Amendment Report

Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L8721/2013/2
Licence Holder	Karara Mining Limited
ACN	070 871 831
File Number	2012/008499-1
Premises	Karara Minesite Beneficiation Plant M59/644, M59/645, M59/721, G59/38, L59/99 and L59/109 PERENJORI WA 6620
Date of Report	29 August 2022
Decision	Revised licence granted

Carmen Standring

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A/MANAGER, RESOURCE INDUSTRIES

REGULATORY SERVICES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L8721/2013/2 is held by Karara Mining Limited (Licence Holder) for the Karara Minesite Beneficiation Plant (the Premises), located on M59/644, M59/645, M59/721, G59/38, L59/99 and L59/109 in the Shire of Perenjori.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L8721/2013/2 has been granted.

The Revised Licence issued as a result of this amendment supersedes the existing Licence previously granted in relation to the Premises.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at https://dwer.wa.gov.au/regulatory-documents.

2.2 Application summary

On 27 January 2022, the Licence Holder submitted an application (KML 2022a) to the department to amend Licence L8721/2013/2 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Construction of Tailings Storage Facility (TSF) Wet TSF 2B to operate as an emergency backup should the Wet TSF 2A and tailings not operate at full capacity and efficiency. Once dry, dry stacking will occur over West TSF 2B.

Background

The Premises is located approximately 230 km east of Geraldton and current operation consists of a Magnetite mine, Processing Plant (Magnetite concentrator), export terminal, rail, and other infrastructure required to produce and export Magnetite concentrate.

The filtered tailings associated with the ore processing are dewatered to a moisture content of approximately 15% (by weight) and transported to a dedicated Dry Stack tailings storage facility (Dry Stack TSF) via a conveyor/stacker system.

The long-term tailings storage plan for the Premises is based on dry stacking of the Magnetite tailings. An area of approximately 800 hectares (ha), south of the Processing Plant has been set aside within the Premises for tailings storage.

The tailings dry stacking operation commenced in the early stages of the operation in 2013. However, due to operational issues, the Licence Holder has been forced to store some of the tailings as Wet tailings to meet production targets. A number of Wet TSFs have been constructed since 2014.

Wet TSF 1 was constructed in 2014 inside the approved area of the Dry Stack TSF, (south of the Sweep 2), and this was raised in 2017. An additional facility, Wet TSF 2A, was designed and constructed adjacent to Wet TSF 1 in March 2019 with a total storage capacity of 12.7 million cubic metres (Mm^3) and estimated at the time to provide approximately 51 months (4.3 years) of storage life for wet tailings deposition. A review of Wet TSF 2A capacity in early 2021 estimated it to be full by the end of 2022 based on the Licence Holder's tailings production forecast.

With the estimated storage life of existing Wet TSF 2A coinciding with the Project forecast completion date of 2022, the Licence Holder is required to construct Wet TSF 2B to:

i. provide emergency storage during periods when the tailings filters are not operating at full capacity due to downtime or maintenance; and

ii. mitigate production risk in case of delays in the Additional Tails Filter installation project. Wet TSF 2B is proposed as an extension to the north of the Wet TSF 2A, within the currently approved TSF footprint, to provide an additional storage capacity of approximately 2.7 Mm^3.

Construction

Wet TSF 2B will be constructed as an extension to the north of the existing Wet TSF 2A, and east of the Dry Stack TSF. Wet TSF 2B is designed as a full impounding structure, and the embankments will be constructed to final design elevations as Wet TSF 2A.

The south side of the new facility will abut against the northern embankment of Wet TSF 2A, and new embankments will be constructed to the west, north and east sides. A decant compartment will be located in the southeast, equipped with a pontoon mounted pump.

Tailings will be deposited via multiple spigots located along the crest of the perimeter embankments and operated in a way that will create a beach towards the location of the decant compartment for water recovery (the same concept used for all the Wet TSFs, including current Wet TSF 2A).

The TSF is designed with zoned fill embankments with the upstream and downstream slopes to manage seepage. The embankment crest is 8 m wide to accommodate pipework, safe vehicle access and other TSF operational infrastructure. New pipework will be installed to deliver tailings from the Processing Plant.

Topsoil will be stripped from the TSF footprint area before the embankment construction and stockpiled at designated areas for future use by the Licence Holder as part of the TSF rehabilitation works. However, site inspection of the proposed Wet TSF 2B footprint indicate large areas are waterlogged and therefore topsoil will not be available for stripping. Only areas where topsoil exist will require stripping for storage.

Furthermore, waterlogged and soft areas will not allow for normal construction of key trenches in those areas.

Vibrating wire piezometers will be installed at selected locations in the embankments of Wet TSF 2B for pore pressure monitoring.

Decant Water Reclaim System

A rock fill embankment will be constructed in the southeast corner of the facility. Water will seep through the graded rock fill decanted water collection compartment. The decant compartment will be equipped with a pontoon mounted pump from where water will be returned to the Processing Plant for re-use.

Tailings quality

The tailings slurry is thickened at the process plant to between 55% and 60% (by weight) solids. The dominant mineral in the tailings is quartz, with accessory to trace amounts of other minerals. Trace elements concentrations do not represent a significant risk of leaching under neutral pH conditions. It is highly unlikely that the prevailing pH value in the tailings stack will rise above a pH of 8.5. The pH of the tailing samples analysed ranged between 7.8 and 8.4. The tailings are also considered non-acid forming (NAF).

