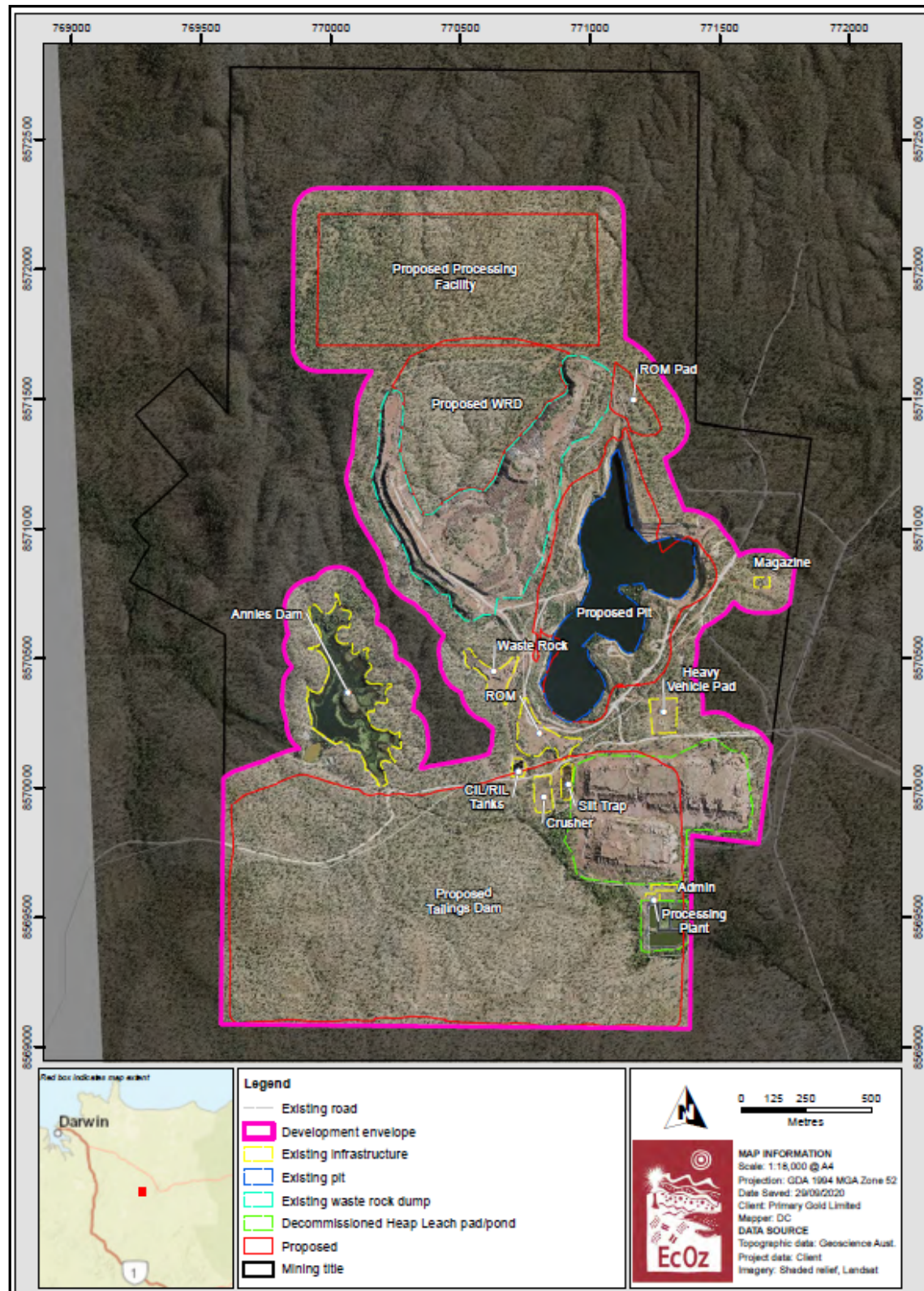
