14 December 2018

Attn: Ms Janice van Reyk
Delegated Member
Northern Territory Environment Protection Authority
PO Box 3675
DARWIN NT 0801

Primary Gold Limited – Environment Impact Statement (EIS), 14A Amendment to the Toms Gully Underground Project Site - Modifications Reflective of Placing New Waste Rock and, Existing and New Tailings in the Pit

Dear Ms van Reyk,

I would like to take the opportunity to thank the NT Environmental Protection Authority (NT EPA) board members and staff for their time to discuss the changes to the Toms Gully Underground Project on the 28 November and 6 December 2018. Following their advice, this submission has been prepared to provide a notification of alterations to the Toms Gully Underground Project, for consideration by the NT EPA under clause 14A of the Environmental Assessment Administrative Procedures.

This document precedes the lodgement of an "Addendum to the Supplement" to the EIS detailing changes made to the proposal. These changes are a function of comments received from the NT EPA and other regulatory agencies after assessing the EIS Supplement and a subsequent site visit by the NT EPA board members to the Toms Gully site. Included are changes to the proposed infrastructure, activities associated with the management of tailings and waste rock produced during operations. It is anticipated that during operations and closure the changes will better;

- meet stakeholder expectations on mineral waste management,
- produce better environmental outcomes in respect to acid mine drainage, water and closure, and
- further align to the Environmental Factors and Objectives developed by the NT EPA.

1. *The Alterations and Changes from the EIS Supplement and this Section 14A for the Toms Gully Underground Project*

Details of the existing proposal can be located in the previous Draft EIS (dated 21 September 2018), Section 14A (dated 8 June 2018) and EIS Supplement (dated July 2018). This section will be limited to a discussion and comparison of the intended alterations. The proposed changes to the footprint of Toms Gully Underground Project are outlined in Figure 1 (EIS Supplement layout) and Figure 2 (revised layout).

The proposed alterations can be summarised as follows:

1. Construction of a Boxcut (two hectare in area) and associated decline to access the Toms Gully ore body further down trend/dip. A Boxcut removes the requirement to enter the ore body via the existing Toms Gully open cut pit and underground workings.

2. Leave a 100 metre rock barrier pillar (i.e. Exclusion Zone) between the old underground workings and the proposed underground working.
3. Placement of all existing and future tailings into the Toms Gully pit under the existing pit water level (i.e. under a water blanket) using a floating head system. The system is proposed to discharge the tailings deeper in the water profile to avoid oxygenated water. Tailings will be placed in the pit whether processed or not.
4. Moving underground waste rock to surface during operations via the proposed decline and then positioning of that waste rock into the pit beneath the water. This process will occur within 48 hrs.
5. Full dewatering of the pit is no longer required reducing dewatering from 4.7 gigalitres to 1.7 gigalitres. The water treatment option remains the same with surface water, water within water holding facilities, dewatering and water displaced from the pit potentially being treated.
6. All current tailings within Tailings Storage Facility (TSF) 1 and 2 are placed in the pit removing the requirement to upgrade both facilities to ANCOLD 2012 guidelines and lining dependent on the nature of the tailings.
7. If demonstrated that TSF2 can meet ANCOLD 2012 guidelines and seepage can be managed. TSF2 repurposed to a water storage dam during operations. Ultimately TSF2 removed and area rehabilitated at closure
8. Remove the need for the proposed contingency TSF that covers a 9 hectare area as all tailings will be placed in the pit.
9. Treat pit water insitu by the addition of lime or caustic or Virtual Curtain to lower the pH and remove metals from the water column.
10. Continuously inject lime or caustic or Virtual Curtain into the tailings stream if tailings studies to “Addendum to the Supplement” determine the need for the addition buffering capacity into the tailings pile to prevent release of metals and metalloids.
11. If suitable, use the oxide waste rock from the Boxcut to cap the oxide and sulphide the waste rock dumps to reduce the ingress of water through the waste rock pile.
12. Retain the ability to reprocess existing tailings.

For completeness a background description is provided on the handling and, management/deposition of tailings and waste rock into the pit. As part of the revised proposal the intended closure strategy will reflect the tailings disposal and consultation with all relevant regulatory agencies.

