perilya

Perilya Broken Hill Limited
ABN: 46 099 761 289

Statement of Environmental Effects

for the

Re-alignment of the Ore Transport Route and Construction and Operation of a Single Evaporation Pond Area

Broken Hill North Mine

SSD 7538

Prepared by:

R.W. CORKERY & CO. PTY. LIMITED

July 2018

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Ref No. 938/20

July 2018

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1. INTRODUCTION

1.1 SCOPE

This *Statement of Environmental Effects* (SoEE) has been prepared by R.W. Corkery & Co. Pty Ltd (RWC) on behalf of Perilya Broken Hill Limited (Perilya) to support the application to modify Development Consent SSD 7538 for the Broken Hill North Mine.

It is proposed that the modification to SSD 7538 is made to allow for the following.

1. The realignment of the ore transport route between the North Mine and the Southern Operations Mine Sites to avoid impacts to the occupants of residences adjacent to Argent Street.
2. The reconfiguration of the evaporation ponds to reflect improvements in on-site water management.

Details of the proposed modifications are provided in Sections 3 and 4 respectively.

The proposed modification to SSD 7538 is being sought under Section 4.55(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as the modified components of the Project have been assessed to have a minimal environmental impact.

1.2 CONSULTATION

1.2.1 Government Consultation

Perilya has recently consulted with RMS, EPA and Broken Hill City Council regarding the proposed modifications and has formerly written to each agency as follows.

- A letter outlining both proposed modifications sent to Mr Darren Wallett of the EPA on 19 July 2018.
- A letter outlining the modified ore transport route was sent to Mr Andrew McIntyre of RMS on 19 July 2018.
- A letter outlining both proposed modifications was sent to Mr James Roncon (General Manager) of Broken Hill City Council on 19 July 2018. It is understood that the proposed modification will be discussed at Council's next meeting on 25 July 2018 with a response to be forwarded by 27 July 2018.

Copies of responses from each agency will be forwarded to DPE upon receipt.

1.2.2 Community Consultation

Both proposed modifications were presented to Broken Hill North Mine Community Consultative Committee at its second meeting on Friday, 20 July 2018. Both proposed modifications were supported unanimously by the Committee.

2. CURRENT OPERATIONS

Perilya currently operates the Broken Hill South Mine and Site D (a tailings storage facility), collectively incorporated within the Southern Operations Mine Site, the Potosi Mine, and the Broken Hill North Mine (North Mine).

The North Mine operates under Development Consent SSD 7538, which was granted on 22 December 2017. This consent allows for the following activities to be undertaken.

- Remediation the existing Cosmopolitan access ramp, portal and decline to the 12 Level (limit of the existing decline) to facilitate safe and efficient access to the underground workings
- Restoration and upgrade of the existing electrical, ventilation, air and water services, including on surface and within the decline, No. 2 and No. 3 Shafts, No. 3 Return Air Rise.
- Extension of the existing decline from the 12 Level to link with the existing decline between the 32 Level and the 38 Level.
- Exploration drilling from underground to further define remnant ore and identify additional ore lenses and lodes.
- Development of access drives to permit access by modern mining equipment.
- Extraction of remnant ore and ore below the base of previous mining operations, including within the Fitzpatrick Area.
- Transportation of extracted ore to the surface ROM Pad using underground haul trucks, including establishment of a haulage route utilising existing roads and a proposed haul road cutting.
- Transportation of extracted waste rock for placement either within completed stopes underground or within the in-pit waste rock emplacement in the Cosmopolitan Open Cut.
- Extraction of waste rock from the existing surface waste rock emplacement for transportation back underground, as required.
- Harvesting of tailings from a former Tailings Storage Facility for mixing with water and cement in a proposed Paste Fill Plant for use backfilling completed stopes.
- Re-establishment of surface infrastructure required to support the mining operation, including a ROM pad, office and store, workshop and fuel store, change house and car park, services (power, water, air and communications), surface magazine and ancillary infrastructure.
- Stockpiling and crushing ore within the existing ROM Pad using a mobile crusher.

- Loading and transportation of the crushed ore to the Southern Operations using A-double road trains utilising the existing North Mine Site Entrance, Barrier Highway, Iodide Road, Crystal Street and Gypsum Street.
- Dewatering of the existing workings and transferring that water to the Southern Operations or on-site evaporation ponds.

The transported ore is processed using the Southern Operations Concentrator under the continuing use rights held for that operation.

3. ORE TRANSPORT ROUTE

3.1 INTRODUCTION

SSD 7538 identifies the maximum size of vehicles and number that may be used for ore transportation operations. This section describes the relevant conditions of SSD 7538, modifications required, the approved transport route between the North Mine and the Southern Operations Mine Sites and explains the need for, and describes the proposed modification to this route. This section also reviews the additional or modified mitigation measures that relate to the modified transport route that would be implemented by Perilya and concludes with an assessment of the potential environmental impacts.

3.2 MODIFICATIONS REQUIRED

Development Consent SSD 7538 permits the transportation of ore from the North Mine to the South Mine. Relevant conditions in SSD 7538 relating to the ore transport route and required modifications are as follows.

Condition 2(2)

"The Applicant must carry out the development:

- generally in accordance with the EIS; and
- in accordance with the conditions of this consent.

Note: The general layout of the development is shown in Appendix 2."

Appendix 2 of SSD 7538 needs to be modified to reflect the modified transport route. Condition 2(2) should also reference this SoEE.

Condition 3(24)

"The Applicant must ensure that ore laden trucks use the designated haulage route from the site to South Mine, and the same route for the return trip from South Mine to the site (shown in Appendix 6), unless in exceptional circumstances as agreed with the applicable roads authority and approved by the Secretary."