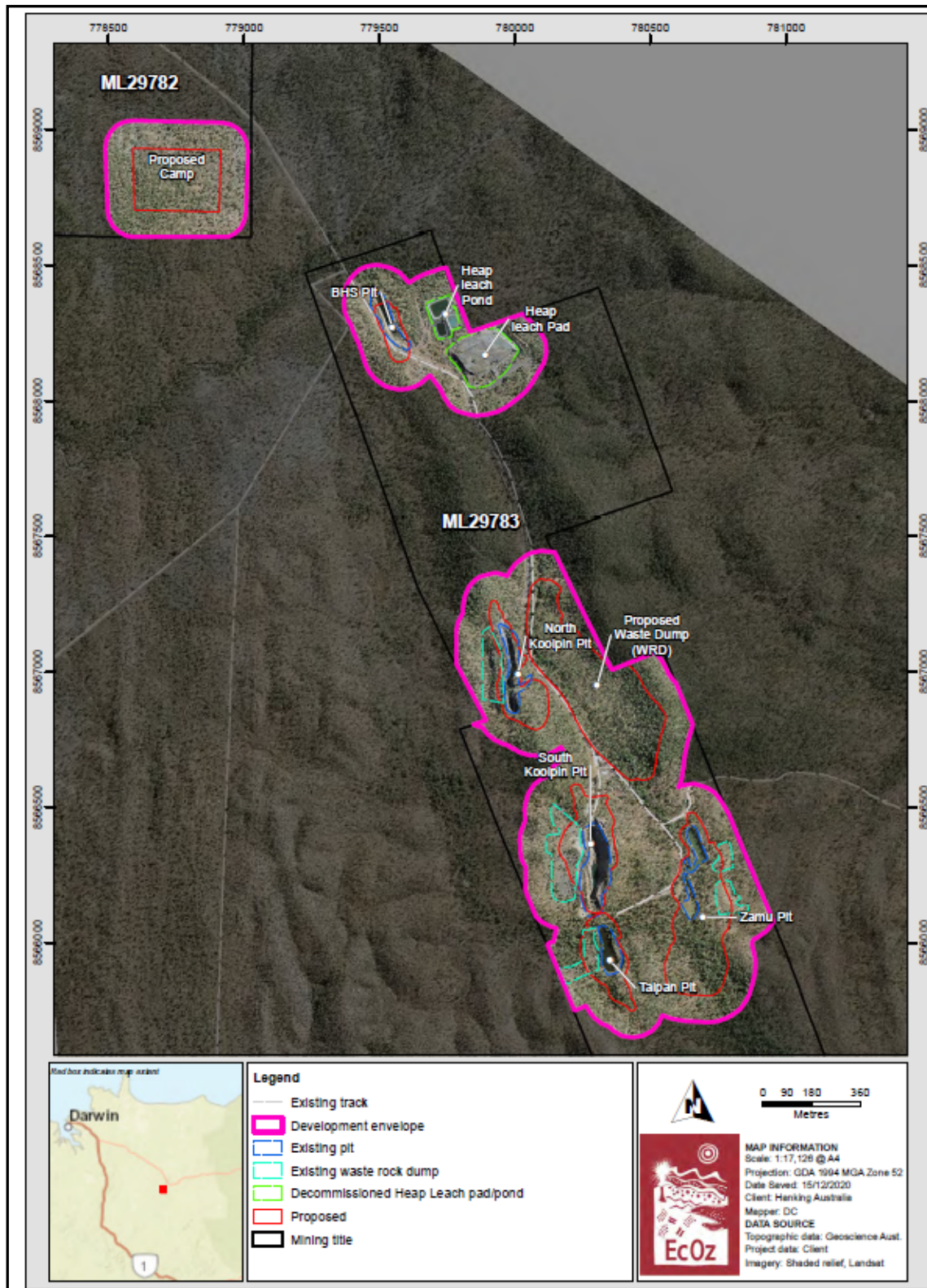