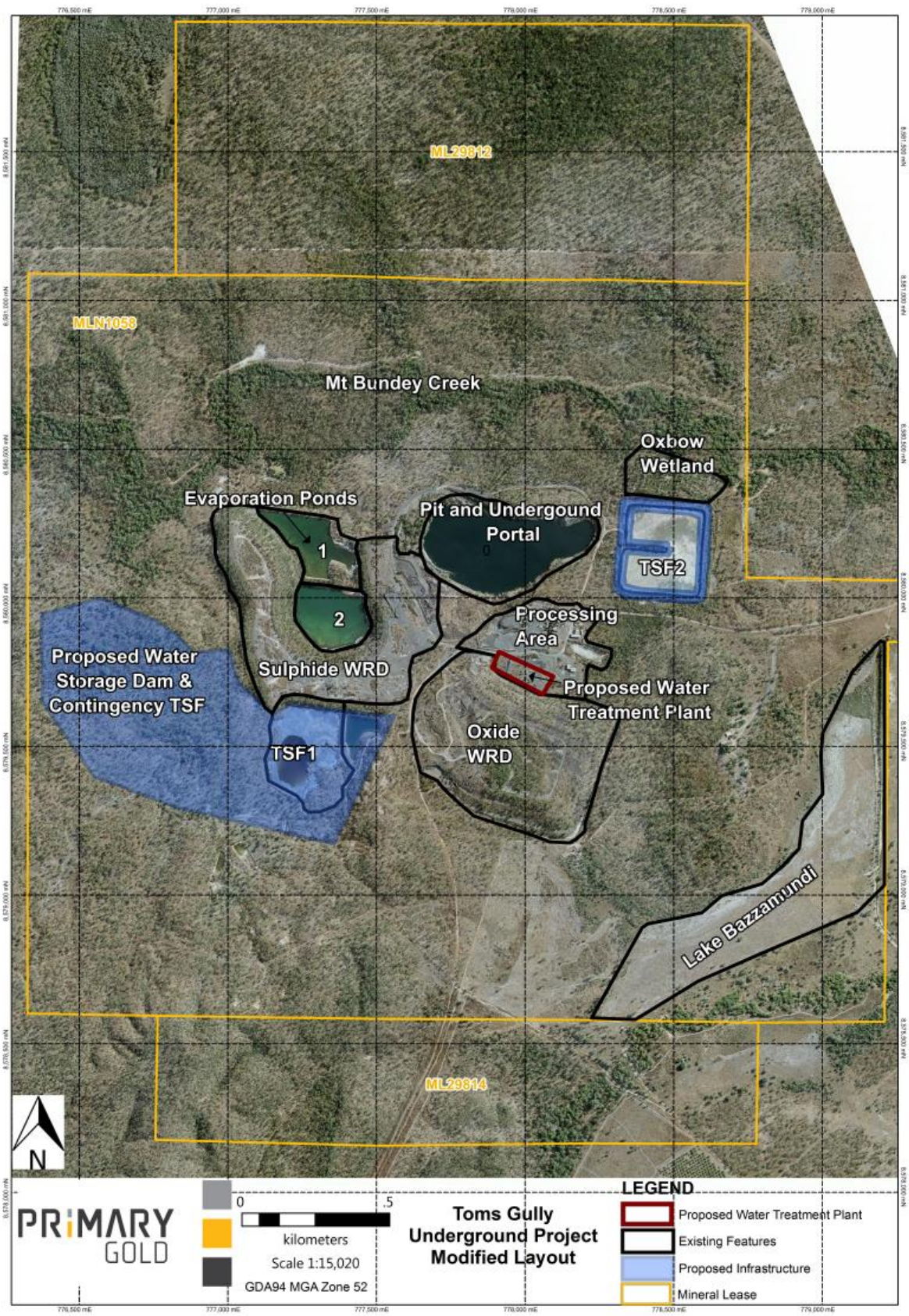

Figure 1: Previous Toms Gully Underground Project site layout (as submitted in the EIS Supplement)

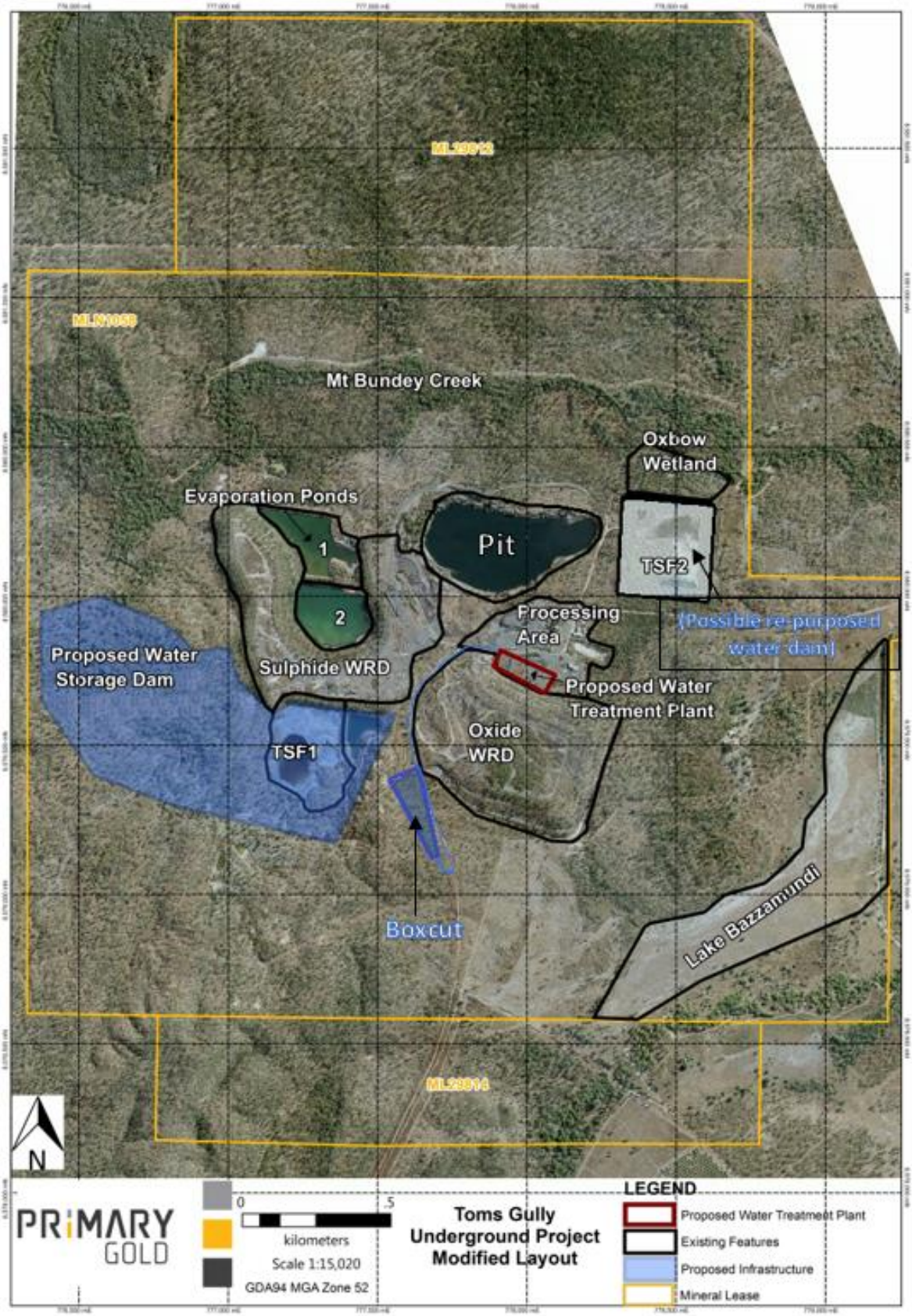

Figure 2: Modified Toms Gully Underground Project site layout (to be submitted as part of the EIS Addendum to the Supplement).