Tailings water quality

Bore monitoring data collected from bores around wet TSF 2A (Figure 1) from December 2020 to December 2021 (KML 2022b), reported the water quality in the wet TSF 2A to have a

neutral pH. Major cations Calcium, Chloride, Fluoride and Potassium were found to be below stock tolerance and freshwater quality limits. Manganese exceeded water quality limits of 3.6 mg/L at monitoring bore (MB) 49 at 3.96 mg/L.

Nutrients Nitrate, Nitrite and Total Nitrogen, were also within the water quality limits. Ammonia exceeded fresh water quality limits for cold waters (<0.025 mg/L) however remains within the limits for warm waters (<0.3 mg/L) at 0.11-0.31 mg/L across MB04, MB32 and MB52.

A moderate suite of heavy metals was tested for and Arsenic (0.018 mg/L), Cobalt (0.022 mg/L) and Iron (1.17 mg/L) were detected at trace levels. Boron (5-17 mg/L) exceeded livestock limits of >5 mg/L at MB06 and MB32 respectively. While Chromium (0.001-0.017 mg/L), Nickel (0.007-0.045 mg/L), Vanadium (0.006 mg/L) and Zinc (>0.031 mg/L) exceeded freshwater quality limits of >0.0033 mg/ L, >0.017 mg/L, >0.006 mg/L and >0.031 mg/L respectively. Mercury was not found within detection limits.

The information provided may provide insight into the water quality which could be expected in the Wet TSF 2B.

Ambient groundwater quality

As of December 2021, the water quality of the ambient groundwater was found to also have a relatively neutral pH, traces Calcium, Chloride, Fluoride, Potassium and Nitrate within livestock and freshwater quality limits. Manganese was not tested for. Ammonia exceeded freshwater quality limits for warm water (0.0-0.3 mg/L) by an order of magnitude at monitoring bores BHN1002 (2.24 mg/L) and MKC439 (6.64 mg/L).

Iron exceeded freshwater quality limits of <2 mg/L at bores BHN1002 (6.33 mg/L) and BHN1003 (24 mg/L). No other metals were detected, while Boron, Thallium, Vanadium and Zinc were not tested for.

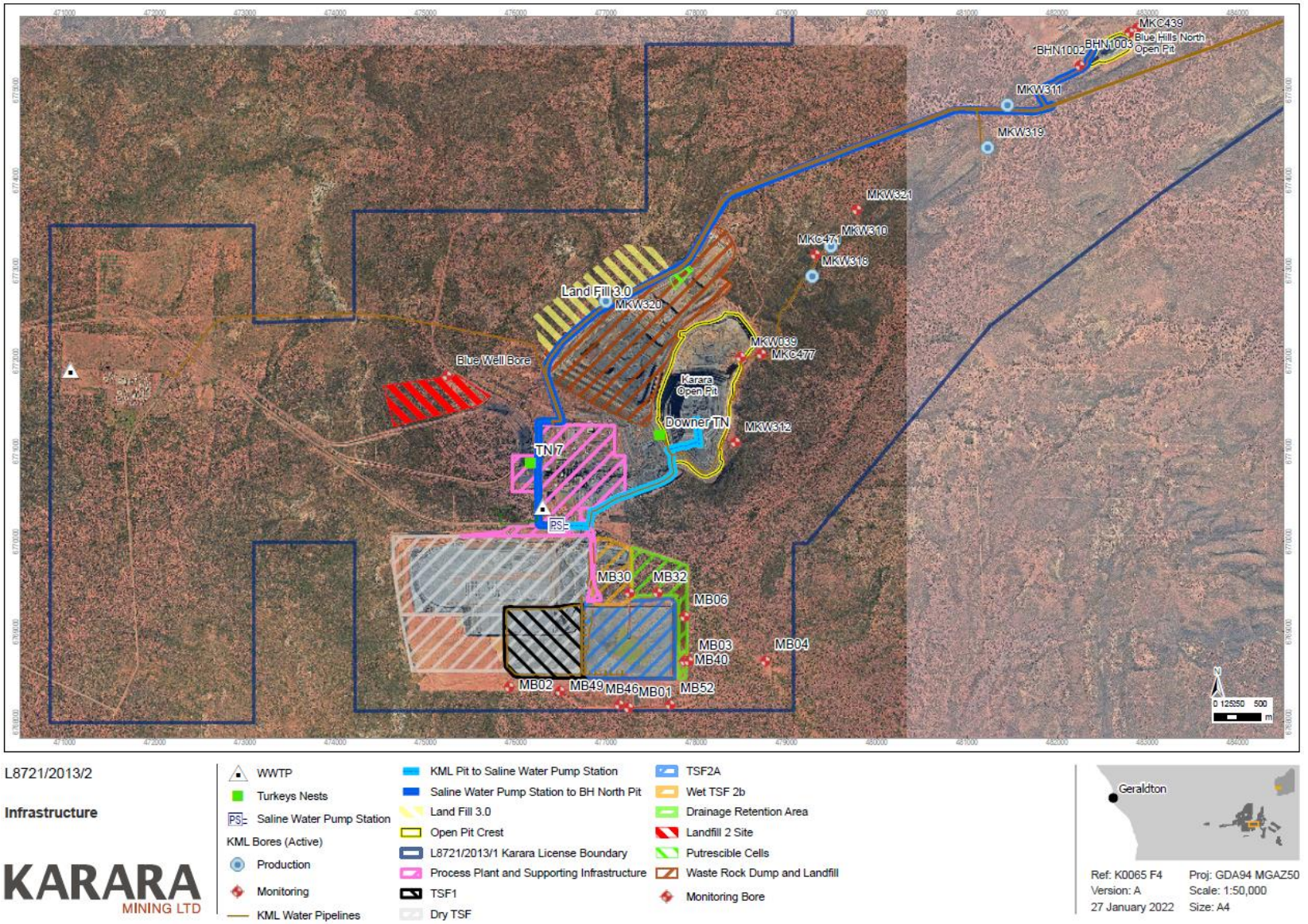

Figure 1: Location of monitoring bores.