Appendix 6 of SSD 7538 needs to be modified to reflect the proposed modified transport route.

Condition 3(25)

"Prior to commencing ore haulage, the Applicant shall implement the road upgrade works detailed in Table 5, unless the Secretary agrees otherwise, to the satisfaction of the applicable roads authority."

Table 5: Road upgrades to accommodate 30 metre A-Double vehicles

Intersection	***Upgrade requirements***	***Roads Authority***	***Funding***
Site access road and Argent Street intersection	• *A Channelised Right Short [CHR(s)] turn treatment in accordance with Figure 7.18 Part 4A of Austroads Guide to Road Design and relevant RMS supplements.* • *A Basic Left (BAL) turn treatment as shown in Figure 8.2 Part 4A of the Austroads Guide to Road Design and relevant RMS supplements.* • *Designed and constructed for a 50km/h zone.*	*RMS*	*Applicant*
Argent Street and Iodide Street *Iodide Street and Crystal Street*	• *To the satisfaction of RMS*	*RMS* *RMS*	*RMS and Applicant on a pro-rata basis*
South Road and Gypsum Street	• *Widen the formation and seal of the left-turn lane by 0.5 metres to accommodate a left turn onto South Road.* • *Modify the right turn island to accommodate a right turn onto Gypsum Street.*	*RMS and Council*	*In accordance with the terms of the VPA detailed in Appendix 3*

The upgrade requirements nominated in Table 5 need to be modified for the intersection of the Site Access Road and Argent Street.

3.3 APPROVED TRANSPORT ROUTE

Figure 1 presents the approved transport route which permits transportation of ore from the North Mine to the Southern Operations Mine Site on the following roads.

- North Mine Site Access Road.
- Barrier Highway.
- Iodide Street.
- Crystal Street/Silver City Highway.
- Gypsum Street.
- Southern Operations Mine Site.

It is noted that the use of A-double Road Trains on the approved transport route has been assessed by Roads and Maritime Service (RMS) and the Class 2 – Heavy Vehicle Authorisation Permit (No. 17462) has been received and is current to 30 June 2019.

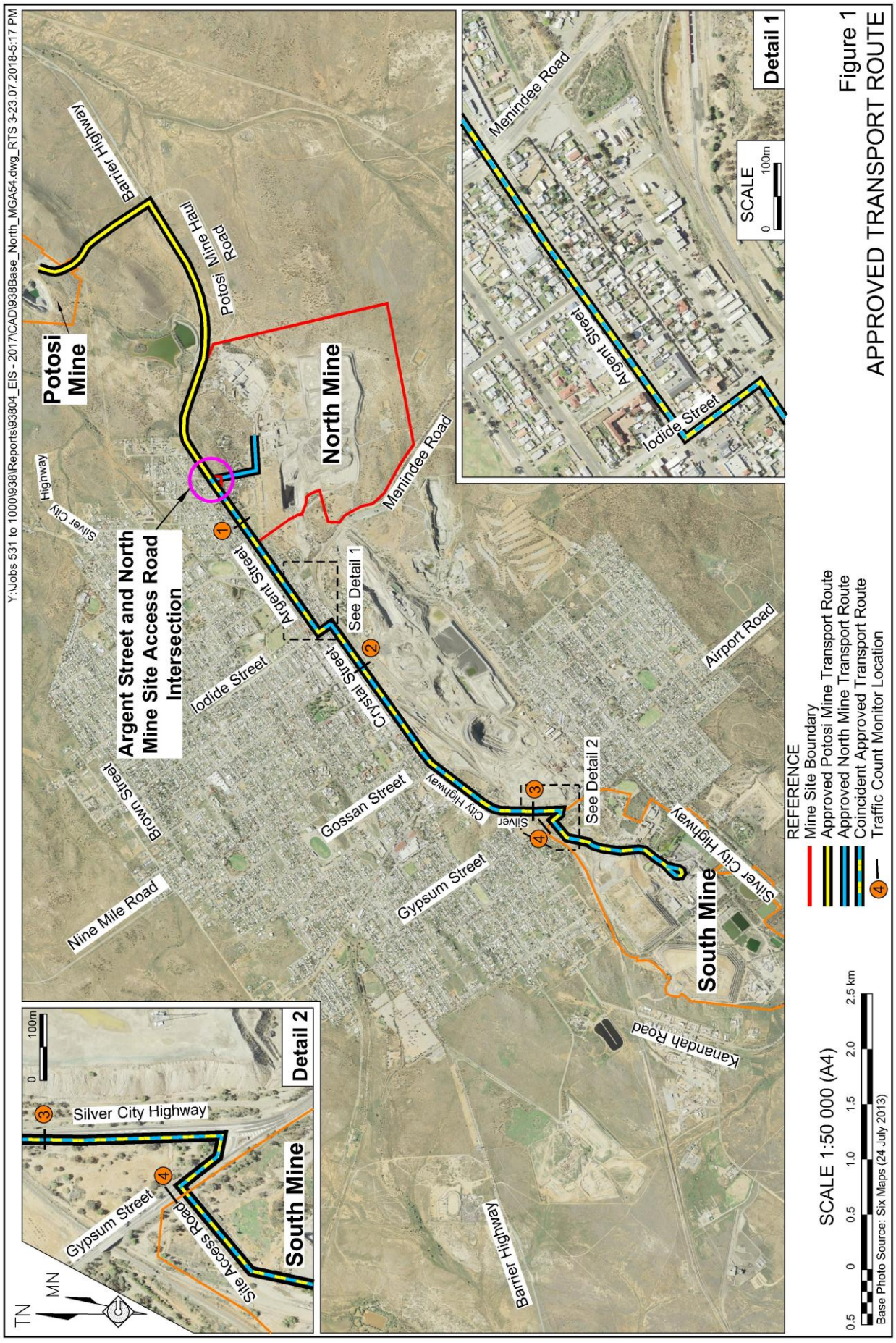

Figure 1
APPROVED TRANSPORT ROUTE

The approved transport route only applies to laden vehicles transporting crushed ore and unladen vehicles returning to the North Mine. A range of other light and heavy vehicles currently access the North Mine Site via the North Mine Site Access Road, including employee's vehicles and delivery vehicles transporting equipment and consumables. These vehicles predominantly access the Mine Site from the west, however, limited numbers of vehicles access the Mine Site from the east. The routes taken by these vehicles depend on the location within Broken Hill where their journey commenced and Perilya does not propose to restrict the routes that such vehicles may use.