Mining entrance method changes

The entrance method for underground mining has been changed under this Section 14A. The reason for this entrance method change is to negate the dewatering of the pit, which would create a significant amount of water being discharged to the surrounding environment over a short period of time during the start up. Instead of dewatering the existing pit and reusing the existing decline, Primary proposes to create a new Boxcut and decline from the surface Figure 3. The Boxcut in addition to the removal of the Contingency TSF are the main changes caused by mining that effects the surface environment.

A new decline will allow for a reduction in linear metres (i.e. amount of material to be mined) in some of the ore level tunnels in the main working areas. This reduction is offset by material excavated from the new decline. This means there is an increase in waste mined from the underground. It is estimated underground waste is now 0.85Mt.

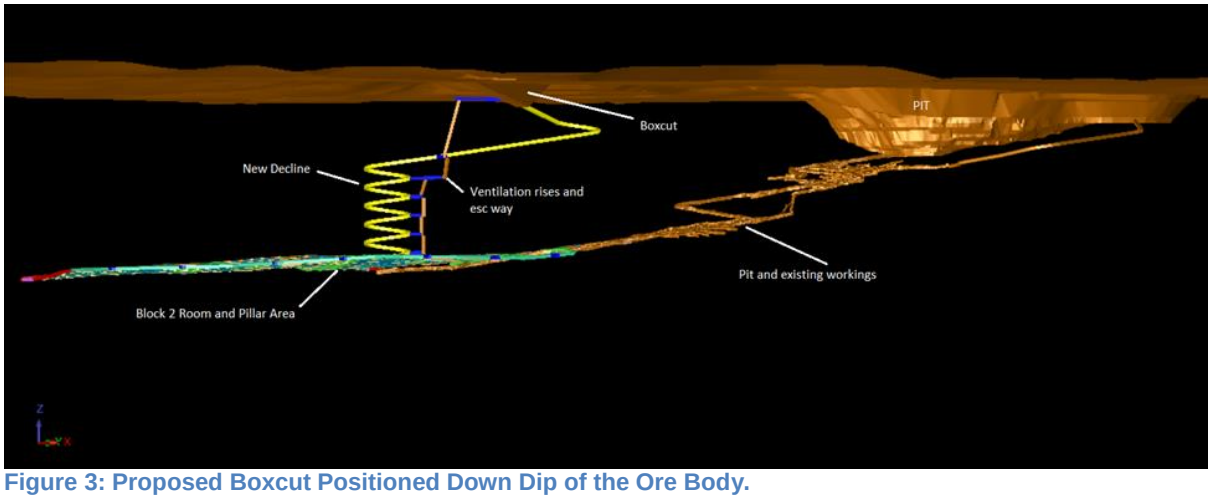

Figure 3: Proposed Boxcut Positioned Down Dip of the Ore Body.

To access the ore, a Boxcut is to be located south east of TSF1 in an area of disturbed ground Figure 2. The portal and decline are located west of the near vertical fault called the "Crabb fault". Also the bottom of the Boxcut will be founded in fresh rock allowing the portal to be within stable ground conditions. Positioning of the decline negates having to transverse the fault, making development of the decline safer and easier. A 100 metre rock barrier pillar (i.e. Exclusion Zone) will be left (Figure 4). This rock barrier provides both horizontal and vertical separation between the two workings to allow the retention of pit water and positioning of the tailings and waste rock into the pit during operations.

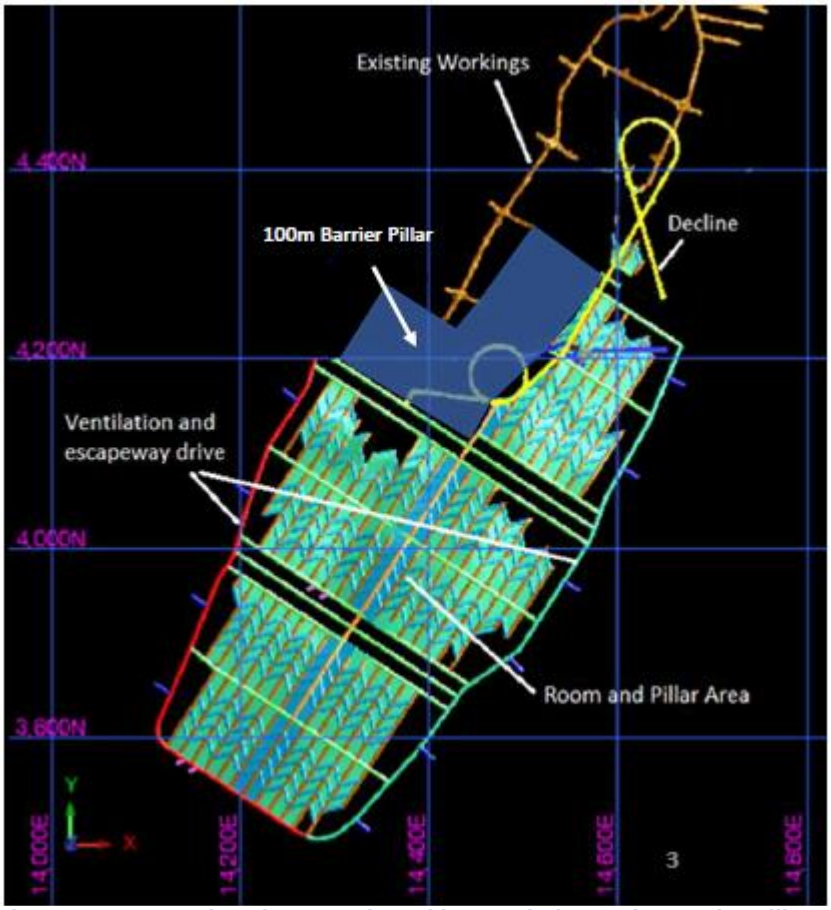

Figure 4: Proposed Underground Workings Relative to the Barrier Pillar.