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Water Balance

The water balance simulations indicate that there will be significant water losses through evaporation from the tailings surface, followed by seepage losses. A proportion of water will also be trapped within the in-situ tailings pores (interstitial water). The remaining amount that will vary across the seasons will be available for recovery and can be pumped back to the processing plant for reuse. The monthly return will likely range from 5% to 15% in the dry summer months to 25% to 35% in the wetter winter months.

During this amendment, the department has included a condition relating to undertaking an annual water balance. The results of the water balance are to be provided to the department to demonstrate the water balance is updated to reflect the actual seepage performance of TSF 2A and TSF 2B.

Seepage recovery

Details of recovery bores (e.g. number and locations of bores, trigger level for bores to be used etc.) will be provided to the department once they become available. The Licence Holder is expected to engage a Hydrologist Consultant in the fourth quarter of 2022.

Hydrogeological report

Groundwater mounding has been identified onsite at TSF 2A and to prevent mounding issues from also occurring at the proposed Wet TSF 2B, it is required that a hydrogeological study for Wet TSF 2B is conducted. The study is essential for the development of a conceptual hydrogeological model, to determine groundwater monitoring bore requirements and to determine methods to recover seepage. A hydrogeological study for Wet TSF 2B has not yet been conducted and a hydrogeological report was not submitted as part of this application.

During this amendment, the department has conditioned a hydrogeological study to be conducted and a report provided. The study will provide insight to any underlying aquifers and fault zones present within the premises, determine the hydraulic conductivity of the regolith and identify the direction of groundwater flow. Using this information, the report is required to recommend the number, locations, depths and standing water trigger levels of the monitoring bores for Wet TSF 2B as well as to recommend methods to recover seepage and mitigate groundwater mounding.

Surface water management

The existing main surface water drain (main drain) along the northern boundary of the TSFs diverts clean runoff water around the site.

An adjacent drain to the south of the main drain diverts water from the approved TSF areas and mostly the northern sections of the Dry Stack operations (TSF contractor's area) and runs through the proposed footprint of Wet TSF 2B until it discharges at the eastern side where a purpose built surface water retention embankment retains all such surface water (Retention Pond basin). This drain will be diverted around the proposed Wet TSF 2B, from the northwest corner and along the northern embankment to the eastern side so that surface water can continue to be collected and discharged into the retention basin area to maintain the surface water management criteria established at the start of the operation.

Embankment toe drains will be constructed around the perimeter embankments to collect seepage and water from the outer faces of the embankments and discharged into a sump, from where it will be pumped back to the Processing Plant for re-use.

Wet TSF 2B

The existing Licence has a category 5 design capacity of 30,000,000 tonnes per year. Wet TSF 2B has a storage capacity of 2,700,000 tonnes per year of tailings material. There will be no change to the design capacity of category 5 authorised in the licence due to the construction and operation of Wet TSF 2B. Table 1 below outlines Wet TSF 2B design and

construction requirements.

Table 1: Wet TSF 2B design and construction requirements

Category	Design and construction requirements
5	• Constructed within tenements G59/38 and M59/64; • Storage area of 10.6 (ha); • Constructed to provide a minimum 0.5 m total freeboard (including an allowance for the 1 in 100 AEP 72-hour period of 290 mm) above the normal operating pond; • Upstream and downstream slopes 1:2 (v:h) and 1:1.75 (v:h); • Establishment of a decant compartment in the southeast corner of the TSF; • 348.5 m maximum RL height (RL 345.5 m to the south, RL 348.5 m to the north and 345.0 m for the decant pond); • Embankments are to be constructed using a central core (zone 1) of compacted dry tailings, an upstream and downstream shell (zone 2) of mine waste and capped with compacted colluvium (zone 3); • Compaction densities at least 96% standard maximum dry density; • The embankment crest is 8 m wide to accommodate pipework, safe vehicle access and other TSF operational infrastructure; • Embankment toe drains will be constructed around the perimeter embankments to collect seepage and water from the outer faces of the embankments and discharged into a sump; • Vibrating wire piezometers; • Decant embankments constructed with rock fill; • Installation of a pontoon mounted floating decant pump; • 3100 m of 225 diameter, 900 m of 400 diameter and 33 m of 150 diameter Victaulic jointed HDPE pipes; and • 33 Victaulic jointed HDPE Tee connection and flexible hose with scissor clamps.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 2 below.

Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Licence Holder controls

Sources	Emission	Potential pathways	Proposed controls
Construction			
Wet TSF 2B	Fugitive Dust	Air/windborne pathway	• Dust suppression and mitigation techniques including, water carts, sheeting of roads, implement no drive areas - windrow off non trafficable areas and progressive rehabilitation. • Clearing will be progressive, staged where applicable and to be conducted during favourable environmental conditions (particularly when stripping topsoil). • Scheduled Inspections and Audits. • Controlled speed limits on unsealed roads.
Operation			
Wet TSF 2B	Waste and leachate tailings water (Seepage and overtopping)	Waterborne pathway	Seepage and overtopping will be contained by the: • minimum total freeboard of 500 mm; • toe drains to direct seepage to the Seepage Collection Sump (Figure 2); • existing retention pond wall (Figure 3); • existing diversion drain (Figure 4); • proposed diversion drain around the proposed TSF2B (Figure 4); • the proposed collection sump (Figure 5); • minimum 300 mm freeboard in the Seepage Collection Sump; • Monthly measuring standing water level and sampling of groundwater bores around Wet TSF 2 B to monitor groundwater level and quality (Figure 1); • Daily inspections of the embankment wall; and • Incident reporting. A new drainage collection sump will be constructed at southeast corner of the TSF 2B (Figure 4 and Figure 5) to collect seepage and water from the outer faces of the TSF embankments. Water collected in the new drainage collection sump and existing seepage collection sump will be returned to the process plant or Wet TSF 2 (A and B) or reused as dust suppression.

Sources	Emission	Potential pathways	Proposed controls
Pipelines	Leaks and spills	Waterways/Waterborne pathway	New pipework will attach to existing pipework along the crests of the TSF embankments (Figure 5). Leaks will be contained from the: • proposed TSF 2B itself (Figure 5); • existing retention pond wall (Figure 3); • existing diversion drain (Figure 4); • the proposed diversion drain around proposed TSF2B (Figure 4); • the proposed collection sump which is pumped back to the process plant, Wet TSF 2 (A and B) or reused as dust suppression (Figure 5); and • minimum 300 mm freeboard in the Seepage Collection Sump. Daily monitoring of pipelines. Welding of leaks by qualified personnel.
Wet TSF 2B	Potentially contaminated stormwater (sediment)	Waterborne pathway	As per existing licence, all surface water run-off from the TSF landforms is directed to the Drainage Retention Area which is constructed and maintained to accommodate stormwater flows from a 1 in 100 year, 72 hour ARI rainfall event.