3.4 REASON FOR MODIFICATION

Perilya originally proposed that only limited works would be required at the intersection of the North Mine Site Access Road and the Barrier Highway. However, RMS and DPE requested and Perilya agreed to construction of a channelised right hand turn treatment for traffic turning right into the Mine Site in the days before SSD 7538 was granted.

Following the grant of SSD 7538, RMS and Perilya concluded that the proposed transport route would impose a number of unacceptable impacts on the occupants of residences between 712 and 732 Argent Street. These impacts would be a direct result of the construction of the channelised right hand turn lane intersection of Argent Street and the North Mine Site Access Road. In a meeting between RMS and Perilya, on 27 June 2018, the following potential impacts were identified.

- On-street parking would be removed for a considerable distance between Warren and Phillips Street. It is noted that three of the affected residences do not currently have direct street access to their properties and are reliant on on-street parking. Access to a fourth residence would also be significantly compromised due to the steepening of the access angle from the street.
- The verge would be narrowed considerably as a result of the relocation of the footpath. This would necessitate modifications to property pedestrian accesses.
- The construction would require the relocation/rerouting of residential power supply services in the vicinity.
- Two to three power poles would require relocation in the immediate vicinity.
- Pedestrian safety would be compromised due to the movement of non-mine related vehicles at speed in the through lane immediately adjacent to the footpath.

In light of the identification of the potential impacts, Perilya has accepted Roads and Maritime Service's recommendation to amend the approved ore haulage transport route between the North Mine and the Southern Operations Mine Site to enter and depart the North Mine via the existing Potosi Mine Haul Road.

3.5 DESCRIPTION OF THE MODIFIED ROUTE

The proposed transport route would largely be the same as the approved transport route and would apply to all ore transportation vehicles accessing the North Mine Site. In summary, the proposed transport route would be as follows.

- Potosi Mine Haul Road.
- Barrier Highway.
- Iodide Street.
- Crystal Street/Silver City Highway.
- Gypsum Street.
- Southern Operations Mine Site.

Figure 2 displays the proposed modified transport route. Access arrangements for all other vehicles would remain unchanged.

The proposed modified route would utilise the existing Potosi Haul Road intersection with the Barrier Highway and would eliminate the requirement to upgrade the intersection of Argent Street and the North Mine Site Access Road. This intersection would be upgraded through minor modifications to ensure it complies with the BAL/BAR requirement for a right turn in/left turn out arrangement (refer to Detail 4 on **Figure 2**). Indicatively, these works would require the following.

- Widening of the seal and shoulder on the southwestern section of the intersection to allow for the swept path of a 28.6m A-double truck.
- Widening of the seal and shoulder on the northern side of the Barrier Highway for the east-bound through lane for a distance of approximately 65m from the centreline of the Potosi Mine Haul Road, comprising:
  - a 15m through section with a sealed lane width of approximately 3.25m;
  - a 50m sealed taper section with variable width; and
  - minimum 0.6m wide unsealed shoulder

The current deceleration lane is approximately 120m long and exceeds the requirements for the approach slip lane for east-bound traffic of approximately 103m.[1]

Perilya intends to adhere to the current conditions of consent regarding the permissible number of ore laden truck movements generated from the North Mine. This will result in a maximum of 32 ore laden truck movements per day or 4 ore laden truck movements per hour.

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[1] Based on the formula

Distance = A + 10m + S + X

Where

A = 0.5 x design speed (km/h) x formation widening (m) / 3.6
= 0.5 x 110 x 3.25 / 3.6
= 103.2m