At this point excavated material from the Boxcut is considered to be waste that needs to be placed into the pit unless testing determines the material is non-acid forming. If non-acid forming and suitable, the material will be used to cap the top surface of the existing waste rock dumps to limit the ingress of water through the waste rock pile. The Boxcut material now increases the total waste to 1.51Mt, comprising 0.66Mt of Boxcut waste and 0.85Mt of underground waste.

Method for disposing waste and tailings into Toms Gully Pit

In total 1.51Mt of new waste rock is produced assuming the Boxcut material is unsuitable for rehabilitation. Additionally, a total of 0.9Mt of new tailings will be produced with 0.38Mt currently on site. An assessment of the Toms Gully Pit volume against the combined tonnage of tailings and waste rock of 2.79Mt has demonstrated that all the tailings (both existing and new) and generated waste rock can be contained in the existing pit. Nominally requiring 42% of the measured pit capacity.

If all material is deposited into the pit the nominal level the pit is filled to is -10AHD or 990mRL. This is nominally 30m to 40m below the surface topography and 25m below the current water level.

When looking at the pit profile, the top levels of the pit have shallow pit wall slopes thus direct tipping of waste rock over the side of the pit will only be successful in limited sections of the pit. This is a function of the tipped material not being able to slide down the walls for the majority of the pit due to the flatness of the top section of the walls.

Primary propose to use a hopper and conveyer system (“Stacker”) to drop waste rock approximately 60m from the pit edge towards the middle of the pit. The waste will fall through the water column and hit the wall where the pit slopes are steepest allowing the waste to slide to the bottom of the pit. The stacker is a mobile conveyer that is available with telescopic versions that can reach distances of 60m. Figure 5 and 6 below show the waste tipping method of a Stacker and final position of backfill material.

The Stacker is capable of moving 725tph or 240m3 per hour. During operations a daily average of 600 tonnes will require placement that can be easily achieved based on the known operational performance discussed earlier. The Stacker will be placed at the edge of the pit, so it can transport waste towards the internal sections of the pit.

Figure 5: Example of Telescoping Stacker

The mode of operation is to truck the waste to the Stacker over a 24 hour period. Waste is loaded daily into the Stacker hopper and the waste is transported to end of the Stacker conveyor belt and dropped into the pit at a distance of 60m from the pit perimeter. Due to the forward velocity of the material as it leaves the conveyor belt there will be an additional distance beyond the length of the conveyor that waste rock is thrown (estimated at least 5m). Through this process waste rock will be in the pit within 48 hours.

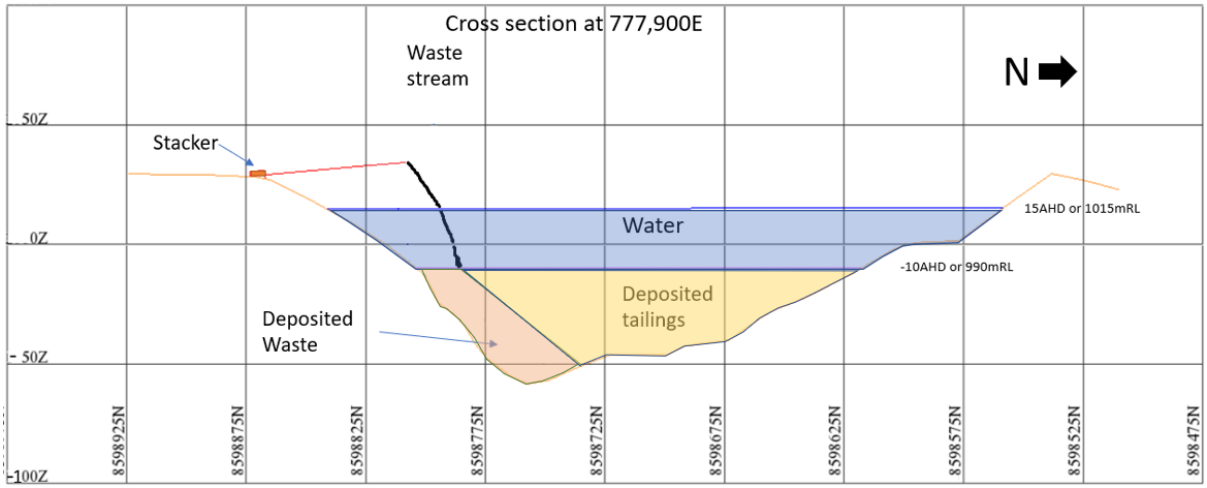

Figure 6: Cross Section Illustrating the Indicative Positioning of the Waste Rock and Tailings in the Pit.

Tailings will be deposited into the pit by using of a pipeline and floating head. The floating head will be able to be moved on the water surface of the flooded pit to deposit tailings sub-aqueously to reduce oxidation and evenly to create a flat surface as they are deposited.

To better understand the changes between the Draft EIS (and EIS Supplement) and this Section 14A (and subsequent "Amendment to the Supplement") Table 1 provides a comparison. The comparison presents information associated with the altered activities, infrastructure and compares it to previous details that were compiled from the Draft EIS, previous Section 14A and EIS Supplement.