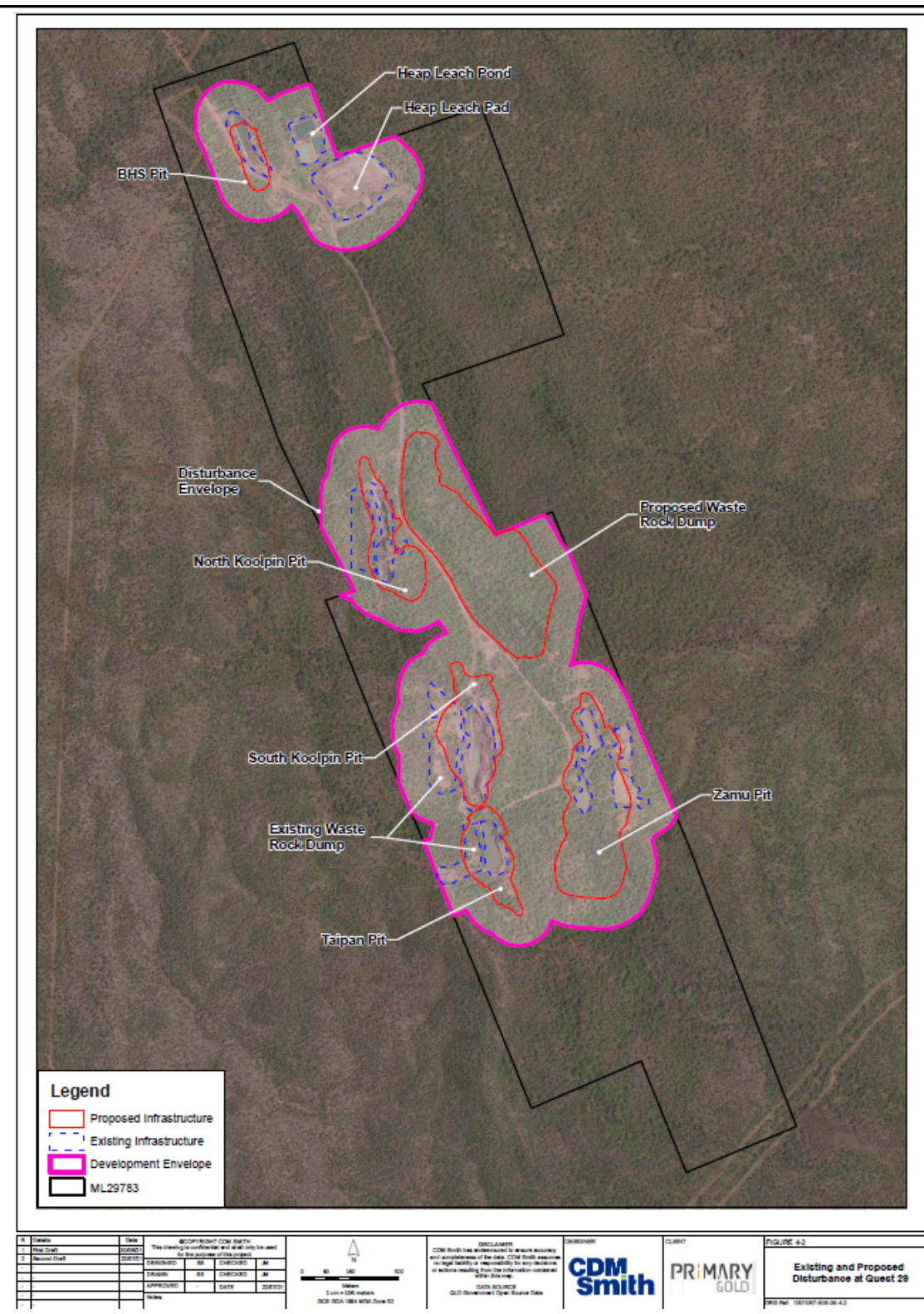