S = storage length for largest vehicle = 28.6m

X = 15m

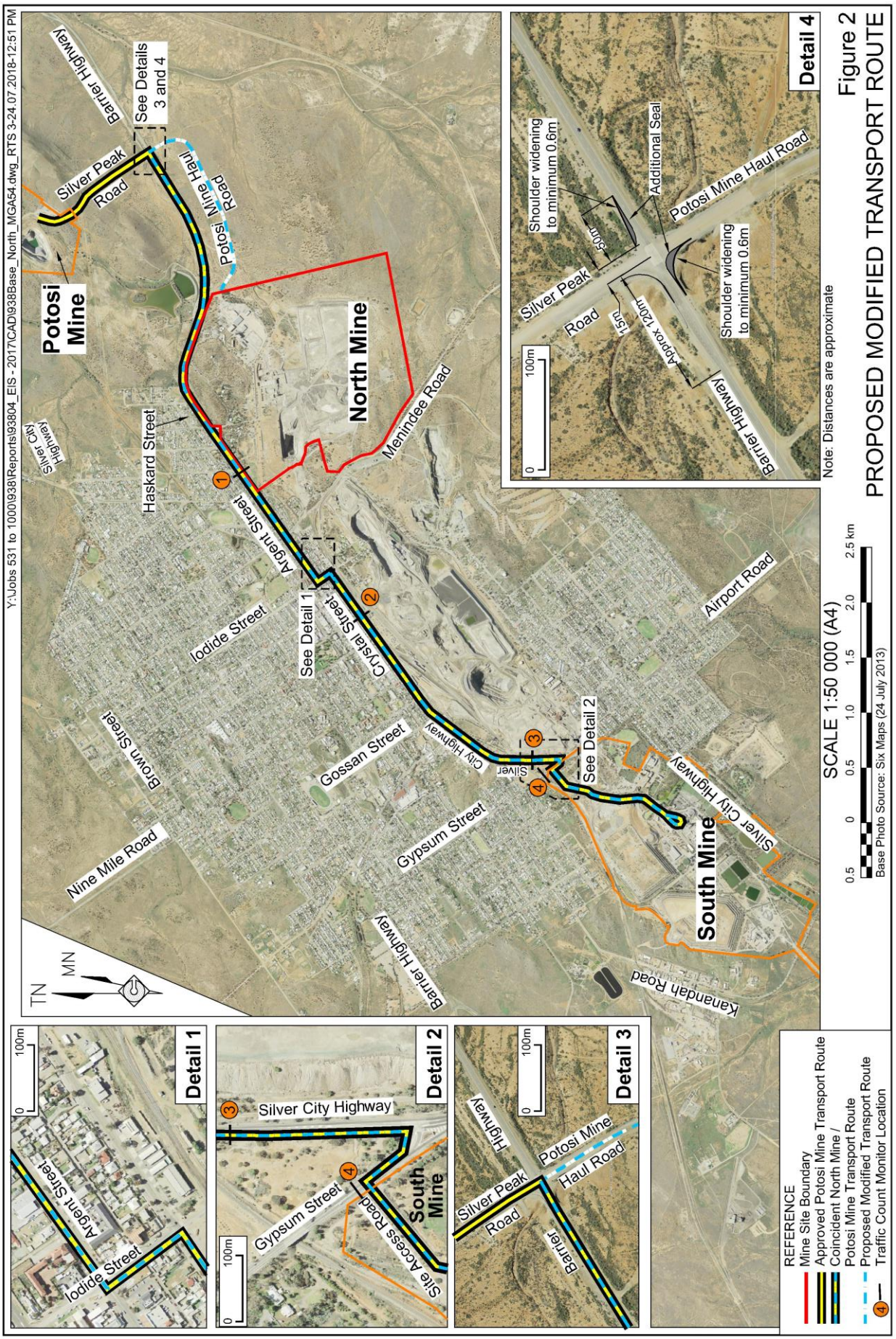

Figure 2
PROPOSED MODIFIED TRANSPORT ROUTE

3.6 MITIGATION MEASURES

Perilya proposes that the full range of management and mitigation measures already approved with respect to transportation issues would continue to apply under the modified transport arrangement. These are consistent with the management and mitigation measures that are currently implemented for the approved transport operations as described in the Environmental Impact Statement (RWC, 2017).

- Operation of one or more wheel washes at both the North Mine Site and the Southern Operations Mine Site and ensure that no vehicles are permitted to leave operational sections of the Mine Sites without passing through the wheel wash.
- Vehicles would not be overloaded.
- All loads would be covered with a rigid framed cover prior to the vehicles leaving the North Mine Site.
- All vehicles entering and leaving the North Mine and Southern Operations Mine Sites would pass through automatic security gates and the drivers would be required to swipe in and out electronically and that vehicles arriving and leaving the both Mine Sites would be videoed.
- All vehicles would have electronic data recording systems to measure location, speed and critical operational statistics, as well as dash cameras that constantly record video.
- All drivers would be required to operate fully in accordance with the Driver's Code of Conduct requiring the following.
  - Compliance with all RMS regulations regarding speed, load limits and driving hours.
  - Compliance with the requirement to cover loads.
  - Limit the use of the engine brake and other noisy driving practices in built-up areas.
  - Show courtesy to all road users at all times.
  - No parking whilst en route between the Mine Site and the Southern Operations.

As a result of the proposed modification, Perilya proposes to upgrade the intersection of the Potosi Haul Road and the Barrier Highway to ensure compliance with BAL/BAR requirements for a right turn in/left turn out configuration (see Detail 4 on **Figure 2**).

It is noted that this upgrade would be undertaken instead of the approved upgrade to the intersection of Argent Street and the North Mine Site Access Road. All other road upgrades would be implemented as identified in Condition 3(25) of SSD 7538.

Finally, Perilya will continue to operate under a Voluntary Planning Agreement in relation to maintenance of the section of the proposed transport route that is classified as a "Local Road". Maintenance of other sections of the proposed transport route, that are classified as "Regional" or "State" roads, are the responsibility of the Roads and Maritime Service and Broken Hill City Council.

3.7 ASSESSMENT OF IMPACTS

The proposed modification to SSD 7538 to realign the approved ore transport route would result in minimal environmental impacts as identified below.

- The occupants of residences between 712 and 732 Argent Street would no longer be impacted by the construction of the Argent Street - North Mine Site Access Road intersection and would maintain acceptable access to their properties.
- The occupants of the nine residences between 745 to 769 Haskard Street (**Figure 2**) would experience a minor increase in heavy vehicle movements at the rear of their properties, which back onto the Barrier Highway. In total, the maximum permissible number of additional laden and unladen heavy vehicle movements along this section of the Barrier Highway would represent approximately 4.4% of the total traffic along this section of road. Further, it is noted that the modified transport route would result in the laden and unladen heavy vehicles travelling at a consistent speed (<50kph) on the Barrier Highway near these residences and not braking or accelerating through the currently approved Mine Site Access Road / Argent Street intersection.

  It is further noted that property accesses for residences located between 745 to 769 Haskard Street would not be restricted as a result of the proposed realignment of the ore transport route as these residences are primarily accessed via Haskard Street.