Table 1: Toms Gully Underground Project Comparison of Proposed Alterations Against Previous Documentation (documentation based on Section 14A dated June 2018 and the Supplement dated August 2018).

	Component	Size/capacity	Changes	Ultimate size/capacity
Whole of Proposal	Total area of mineral lease or development area – MLN1058	682 ha	No change	682 ha
	Life of mine	5 years	An additional year for treatment of old tailings	5 years
	Operational workforce (local residents)	104 workers	No change	104 workers
	Closure period	10 years	No change	10 years
Mining	Ore to be extracted	0.9 Mt	No change	0.9 Mt
	Waste rock to be extracted	0.8 Mt	An additional 50kt from the new decline	0.85Mt
	Waste rock removed from the boxcut	0.66 Mt	Activity added	0.66Mt
Processing	Existing Carbon In Leach (CIL) plant – to be renovated		No change	
	Gold to be extracted	315,000 oz	No change	315 000 oz
	TSF1 material – Likely to be reprocessed	~196 500 t	To be reprocessed then disposed into the Pit. If not reprocessed will be placed in Pit	250 000t
	TSF2 material – Likely to be reprocessed	~135 000 t	To be reprocessed then disposed into the Pit. If not reprocessed will be placed in Pit	125 000t
	Tailings to be generated	0.9 Mt	New and reprocessed tailings, 0.9 Mt plus 0.38 Mt. Placed in pit with lime/caustic/virtual curtain dosing if required to stable and prevent acid generating potential.	1.28 Mt
Existing components	Total area of existing disturbance	120 ha	No change	120 Ha
	To be repurposed			
	Open pit – Contains access to the underground workings that will be reopened Waste rock to be stored at western side	9 ha 88 m deep	No workings in the pit to be reopened Entire base of pit will be filled with waste rock and all tailings proposed and existing. Material covered by water blanket.	9 ha 52 m deep No reopening, filling with waste rock and tailings that reduces depth
	TSF1: Option 1 – upgrade to ANCOLD and reuse Option 2 – empty structure rehabilitated OR if material not reprocessed: encapsulated in situ	10 ha (includes decant pond)	Tailings removed, and empty structure rehabilitated for use to manage surface runoff from the sulfide waste rock dump. At closure used as a sediment and water capture area.	10 ha
	TSF2: Option 1 – upgrade to ANCOLD (with an embankment lift) and reuse Option 2 – capped in situ	9 ha Existing capacity 350 000 t	Tailings removed, and structure used as a water storage facility during operations. At closure emptied structure levelled and rehabilitated.	9 ha
	Water ponds / evaporation dams – to be treated & emptied initially, then used for water storage	14 ha	No change	14 ha
	Processing area (CIL) and RoM pad – to be reused	10 ha	No change	10 ha
	Drill pads and sumps	2 ha	No change	2 ha
	Tracks/roads	2 ha	No change	2 ha
	Offices and workshop - re-used and upgraded		No change	
	Production and monitoring bores – if practicable refurbish and reuse. If unable to reuse redrill. In addition for monitoring add bores as recommended by GHD to expand network.		No change	
	Components not for further use			
	Oxide waste rock dump (OWRD)	25 ha 3.97 million m^3	No change	25 ha 3.97 million m^3
	Sulfide waste rock dump (SWRD)	29 ha 3.27 million m^3	No change	29 ha 3.27 million m^3

	Component	Size/capacity	Changes	Ultimate size/capacity
Proposed new Infrastructure	Total potential maximum disturbance	83 ha	Add Boxcut area (2 hectares) and subtract Contingency TSF (9 hectares)	76 ha
	Water storage dam (for treated water)	16 ha, 1 GL	No change	16 ha, 1 GL
	Boxcut	2 ha	40m deep Boxcut for locating start of decline in hard rock	2 ha
	Contingency TSF – only if using Option 2 Built to ANCOLD guidelines; lined if required	9 ha	Contingency TSF removed. All tailings to be put in pit	0 ha
	Borrow pits and associated access tracks Required for dam embankments	58 ha	No change	58 ha
Water management	Existing onsite poor quality water (pit + underground + ponds/dams) to be treated and discharged to Mount Bundey Creek	Total: 4.7 GL	Only the displaced pit water due to deposited tailings and underground waste will be treated and pumped to Mt Bundey creek and other third parties over 59 months. The remaining water in the pit will be treated with virtual curtain or lime or caustic soda to neutralise acidity.	1.7 GL to creek and other parties. 3 GL remains in pit.
	Treatment process – treat to SSTVs	BioAqua	No change	BioAqua
	Annual operational water discharge to Lake Bazzamundi (treated if in situ monitoring determines that water quality does not meet SSTVs)	~1.1 GL	Water discharge to either Lake Bazzamundi or Mt Bundey or third party for use.	~1.1 GL
	Two future waste discharge licence (WDL) compliance points proposed to be at the eastern lease boundary	DP1 – Mount Bundey Creek DP2 – Lake Bazzamundi	No change	DP1 – Mount Bundey Creek DP2 – Lake Bazzamundi

2. Changes to the Potential Environmental Impacts as a Result of the Project Alterations

To understand the potential impacts associated with the proposed alterations, the changes need to be considered in the context of a source – pathway – receptor model for the site. The following sections illustrate alignment with ecological sustainable development and the NT EPA's environmental factors and objectives. Potential impacts will be discussed in the context of the environmental factors of *Terrestrial Flora and Fauna, Terrestrial Environmental Quality, Aquatic Ecosystems, Inland Water Environmental Quality, Hydrological Processes, Air Quality and Greenhouse Gases* and, *Social Economic and Cultural Surroundings* Table 2 provides a summary of the changes to the environmental outcomes as a result of the proposed changes.

Terrestrial Flora and Fauna

Objective: Protect the NT's flora and fauna so that biological diversity and ecological integrity are maintained.