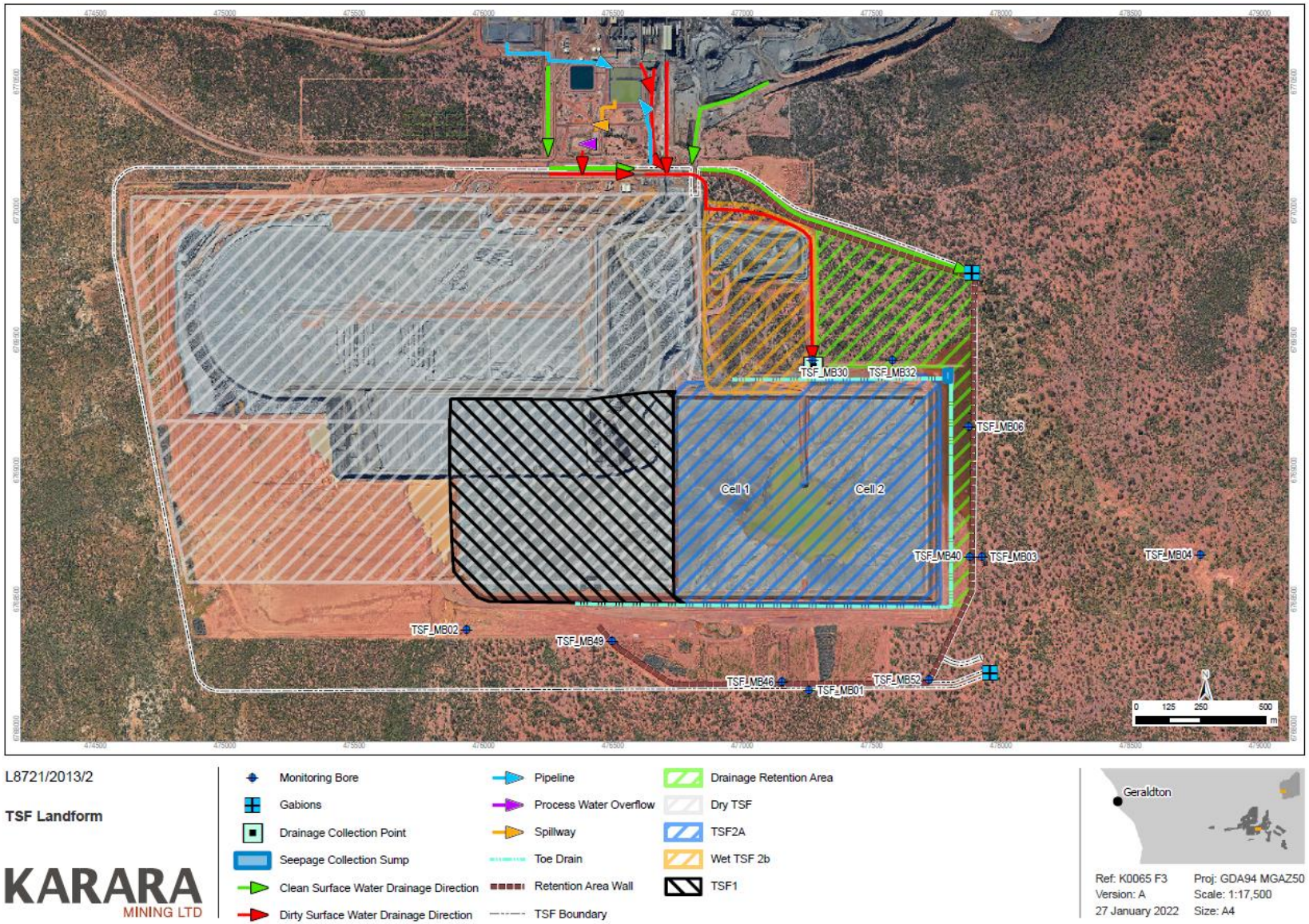

Figure 2: TSF Landforms

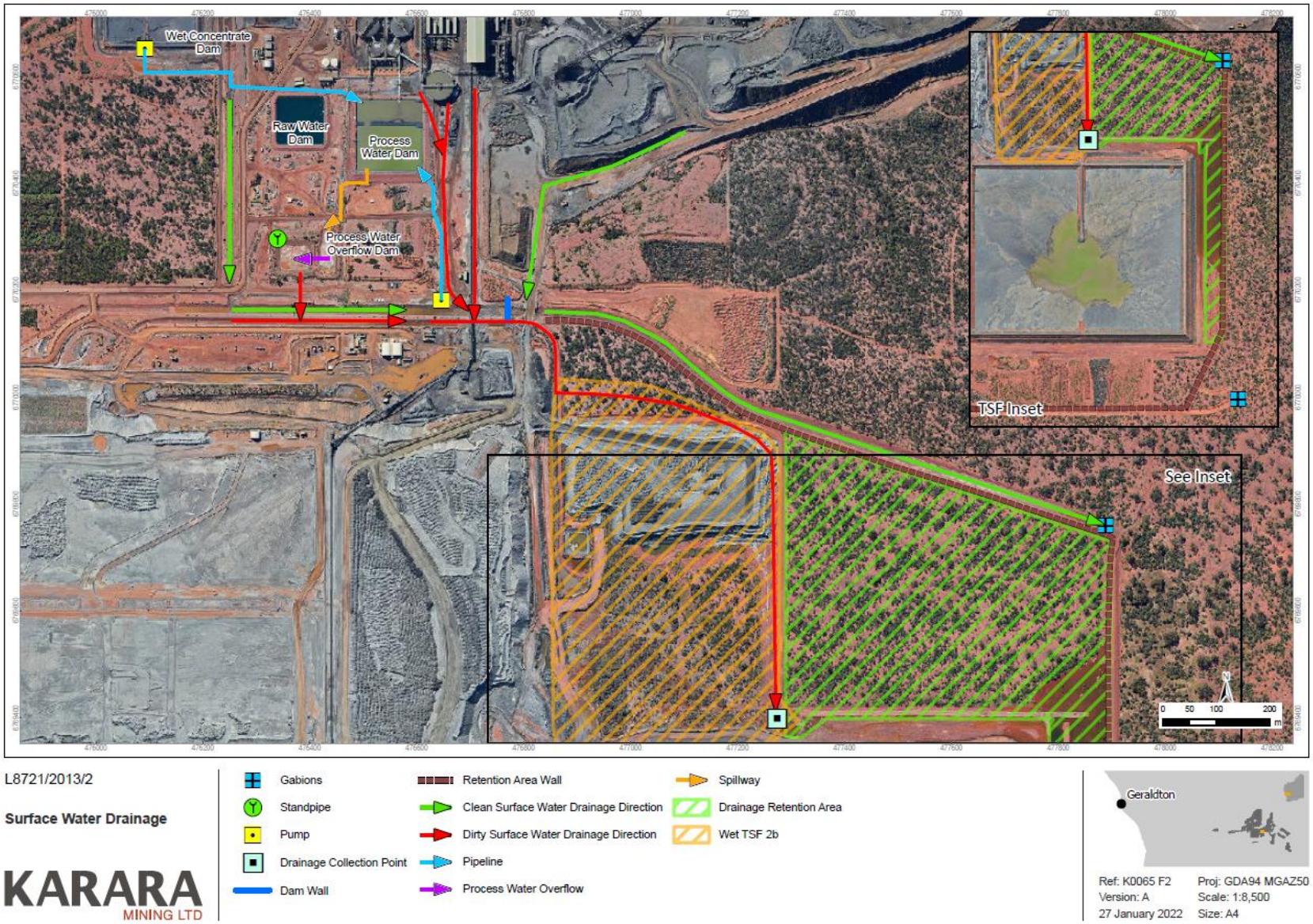