Figure 2 Rustlers Roost Referral and EIS Project Layout Comparison

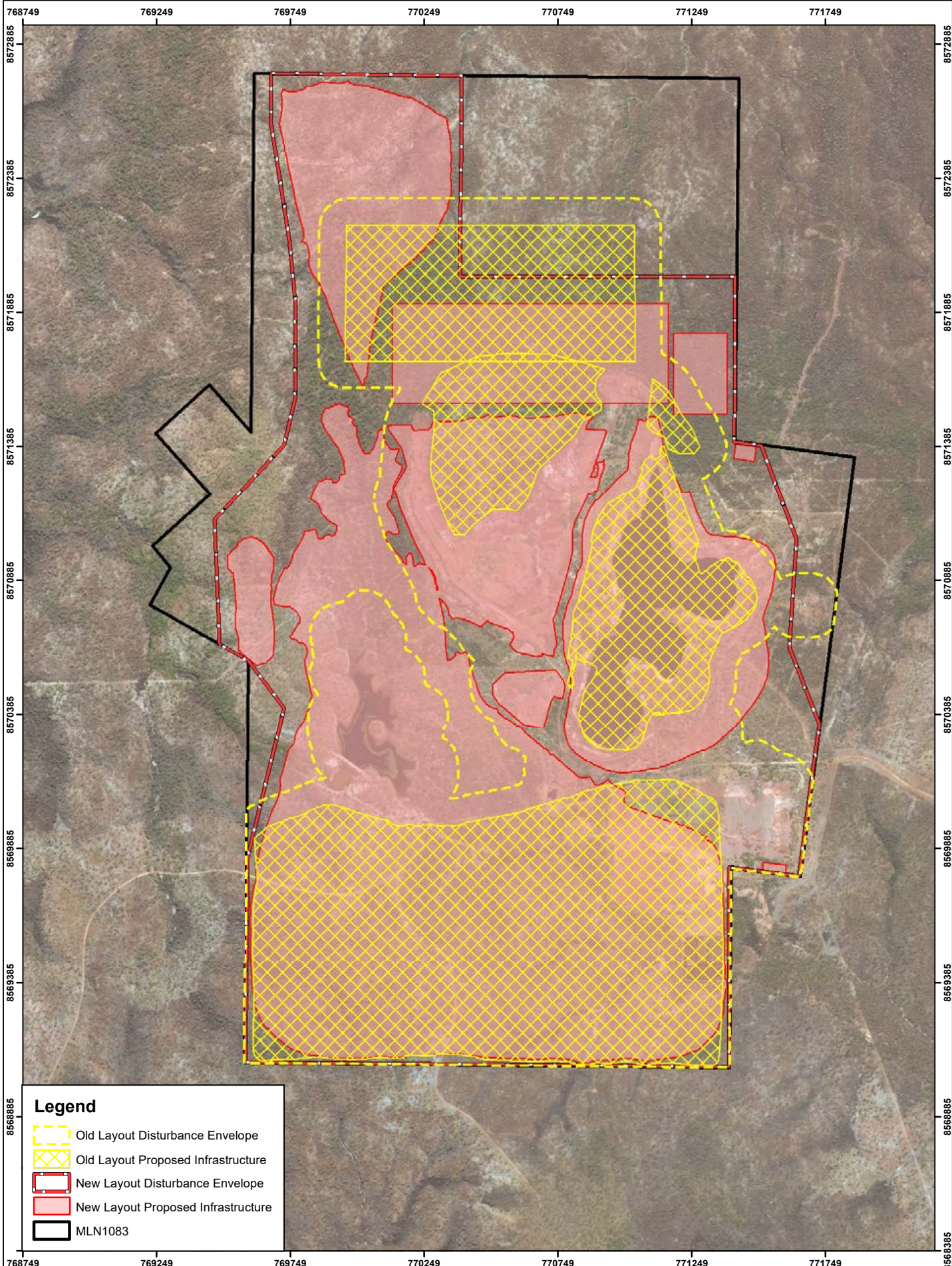


Referral Project Layout



EIS Project Layout

Figure 3 Quest 29 Referral and EIS Project Layout Comparison



Legend

- Old Layout Disturbance Envelope
- Old Layout Proposed Infrastructure
- New Layout Disturbance Envelope
- New Layout Proposed Infrastructure
- MLN1083

R	Details	Date	©COPYRIGHT CDM SMITH			
1	First Draft	30/06/21	This drawing is confidential and shall only be used for the purpose of this project.			
2	Final	21/07/21	DESIGNED	SS	CHECKED	JM
			DRAWN	SS	CHECKED	JM
			APPROVED	TK	DATE	21/07/21
Notes:						

0 100 200 400
 Meters
 1 cm = 125 meters
 GCS GDA 1994 MGA Zone 52

DISCLAIMER
 CDM Smith has endeavoured to ensure accuracy and completeness of the data. CDM Smith assumes no legal liability or responsibility for any decisions or actions resulting from the information contained within this map.

DATA SOURCE
 QLD Government Open Source Data



FIGURE 4

Rustlers Roost Referral and EIS Disturbance Envelope and Infrastructure Overlaid

DRG Ref: 1001087-SIGVAR-0-4

Conclusion

Primary Gold have included two new infrastructure components (landfill and laydown) and amended the spatial extent of six existing Project components with resultant changes to the quantity of overburden produced, tailings storage volume, LOM (from 7 to 10 years) and volume of water required for the operation. With exception of a minor alteration to the haul road (inclusion of a new bridge at Mount Bunday Creek) and relocation of the accommodation north to ML29782, all Project changes are limited to the Rustlers Roost site and are largely within the development envelope identified in the original referral. The change in the overall Project disturbance envelope represent a 23% increase from the referral and processing throughput is proposed to increase from 3 Mtpa to 5 Mtpa. Any increase in processing throughput would result in a reduction of waste ore and increase in TSF storage material. The changes reflect refinements of the Project definition and layout that have been progressed by PGO since the referral, which is typical for Project definition being refined through the environmental impact assessment process.