By removing the Contingency TSF and only adding the proposed boxcut nestled between TSF1 and the oxide waste rock dump the overall vegetation clearing has been reduced by seven hectares and potential habitat fragmentation by the previous footprint has been reduced. Due to the project's proximity to the Mary River National Park that supports a diverse range of birdlife by removing the contingency TSF a reduction in the surface water expression (i.e. reduced water bodies) has the potential to reduce the amount of wildlife attracted to the site. While placing tailings in the pit also aligns to the intended commitment to where practicable minimize the size of the active supernatant water ponds as only one tailings disposal area is operated thus reducing the water area available to birdlife.

Placement of all the tailings (including existing tailings if reprocessed or not) and future underground waste rock in the pit beneath a 25 metre water blanket reduces the surface sources and acid generating profile across the site. If required the addition of lime/caustic and virtual curtain in the tailings profile also aids by providing a buffering capacity into the profile if oxidation was to occur due to the ingress of oxygen. By reducing the acid generating at surface, using water treatment, and buffering as required the tailings profile that also contains the co-blended waste rock the risk and potential impact from acid water on site to flora and fauna is downgraded.

Terrestrial Environmental Quality

Objective: Maintain the quality of land and soils so that environmental values are protected.

The effect of reducing the proposed vegetation clearing leads to less disturbed soils and potential impact of water and wind erosion on those exposed areas. Removal of all tailings from surface and placement of future tailings into the pit eliminates the requirement to repurpose or source suitable capping material from the site that would require further land disturbance at closure. Less disturbance across the site reduces land degradation or disturbance to the geomorphological profile and processes across the site. Additionally, consolidation and containment of tailings deep in the pit removes the landforms associated with TSF2 and contingency tailings storage facility. The removal of these structures eliminates the risk associated with making each structure compatible with the surrounding environs and land use, geotechnically stable, non-polluting and reduces potential liabilities to the Northern Territory.

Aquatic Ecosystems

Objective: Protect aquatic ecosystems to maintain the biological diversity of flora and fauna and ecological functions they perform.

By reducing the Toms Gully pit dewatering by 3 gigalitres, spreading the treatment of the remaining 1.7 gigalitres of water over the life of the project and treating the pit water insitu the required scalability of the water treatment plant is reduced. Additionally, with less water discharged over the period impacts on the flow regimes and potential stress on the aquatic ecosystem is reduced. Concentrated point sources of acid mine drainage contamination associated with tailings at TSF1 and TSF2 will be removed and contained below ground and sub-aqueously only leaving the oxide and sulfide waste rock dumps as potential sources of oxidising sulfides at surface. Additionally, during operations the reduction in active tailings storage facilities reduces the build of water at different locations thereby reducing the number of potential pathways that can move contaminants. Less disturbance as discussed in the section titled “Terrestrial Flora and Fauna” causes a decrease in localised sources of sediment erosion therefore creating less suspected sediment in water moving across the site.

Inland Water Environmental Quality

Objective: Maintain the quality of groundwater and surface water so that environmental values including ecological health, land uses, and welfare and amenity of people are protected.

In removing the requirement to dewater the existing pit and use the void for tailings and waste rock disposal the volume of water to be discharged to Mount Bundey Creek or transferred to a third party is reduced. Having to treat less water during start up and operations helps to provide more flexibility and reduces the scalability required for the water treatment options. At the source sulfides in the pit walls are not exposed and waste rock exposure to oxidising processes is greatly reduced to the period taken to place the material in the bottom of the pit. The diminished interaction of waste rock and tailings with surface water leads to less mine affected water being generated across a number of sources requiring treatment and management.

In-situ pit water treatment will increase the pH and alkalinity resulting in the precipitation of metals and metalloids out of solution. Changes in water pH and metals in solution will reduce potential contaminated loading within the system that could interact with groundwater and/or surface water.

Hydrological Processes

Objective: Maintain the hydrological regimes of groundwater and surface water so that environmental values are protected.

In the EIS Supplement it was intended to fully dewater the Toms Gully pit and remediate the underground workings to gain access to the Toms Gully orebody. To achieve this it was estimated that a total of 4.7 gigalitres of water would need to be removed and treated before discharge to Mt Bundey Creek, transfer to a third party and/or use across the site. To achieve the dewatering of the pit and water treatment it was expected to take 200 days that would occur during the wet season and dry season. The amount of water to be disposed by either usage or discharge would be 272 litres per second. If all the water was only discharged to Mount Bundey Creek (assuming the Mount Bundey channel is 12 metres wide) the rate of discharge would fill the creek to an estimated 0.24m depth and flow at 0.09m/s assuming a uniform creek bed and a 1 in 500 slope. From these calculations it is

anticipated that the amount of water is likely to result in Mount Bundey Creek flowing during the dry season.