In consideration of the above, the assessed impacts of the realigned ore transport route are considered minimal and likely to result in a net benefit in environmental outcomes compared with the approved transport route.

4. EVAPORATION POND AREA

4.1 INTRODUCTION

Development Consent SSD 7538 allows for the design, installation, maintenance and use of three evaporation ponds as part of the North Mine's produced water management strategy.

The proposed modification to SSD 7538 would allow for a reconfiguration of the approved on-site produced water management infrastructure resulting in a singular extraction pond area. This section describes the currently approved evaporation ponds and the reasons for the proposed modification. Proposed mitigation measures relating to the evaporation ponds are also identified in conjunction with an assessment of potential environmental impacts.

4.2 MODIFICATIONS REQUIRED

Relevant conditions in SSD 7538 relating to the evaporation ponds and required modifications are as follows.

Condition 2(2)

"The Applicant must carry out the development:

- generally in accordance with the EIS; and
- in accordance with the conditions of this consent.

Note: The general layout of the development is shown in Appendix 2.":

Appendix 2 of SSD 7538 needs to be modified to reflect the modified evaporation pond area. Condition 2(2) should also reference this SoEE.

Condition 3(32)

"The Applicant must comply with the following measures in Table 6."

Table 6: Water management performance measures (extract)

Feature	***Performance Measure***
Evaporation Ponds	*Design, install and maintain the facilities to ensure that a minimum freeboard of 500 mm is maintained at all times, and that that any leakage is prevented* *Facilities must be lined with a welded High-Density Polyethylene liner, or equivalent*

Table 6 of SSD 7538 needs to be modified to reference the Evaporation Pond Area.

4.3 APPROVED EVAPORATION PONDS

Approved produced water management operations at the North Mine comprises a combination of use within the Southern Operations processing plant and management on site using three yet to be constructed evaporation ponds (Evaporation Ponds 1, 2, and 3). Collectively, these ponds cover an area of 19.4ha.

Figure 3 displays the locations of the approved evaporation ponds. It is noted that Evaporation Ponds 1, 2 and 3 are located above former tailings impoundments.

4.4 REASON FOR MODIFICATION

Improvements in produced water management at the Southern Operations Mine Site have resulted in an increased ability to utilise produced water from the North Mine Site. As such, Perilya has determined that the currently approved evaporation ponds exceed the total area required to effectively manage produced water on site.

In addition, a review of the risks associated with construction of the approved evaporation ponds following granting of development consent identified that air quality risks associated with material handling of tailings material during construction of the ponds could be eliminated by relocating the evaporation pond to an area that does not include tailings material. Furthermore, as the approved evaporation ponds were to be located on unconsolidated tailings, risks associated with minor settling or movement of those tailings or leakage of the ponds into those tailings could be eliminated by relocating the ponds. Finally, as the approved evaporation ponds are located on an elevated section of the Mine Site, amenity issues associated with noise and visual impacts could be reduced through relocation of the ponds to a lower, more protected location within the Mine Site.