As identified in the Project Notice of Decision and Statement of Reasons (11 May 2021), the NT EPA considers that the proposed action has the potential to have a significant impact on the environment, including six of the NT EPA's environmental factors, due to the scale and extent of the proposed action, the nature of the environmental stressors potentially arising from the proposed action, and the environmental values that may be present within the area of influence of the proposed action.

The scope of the technical studies being progressed, as per the TOR, accommodates the proposed changes. Therefore, the impacts and risks to be assessed and presented in the draft EIS, will reflect the 'outer envelope' of the Project profile, which PGO considers to be a better approach than not providing a holistic impact evaluation. PGO is confident in addressing the Project changes, consistent with the scope and content expectations of the TOR as endorsed by the NT EPA.

The TOR has the requirement to describe *"any variations or modifications to the proposal since the referral information was submitted"* (TOR, Section 2.2.1). This will be carried through into the draft EIS, consistent with the TOR. Furthermore, PGO is committed to communicating these Project changes and refinements transparently through the consultation process that is currently underway for the draft EIS.

PGO expect the proposed changes are unlikely to result in significant additional impacts to new environmental factors, and that the existing TOR sufficiently captures the relevant environmental factors. The same six environmental factors, as defined in the TOR and reflected in the NT EPA's Statement of Reasons, remain relevant for the Project context, and no new environmental factors are identified to be influenced by the Project changes.

cc: Mark Qiu (Primary Gold)



Appendix A – Significant Variation Checklist

APPENDIX B: Checklist

TABLE 1: ENVIRONMENTAL FACTORS, OBJECTIVES AND INDICATIVE ENVIRONMENTAL VALUES AND SENSITIVITIES POTENTIALLY RELEVANT TO THE PROPOSED SIGNIFICANT VARIATION

Theme	Environmental factor and objective	Indicative environment values and sensitivities	Does your significant variation have the potential to significantly impact on environmental values or sensitivities?
LAND	<p>1) Landforms</p> <p><u>Objective:</u> Conserve the variety and integrity of distinctive physical landforms so that environmental values are protected.</p>	<ul style="list-style-type: none"> • distinctive features in the landscape, either geological or anthropogenic • subterranean karstic terrain and faults • craters, gorges, ranges, caves, massifs, escarpments, plateaus • monuments • culturally important features • tourism related to landforms 	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Uncertain</p> <p><input type="checkbox"/> Not Applicable</p>
	<p>2) Terrestrial environmental quality</p> <p><u>Objective:</u> Protect the quality and integrity of land and soils so that environmental values are supported and maintained</p>	<ul style="list-style-type: none"> • characteristics of soils, including chemical, physical, biological and aesthetic qualities 	<p><input type="checkbox"/> Yes</p> <p><input checked="" type="checkbox"/> No</p> <p><input type="checkbox"/> Uncertain</p> <p><input type="checkbox"/> Not Applicable</p>
	<p>3) Terrestrial ecosystems</p> <p><u>Objective:</u> Protect the NT's flora and fauna so that environmental values including biological diversity and ecological integrity are maintained.</p>	<ul style="list-style-type: none"> • 'sensitive or significant' vegetation • vegetation that provides an important ecological function • listed threatened species and their habitat (NT and Commonwealth) • listed migratory species and their habitat (Commonwealth) • locally endemic species or species with restricted habitat • 'iconic' or culturally important animals, plants and vegetation 	<p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p><input checked="" type="checkbox"/> Uncertain</p> <p><input type="checkbox"/> Not Applicable</p>