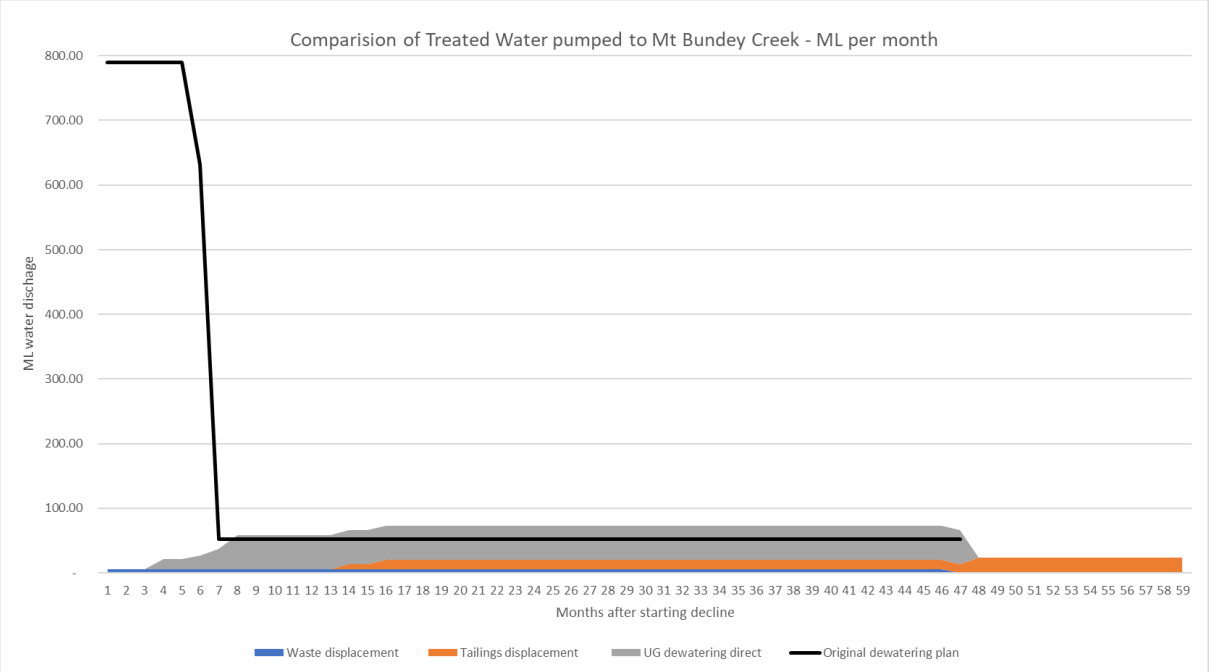

Figure 7: Comparison of Original Dewatering Volumes and Altered Dewatering Volumes.

Under the new proposal by placing tailings and waste rock in the pit beneath the water level only the displaced water would need to be removed and treated. Compared to original proposal, only 27.6 litres per second or 11 times less water would need to be disposed of by either usage or discharge. This maximum discharge is attained 16 months after underground development starts allowing for a stepped increase in treatment capacity compared to the rapid dewatering and discharge associated with the previous proposal. Figure 7 provides a comparison of the nominal discharge volumes. Note this figure provides a worst case scenario as it assumes all water goes to Mt Bundey Creek does not take into account water usage by the process plant or third parties. The greatly reduced discharge volumes result in a reduction the water depths and flow rates during the early part of operations in Mt Bundey Creek during both the wet and dry seasons

The proposal does not change the amount of dewatering required during operations. Figure 8 details the nominal volumes of the combined dewatering and water displacement that will require treatment and disposal. This figure provides a worst case scenario as it assumes all water goes to Mt Bundey Creek and does not take into account water usage by the process plant or third parties.

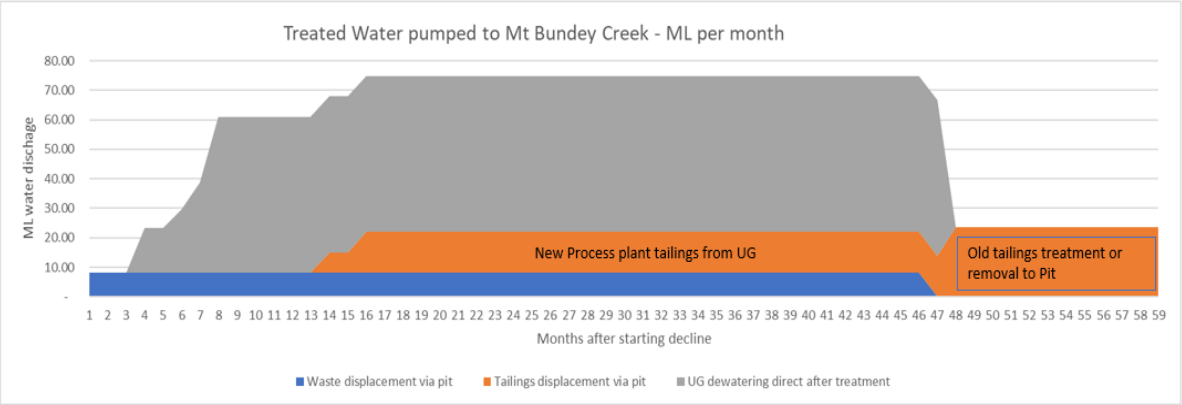

Figure 8: Nominal Water Volumes to be Treated during Operations.

Additionally, tailings and water management is simplified across the site with all existing and new tailings reporting to a single facility (the pit) compared to the previous proposed that was to have tailings potentially reporting to TSF1, TSF2 and a contingency TSF. A reduction in the number of above ground TSFs which reduces the hydraulic water head will lower potential seepage that could create groundwater mounding at various locations. By removing the contingency TSF no seepage and resultant groundwater mounding can occur at its intended location. While during operations the removal of tailings from TSF1 and TSF2 will reduce potential for poor quality seepage.

Air Quality and Greenhouse Gases

Objective: Maintain air quality and minimise emissions and their impact so that environmental values are protected.

By placing all existing and future tailings in the Toms Gully pit rather than within tailings storage facilities (i.e. TSF1, TSF2 or the contingency TSF) tailings will be contained in an aqueous environment. This removes the potential risk associated with tailings at the surface drying out when pan evaporation rates are highest. The reduction in surface moisture and particle cohesion can allow wind to detach tailings particles and lift these particles off the tailings surface leading to the generation of windblown tailings that can lower air quality and result in the deposition of the dust in the surrounding environs. Tailings permanently overlain by water removes the potential for windblown tailings and potential impacts to air quality.

Social Economic and Cultural Surroundings

Objective: Protect the rich social, economic, cultural, and heritage values of the Northern Territory.