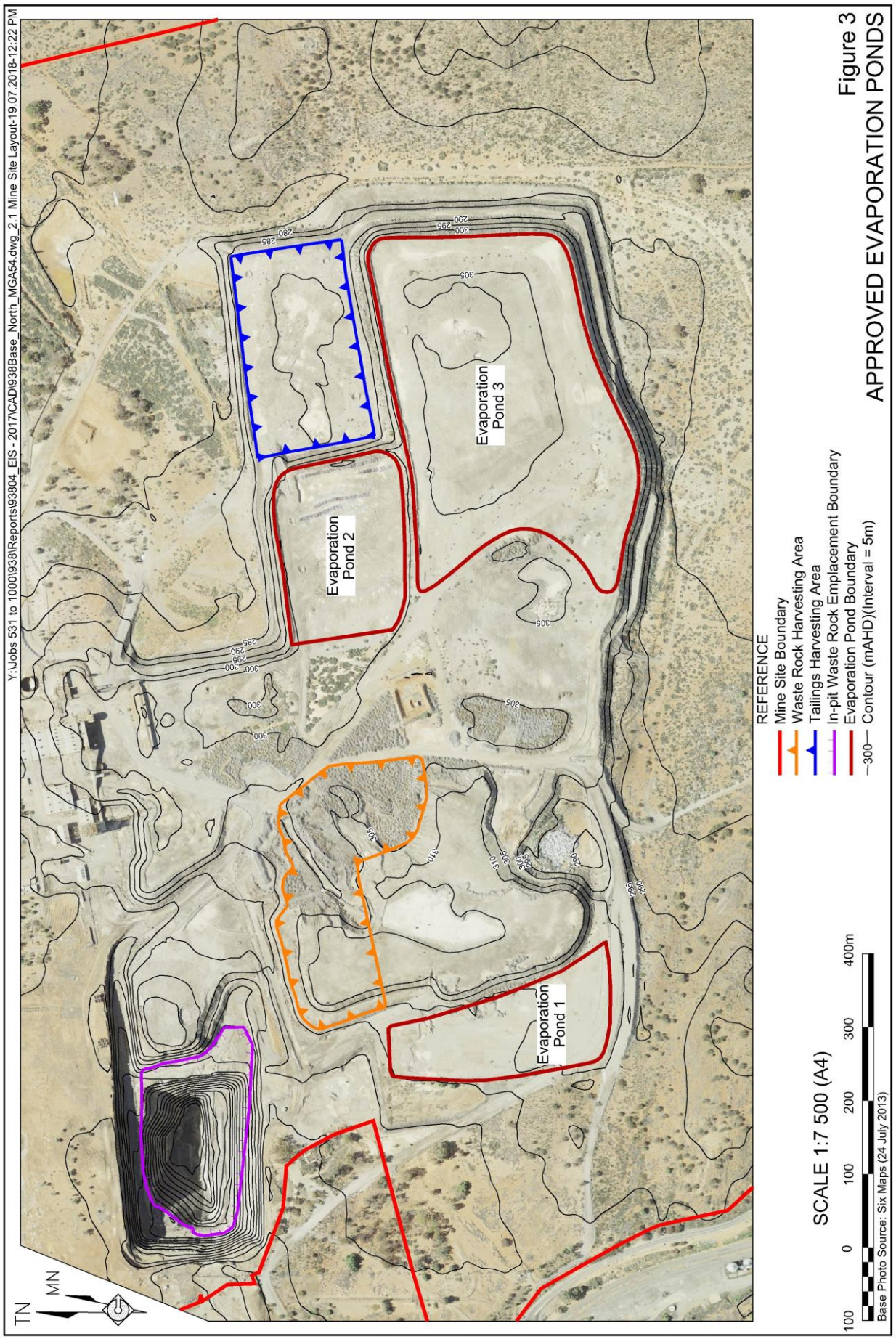

Figure 3
APPROVED EVAPORATION PONDS

4.5 DESCRIPTION OF THE PROPOSED EVAPORATION POND AREA

Figures 4 and **5** display the location of the proposed evaporation pond area. This area has been selected as the location for the new evaporation pond area as it is located on natural ground and not above tailings as Evaporation Ponds 1, 2 and 3 are currently proposed. In addition, Perilya advises that the entire area of the proposed Evaporation Pond has been the subject of previous disturbance. The southeastern section of the proposed Evaporation Pond is currently used for Storage Cells for emergency storage of sediment-laden water.

The total area of the proposed Evaporation Pond is approximately 7.9ha or approximately 11.5ha less than the currently approved evaporation ponds.

Construction of the Evaporation Pond Area

The construction of the proposed Evaporation Pond would be undertaken in three stages. The establishment of each stage would be undertaken as required depending on the quantity of produced water requiring on-site management. Construction of the first stage of the proposed evaporation pond area would be completed prior to the retention of mine water on the North Mine Site. It is noted that dewatering commenced on 3 May 2018 with all water piped to date, to the Southern Operations.

The establishment of each stage would initially require the footprint of the identified area to be prepared through the removal and stockpiling of the residual growth medium to create a flat area suitable for establishing the liner. The proposed evaporation pond area would result in the opportunity to source significant quantities of topsoil and subsoil for rehabilitation purposes. The North Mine Mining Operations Plan (MOP) (RWC, 2018) identified a paucity of growth medium as one of the most significant risks to the rehabilitation of the North Mine Site. Perilya anticipates that between 0.5m and 0.85m of growth medium would be stripped, resulting in up to 65 000m^3 of recovered growth medium which would be stockpiled within an area located immediately south of the proposed evaporation pond area (**Figure 4**).

Earthworks would be required to level the surface of each stage. Following completion of the shaping and contouring of each stage and to create the perimeter earth walls. Perilya would prepare the base for the HPDE liner in accordance with the requirements of the supplier of the liner, prior to installation of the liner itself. The liner would achieve a permeability that would comply with the EPA's *Tailings and Contaminated Water Storage Policy*, namely 1 x 10^{-9}m/s over 1m or equivalent. The integrity of the installed liner and compliance with this standard would be confirmed by the supplier prior to its use.

Operation of the Evaporation Pond Area

The proposed evaporation pond area would be operated in a manner that would ensure that the maximum rate of evaporation is achieved. In summary, this would involve maintaining the pond at a relatively shallow depth that completely covers the base of the area in use. The rate of inflow would be managed through automatic shut-off valves to ensure that the minimum freeboard of 500mm is maintained at all times.