Figure 3: Surface water drainage

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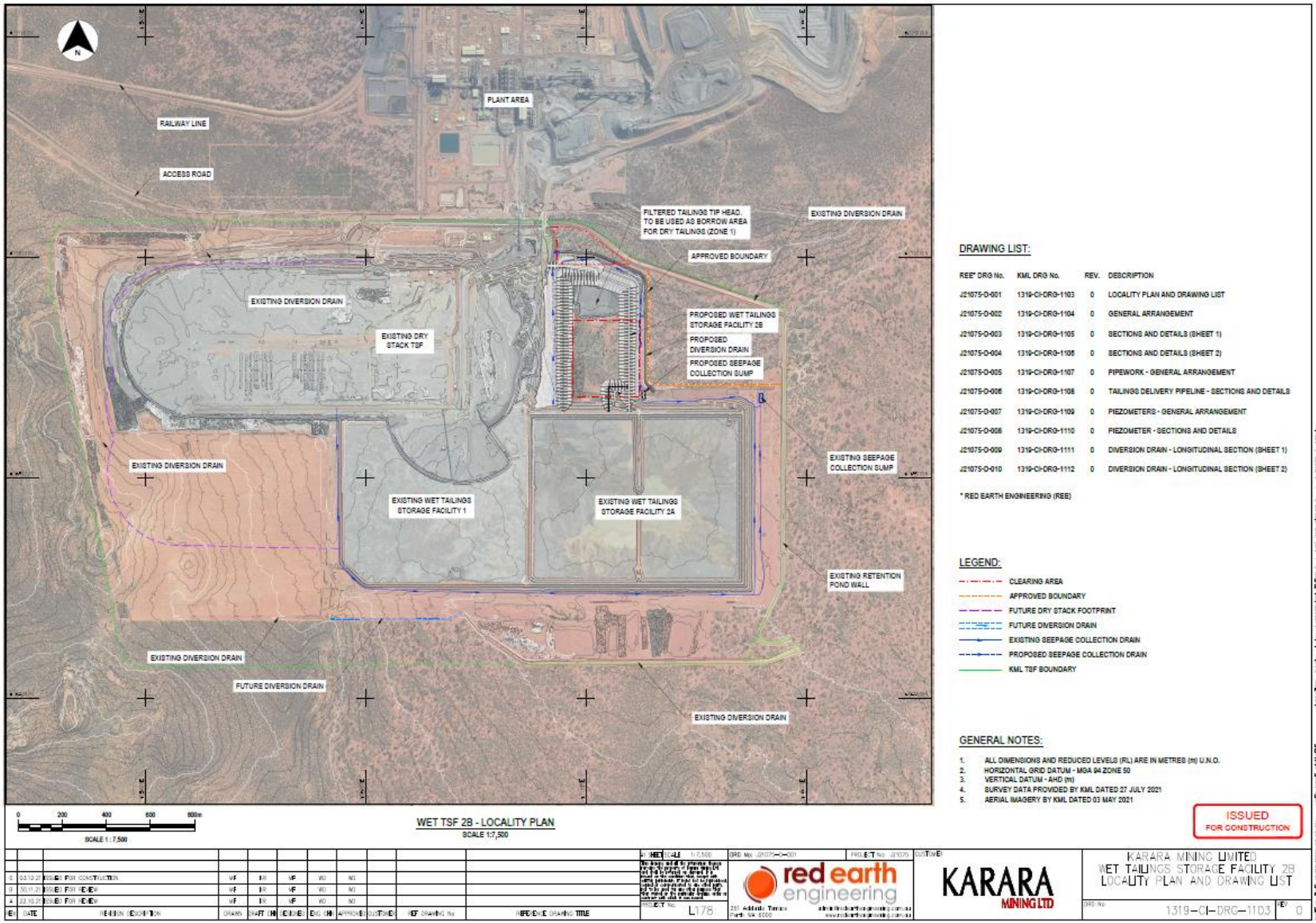