The EIS Supplement proved greater certainty in respect to water treatment and discharge, however after further discussions with regulatory agencies and taking into account their expectations over the protection of environmental and cultural values of the Mary River National Park the altered proposal has targeted better alignment to regulator expectations. By treating water insitu (i.e. within the pit) and reducing the volumes of water to be treated externally of the pit lowers the risk associated with water treatment and increases the level of certainty to achieve the desired water quality parameters across the site, while reducing the volumes of water to be released to the surrounding environs thus affording greater protection to the Mary River National Park.

Removal of the contingency TSF and positioning of the proposed boxcut surrounded by the TSF1 and the oxide waste rock dump ensures the site footprint is reduced with less encroachment on the underlying pastoral lease. In regard to closure planning and associated

environmental liabilities the placement of future and current tailings within the pit lessens closure liabilities, by;

- removal of the contingency TSF from the proposal,
- removal of TSF2 at closure, and
- use of the emptied/modified TSF1 to manage surface water from the sulphide waste rock dump.

The above changes mean fewer point sources of acid mine drainage are present at closure.

Throughout the letter, details are presented on the proposed effects on environmental values and factors. Table 2 provides a summary of the environmental outcomes as a result of changes to infrastructure and onsite activities and, their relationship to the environmental factors, objectives and principles as defined by the NT EPA (NT EPA 2018)

Table 2: Summary of Environmental Outcomes

Theme	Factor	Environmental Outcomes from Proposed update to Toms Gully Project
Land	Terrestrial Flora and Fauna	• Reduce overall clearing by removing contingency tailings storage facility (TSF) and replacing with decline thus reducing habitat fragmentation. • Lessen surface water bodies available to fauna. • Further reduce acid mine drainage generation by placing all tailings and future waste rock under a water blanket.
	Terrestrial Environmental Quality	• Further reduction in the overall clearing footprint leading to less disturbed soils and erosion. • Consolidation of tailings into a single facility (i.e. in pit) enhancing post mining land use and management. • Removal and integration of future infrastructure into existing topography and geomorphology by placing within current disturbance. • Improve tailings containment leading to a reduction in the number of landforms at closure (i.e. TSF2 and contingency TSF removed).
Water	Aquatic Ecosystems	• Reduce the volume of controlled discharge/use of excess water. • Lock up contamination loads deep in the tailing profile within the pit. • Limit the potential surface sources of acid mine drainage. • Less disturbance decreases suspended sediment in water moving across the site.
	Inland Water Environmental Quality	• Enhanced and controlled discharge/use of water excess water. • Reduce the interaction of waste rock and tailings with surface water leading to less mine affected water. • Remove the potential for oxidation of sulfide minerals in the pit walls. • If suitable, potential use of Boxcut waste material to cap waste rock dumps to stop the ingress of water into acid generating waste improving onsite water. • Reduce the contaminant loading in the pit waters.
	Hydrological processes	• A reduction in the amount of water proposed to be release resulting in less impact on Mt Bundey Creek hydrology. • Less groundwater mounding beneath the existing TSFs resulting in less localised hydraulic head. • Sources of seepage reduced and removed during operations and closure (i.e. less TSFs)
Air	Air Quality and Greenhouse Gases	• Placement of tailings in an aqueous environment removes the potential for tailings dust and subsequent impact on air quality.
People and Communities	Social, Economic and Cultural Surroundings	• Reduced water discharge into the Mary River Catchment and potential impact. • Less encroachment of the mine site footprint on the underlying pastoral lease. • Better aligned to regulatory and community expectations for managing environmental liabilities.

3. *Conclusion of Project Certainty and Confidence in the Delivery of Environmental Outcomes*

Based on the above assessment against the environmental factors and objections it is considered that the altered proposal does not significantly increase the potential environmental impacts of the project. Project alterations where possible have been directed to address acid mine drainage at source or along pathways during both operations and closure. The changes will enhance the intended environmental outcomes and do not create a situation whereby the desired environmental outcomes are not attainable due to cumulative risks or an inability to manage the risks via appropriate management measures.

As discussed above the intended changes have occurred to align the project to comments and discusses emanating from the EIS Supplement review and EPA board members site visit. These changes are to diminish the level of uncertainty surrounding management and mitigation of the potentially significant environmental impacts associated with the previous proposal. The alterations above are intended to tighten the scope and simplify mineral waste management, whereby the best use of the current infrastructure has been adopted. A clear strategy for tailings management is being put forward allowing the removal of contingency options that were provided during the EIS Supplement. The use of the existing pit with a water cover for tailings disposal and treatment of the tailings with a buffering agent (if studies demonstrate the requirement) to stabilise the chemistry provides an internal contingency if tailings cannot be reprocessed to lower the acid generating potential.

In placing the waste rock rapidly within the pit under a water cover and encapsulating the material in tailings the potential sulfide exposure to oxidating processes is greatly reduced, compared to the material being was placed in the base of the pit with the pit subsequently filling with water at closure. In addition, with no pit dewatering wall sulfides are not exposed that may led to acid water formation.

The proposed changes contained in this Section 14A have been driven by an adaptive management decision making approach aimed to enhance the management of the potential significant environmental impacts associated with the project. The improved site specific certainty on tailings and waste rock management/mitigation at Toms Gully has been a result of tailoring management to site specific conditions and resources. Additionally, the proposed refinements are intended to deliver better environmental outcomes while being consistent with the potential impacts of the previous proposal.

It is considered that the proposed changes to the Toms Gully Underground Project provide:

- a more robust project scope,
- additionally refines the environmental impact and optimises the use of existing infrastructure compared to the EIS Supplement,
- aids the process of life of mine closure planning and,
- better aligns the outcomes in respect to the NT EPA environmental factors and objectives including the principles of “Ecologically Sustainable Development” and “Waste Minimisation”.

If further information is required, please contact Justin Robins on justin.robins@hanking.com.au

Yours Sincerely

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