Theme	Environmental factor and objective	Indicative environment values and sensitivities	Does your significant variation have the potential to significantly impact on environmental values or sensitivities?
WATER	1) Hydrological processes <u>Objective:</u> Protect the hydrological regimes of groundwater and surface water so that environmental values are maintained.	<ul style="list-style-type: none"> • the supply and quantity of water in surface water features including rivers, lakes, wetlands, swamps, creeks, billabongs, intermittent streams, floodplains, mangroves and drainage lines • the supply and quantity of water in groundwater features including aquifers, aquitards and water tables • declared beneficial uses • present and future uses, and users of water • current or potential water supplies, including regional scale aquifers • culturally important water features 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/> Not Applicable
	2) Inland water environmental quality <u>Objective:</u> Protect the quality of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.	<ul style="list-style-type: none"> • the quality of water in surface water features including rivers, lakes, wetlands, swamps, creeks, billabongs, intermittent streams, floodplains, mangroves and drainage lines • the quality of water in groundwater features including aquifers and water tables • declared beneficial uses • present and future uses and users of water • current or potential water supplies, including regional scale aquifers • culturally important water features • RAMSAR wetlands 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/> Not Applicable
	3) Aquatic ecosystems <u>Objective:</u> Protect aquatic habitats and flora and fauna to maintain environmental values including biological diversity of flora and fauna and the ecological functions they perform.	<ul style="list-style-type: none"> • the health of the biota in inland waterways • the habitats that support the lifecycle of aquatic biota • groundwater dependent ecosystems 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/> Not Applicable

Theme	Environmental factor and objective	Indicative environment values and sensitivities	Does your significant variation have the potential to significantly impact on environmental values or sensitivities?
SEA	1) Coastal processes <u>Objective:</u> Protect the geophysical and hydrological processes that shape coastal morphology so that the environmental values of the coast are maintained.	<ul style="list-style-type: none"> • processes that support coastal benthic communities and habitats such as coral reefs, mangroves, salt marshes, seagrass meadows and sponge gardens • conservation significant low lying areas including tidal creeks, deltas and river mouths • unique coastal landforms • significant cultural and aesthetic values • active or passive recreation 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input checked="" type="checkbox"/> Not Applicable
	2) Marine Environmental Quality <u>Objective:</u> Protect the quality and productivity of water, sediment and biota so that environmental values are maintained.	<ul style="list-style-type: none"> • quality of the water, sediment and biota • ecosystem health condition • fishing and aquaculture • recreation and aesthetics • industrial water supply • cultural and spiritual values 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input checked="" type="checkbox"/> Not Applicable
	3) Marine ecosystems <u>Objective:</u> Protect marine habitats and flora and fauna so that biological and functional diversity and ecological integrity are maintained.	<ul style="list-style-type: none"> • conservation significant marine and coastal fauna and critical habitat such as nesting, breeding or foraging habitat • conservation significant marine and coastal flora and vegetation • groups of species (species richness and assemblages of species) • ecological functions and processes • species of social, cultural and/or economic significance. • integrity of marine ecosystems and the ecological services they supply • biological diversity • functional diversity • provision of refuge • food supply 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input checked="" type="checkbox"/> Not Applicable

Theme	Environmental factor and objective	Indicative environment values and sensitivities	Does your significant variation have the potential to significantly impact on environmental values or sensitivities?
AIR	1) Air quality <u>Objective:</u> Protect air quality and minimise emissions and their impact so that environmental values are maintained.	<ul style="list-style-type: none"> the chemical, physical and biological characteristics of air the biological processes that depend on the air quality 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/> Not Applicable
	2) Atmospheric processes <u>Objective:</u> Minimise greenhouse gas emissions so as to contribute to the NT Government's aspirational target of achieving net zero greenhouse gas emissions by 2050, and adapt to a changing climate to protect ecological integrity and maintain the welfare and amenity of people.	<ul style="list-style-type: none"> A contribution to the NT's greenhouse gas emissions Adaptation to a changing climate 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/> Not Applicable
PEOPLE	1) Society and economy <u>Objective:</u> Maintain or enhance the social and economic values for current and future generations of Territorians.	<ul style="list-style-type: none"> communities, towns, private properties and dwellings where people reside aesthetics and recreation resources including water supply and food sources jobs and businesses agriculture, fisheries and industry 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/> Not Applicable
	2) Culture and heritage <u>Objective:</u> Protect the rich cultural and heritage values of the Northern Territory. <ul style="list-style-type: none"> cultural heritage items and places sacred sites 	<ul style="list-style-type: none"> bush foods totemic flora and fauna important or significant country 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/> Not Applicable

Theme	Environmental factor and objective	Indicative environment values and sensitivities	Does your significant variation have the potential to significantly impact on environmental values or sensitivities?
	3) Human health <u>Objective:</u> Ensure that the risks to human health are identified, understood and adequately avoided and/or mitigated	<ul style="list-style-type: none"> • drinking water • recreational water • air quality • bush tucker • radiological limits 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/> Not Applicable

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