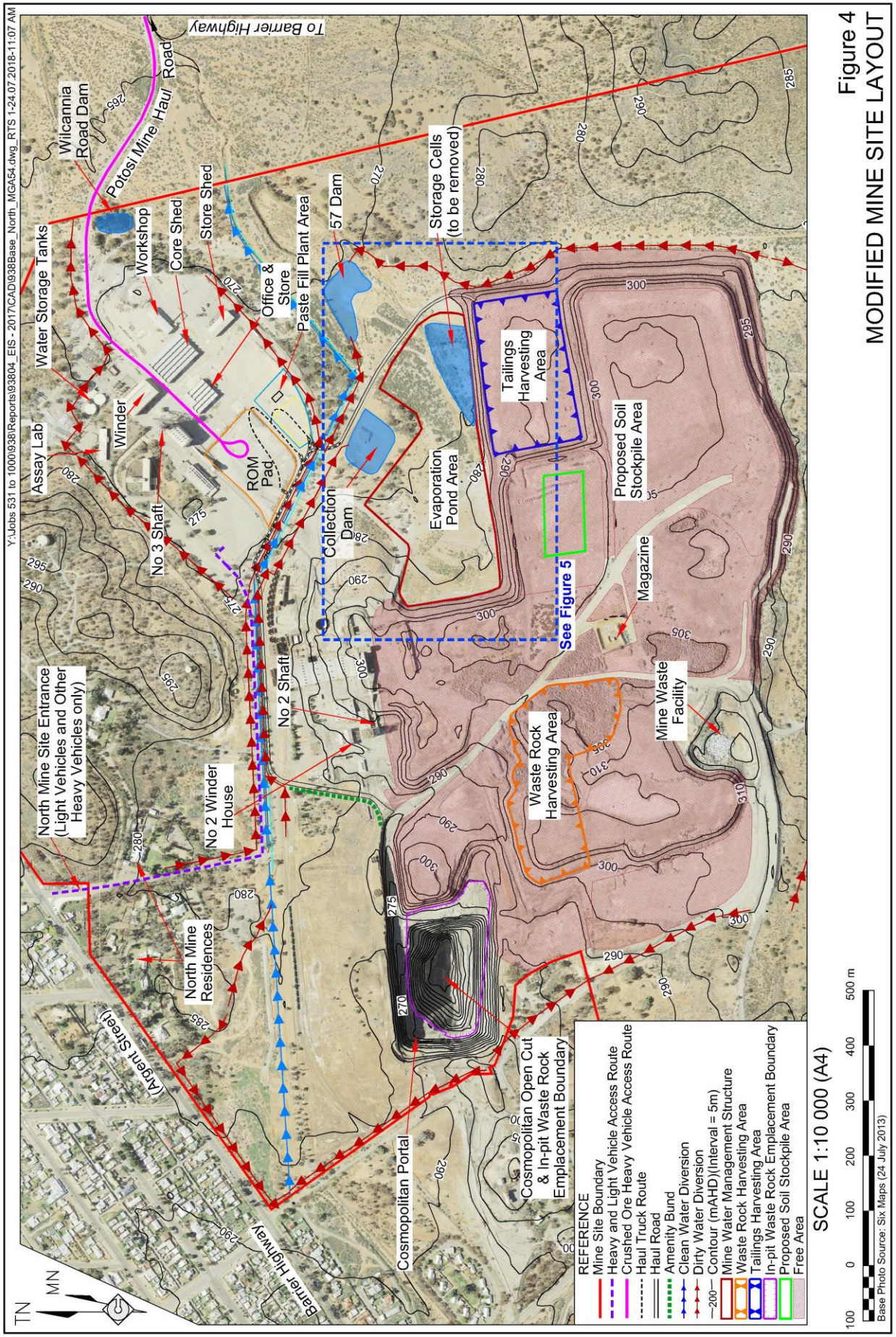

Figure 4
MODIFIED MINE SITE LAYOUT

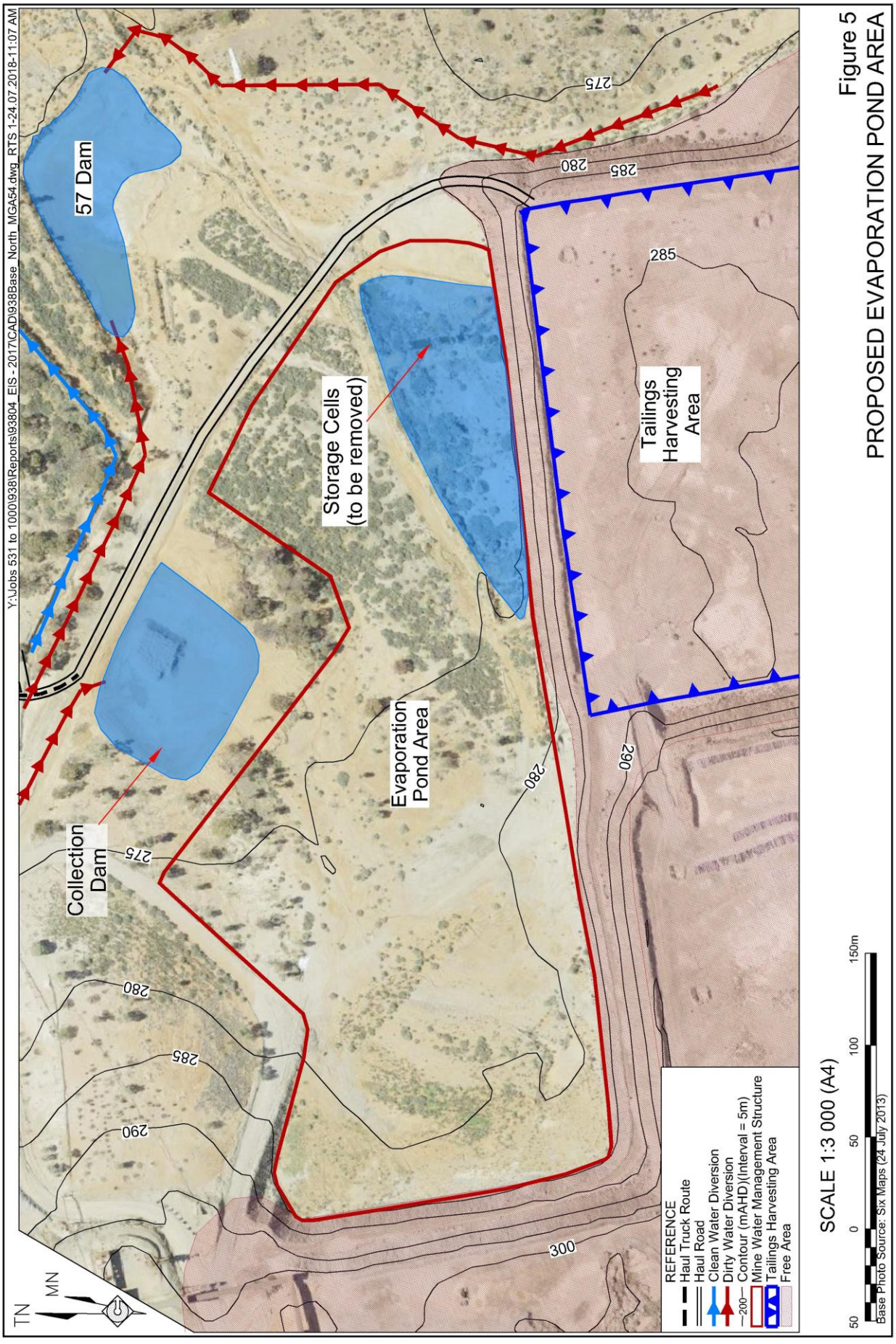

Figure 5
PROPOSED EVAPORATION POND AREA

In addition, Perilya would continue to seek to maximise the rate of evaporation as required through the use of evaporators. As for the currently approved evaporation ponds, where such equipment is to be used, Perilya would ensure that all fallout is contained within the proposed evaporation pond area. In addition, Perilya would ensure that the evaporators are used in conjunction with the KITE Weather Intelligence system, or equivalent, to predict wind, temperature and humidity conditions to maximise the efficiency of the evaporators and ensure that they are not used during periods when meteorological conditions would result in fallout beyond the boundary of the proposed evaporation pond area.