Figure 4: Location of existing and proposed tailings control structures

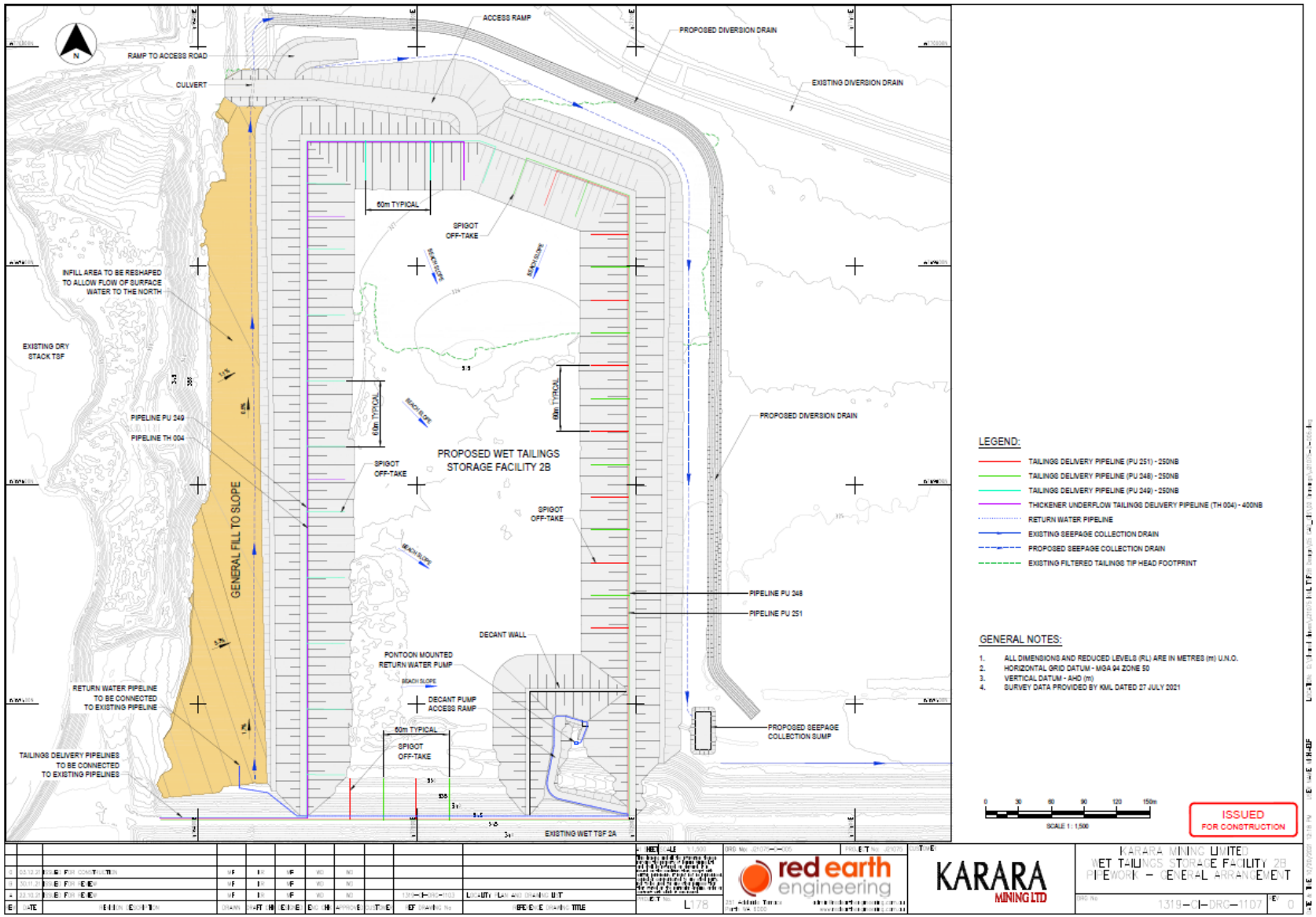

Figure 5: Diagram of proposed pipeline layout

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3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies and is provided for under other state legislation.

Table 3 and Figure 6 below provides a summary of potential environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental siting* (DWER 2020)).

Table 3: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	**Distance from prescribed activity**
-	*There are no human receptors within 10 km of the activity.*
Environmental receptors[1]	**Distance from prescribed activity**
Karara Rangeland Park	The Premises is located on formal pastoral land that has been incorporated into the Karara Rangeland Park. To note, the management plan for the Karara Rangeland Park has not been finalised to date.
Groundwater	2.7 to 24.4 mbgl

Note 1 - *Blue Hills TEC, Prospective Malleefowl and Western Spiny-tailed Skink habitat, Acacia karina (P1) Persoonia pentasticha (P3), Aboriginal and other heritage sites have all been addressed in Ministerial Statement (MS) 805 and or within s18 Ministerial Consent area.*