4.6 MITIGATION MEASURES

The discharge of salt-laden water from the evaporation pond area or mine settling pond has been identified as a potential risk to downstream surface water quality. In order to avoid any such impacts, Perilya would continue to implement the following management and mitigation measures in relation to the evaporation ponds.

- Adhere to all relevant procedures identified in the *Water Management Plan*.
- Inspect and repair all surface water management structures monthly or immediately following all rainfall events of more than 20mm / 24 hours.
- Ensure that the cells in each stage of the evaporation pond area are engineered and lined with a welded HDPE liner or similar to achieve a permeability of 1 x 10^{-9}m/s over 1m or equivalent.
- Ensure that all fallout from evaporators, when in use, is limited to the evaporation pond area and a predictive meteorological tool such as Kite Weather Intelligence is used to predict when the evaporators should not be used.

4.7 ASSESSMENT OF IMPACTS

The proposed modifications to the on-site produced water management infrastructure would result in the following environmental outcomes.

Air quality and Human Health

The proposed evaporation pond area would be located outside the boundary of the previously used tailings storage facility. As a result, disturbance of the surface of those facilities would both be required. In addition, the proposed evaporation pond area at 7.9ha, is approximately 11.5ha or 60% smaller than the currently approved evaporation ponds. Finally, the proposed evaporation pond area is located to the north and east of the existing tailings storage facilities which would provide protection from the prevailing southerly and south-westerly winds.

Notwithstanding this, the Applicant would implement the air quality management measures identified in the Construction Air Quality Management Plan to minimise dust emissions during construction of the evaporation pond.

As a result, the proposed modified evaporation pond would result in reduced air quality and human health impacts.

Noise

Noise impacts generated during the establishment of the evaporation pond area would be significantly less than at the currently approved locations. This is primarily because the proposed evaporation pond area is located at a lower elevation (287m AHD) than the currently approved evaporation ponds (305m AHD). The proposed evaporation pond area would also be located immediately adjacent to the existing tailings dams which would further mitigate noise impacts to the west and south.

Surface Water

The proposed evaporation pond would remove the existing Storage Cells which act as emergency storage for dirty water within the Mine Site. Perilya would, rather than pumping water from the Collection or 57 Dam to the Storage Cells, pump that water to the evaporation pond. Furthermore, Perilya would ensure that a minimum 500mm freeboard remained within the evaporation pond at all times, thereby minimising the potential for overtopping of the evaporation pond.

As the North Mine does not currently discharge potentially sediment-laden water during rainfall events less than a 1 in 100 year ARI event and the evaporation pond area would be lined with an HDPE Liner, Perilya anticipates that the proposed modification would not result in any adverse surface water-related impacts.

In consideration of the above impacts, the proposed reconfiguration of on-site produced water management infrastructure is unlikely to result in any change to the currently approved levels of surface water disturbance.

Heritage

The proposed evaporation pond area is within areas that have been the subject of prior mining-related disturbance. As a result, there is no potential for intact sites of Aboriginal heritage significance within the footprint of the proposed evaporation pond area.

Ecology

Similarly, vegetation within the proposed evaporation pond area is highly disturbed and is identified in Section 4.9.5.1 of the EIS (RWC, 2017) and by OzArk (2017) as not being consistent with any mapped vegetation community. As a result, the proposed evaporation pond area would not significantly impact on any listed vegetation community or flora species.

OzArk (2017) identify two threatened fauna species as being likely to occur within the Mine Site, namely, Little Pied Bat and Yellow-bellied Sheathtail-bat. These species are highly mobile and have ranges that are far greater than the area of the Mine Site. Based on the above, the proposed evaporation pond area would not significantly impact on either species.

Visual Amenity

The proposed evaporation pond area would be located at a lower elevation than the approved evaporation ponds. As a result, unlike construction operations for the approved evaporation ponds, construction operations for the proposed evaporation pond area would not be visible from off site.

Other Environmental Impacts

The proposed evaporation pond area would not adversely impact on traffic or transportation, historic heritage, groundwater, bushfire, agriculture or socio-economic impacts would remain unchanged as a result of the proposed evaporation pond area.

5. CONCLUSION

Perilya is committed to minimising environmental impacts generated during the resumption of operations at the North Mine.

The proposed modifications would allow for the realignment of the approved ore transport route and reconfiguration of on-site produced water management infrastructure to achieve improved environment outcomes. It is anticipated that the modification would minimise environmental impacts to nearby residents and result in more sustainable environmental outcomes.

Environmental management at the North Mine would continue in accordance with the approved management plans and internal procedures. This *Statement of Environmental Effects* demonstrates that the potential impacts associated with the proposed modification would continue to be appropriately managed at levels assessed to be acceptable.

6. REFERENCES

OzArk Environmental and Heritage Management Pty Ltd (OzArk) 2017. *Ecological Assessment*, presented as Part 6 of the *Specialist Consultant Studies Compendium*.

R.W. Corkery & Co. Pty Ltd (RWC) 2017. *Environmental Impact Statement.* Prepared for Perilya Broken Hill Limited.

R.W. Corkery & Co. Pty Ltd (RWC) 2018. *North Mine Mining Operations Plan*. Prepared for Perilya Broken Hill Limited.