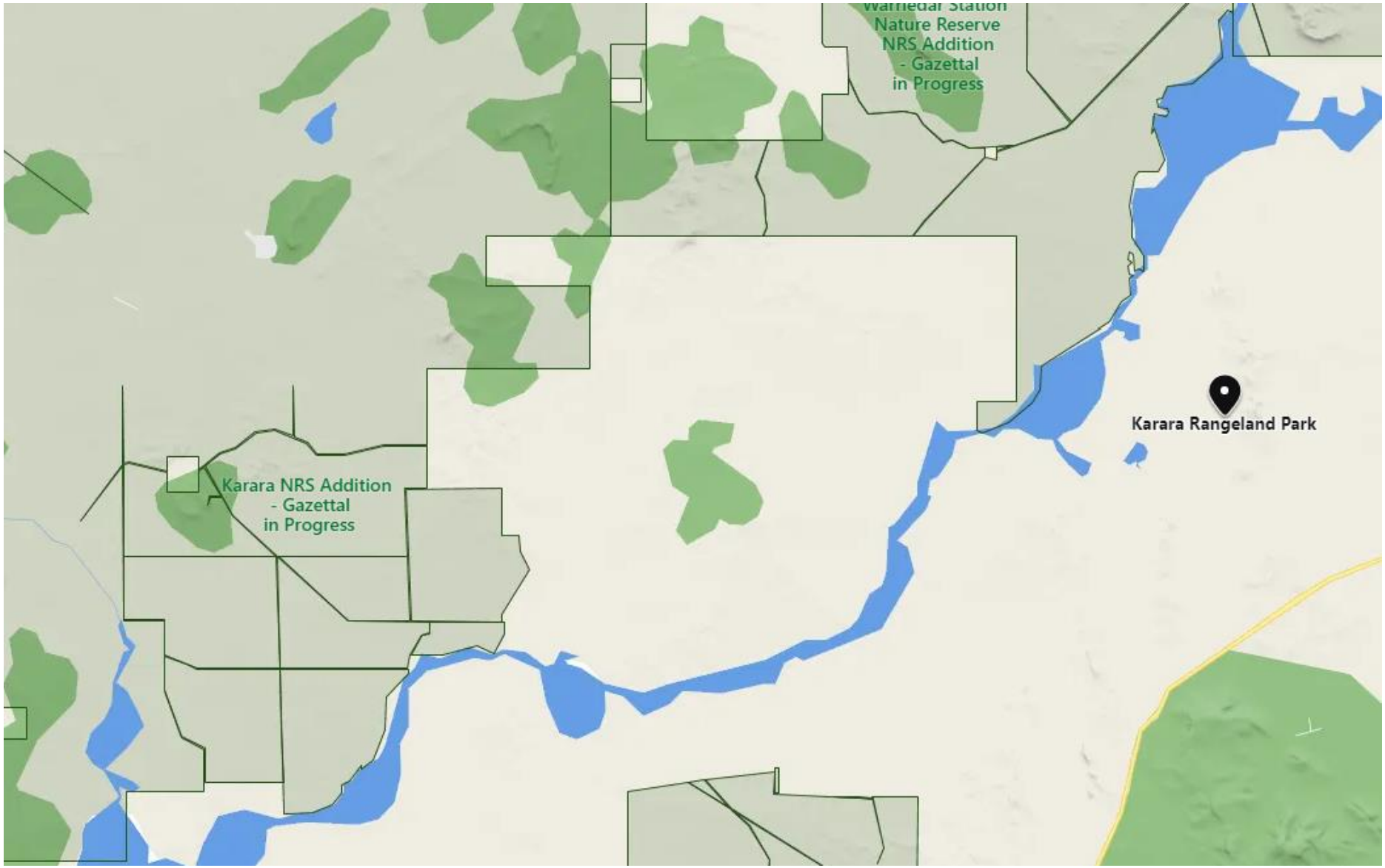

Figure 6: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

The Revised Licence L8721/2013/2 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e., Category 5, 6, 54 and 64 activities.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 4. Risk assessment of potential emissions and discharges from the Premises during construction and operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
Construction								
Wet TSF 2B	Dust	Air/windborne pathway causing impacts to photosynthetic activities.	Karara Rangeland Park	Refer to Section 3.1.1	C = Slight L = Rare **Low Risk**	Y	Condition 2, Table 1.	N/A
Operation								
Wet TSF 2B	Tailings	Seeping of contaminated water into groundwater changing the chemical balance of the water and increasing the water table level.	Groundwater	Refer to Section 3.1.1	C = Moderate L = Possible **Medium Risk**	Y	Conditions 2, 3, **4, 5, 6, 7, 8, 9, 10, 11, 25 and 26**	Inclusion of critical containment infrastructure design and construction requirements. A Critical Containment Infrastructure Report is required to demonstrate construction compliance and may only be operated once the construction compliance has been acknowledged by the department. A hydrogeological report is required to develop a conceptual hydrogeological model, determine the most suitable groundwater monitoring bore configuration and to recommend methods to recover seepage and mitigate groundwater mounding (refer also to section 2.2 under 'Hydrogeological report'). Inclusion of Infrastructure requirements for groundwater monitoring wells. Inclusion of reporting requirements for groundwater monitoring wells. Inclusion of baseline sampling. Inclusion of an annual water balance

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
								for TSF 2A and TSF 2B (refer also to section 2.2 under 'Water Balance'). Inclusion of groundwater monitoring requirements for Wet TSF 2B.
		Seepage and spills escape containment and impact native vegetation.	Karara Rangeland Park	Refer to Section 3.1.1	C = Minor L = Rare **Low Risk**	Y	Conditions 2, 3**, <u>4</u>**.	Inclusion of critical containment infrastructure design and construction requirements.
	Sediment laden stormwater	Waterborne sediments wash and negatively impact native vegetation.	Karara Rangeland Park	Refer to Section 3.1.1	C = Minor L = Rare **Low Risk**	Y	Conditions 1, 2, 3, **<u>4</u>**.	

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **<u>Bold and underline text</u>** depicts additional regulatory controls imposed by department.

4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Environmental Protection Authority (EPA) Services were advised of proposal on 2/05/2022.	EPA Services replied on 11 May 2022 advising that Wet TSF 2B is located within the existing approved development envelope and no additional disturbance is required beyond that already approved under MS 805. Provided that the licence amendment is consistent with MS 805 (e.g., the ability to achieve a dry stack final TSF landform is not compromised), assessment of Wet TSF 2B under Part IV of the EP Act would not be required.	Noted.
Department of Mines, Industry Regulation and Safety (DMIRS) were advised of proposal on 2/06/2022.	DMIRS advised on the 17 June 2020 that the proposed construction of Wet TSF (2B) appear consistent with approvals granted by DMIRS under the *Mining Act 1978* via mining proposal registration ID 103503. A detailed design report for TSF 2B has been reviewed by DMIRS Geotechnical Inspector of Mines. As a result of the review, DMIRS have imposed additional tenement conditions specific to construction of TSF 2B on the relevant tenements. Given this, DMIRS has no additional comments regarding this application.	Noted.
Licence Holder was provided with draft amendment on 3 August 2022.	Karara reviewed the draft and had no further comments. They requested the licence documents to be finalised.	DWER will finalise the licencing documents.

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 6 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 6: Summary of licence amendments

Condition no.	Proposed amendments
Licence History Table	Amendment to authorise the construction of Wet TSF 2B.
Condition 1	Updated references from ‘map’ to ‘figure’.
Condition 2, Table 1	Updated references from ‘map’ to ‘figure’. Inclusion of TSF2B to allow operation once

Condition no.	Proposed amendments
	constructed.
Condition 3, Table 2	Addition of TSF 2B to Scope of inspection.
Condition 4, Table 3	Condition inserted. Addition of Critical containment infrastructure design and construction requirements for TSF 2B infrastructure.
Condition 5	Condition inserted. Addition of audit of compliance reporting conditions for critical containment infrastructure for TSF 2B infrastructure.
Condition 6	Condition inserted. Critical Containment Infrastructure Report (CCIR) requirements.
Condition 7	Condition inserted. Addition of requirement of which TSF 2B can only be operated once the department has notified the Licence Holder that the CCIR meets the requirement of condition 6.
Condition 8	Condition inserted. Condition to engage a Hydrogeologist and submit to the CEO the subsequent report.
Condition 9, Table 4	Condition inserted. Infrastructure requirements for groundwater monitoring bores/wells.
Condition 10	Condition inserted. Requirement to submit a well construction report.
Condition 11	Condition inserted. Requirement to conduct baseline sampling as per condition 26.
Condition 12, Table 5	Condition number changed from 4 to 12. Table number changed from 3 to 5. Updated references from ‘map’ to ‘figure’.
Condition 13, Table 6	Condition number changed from 5 to 13. Table number changed from 4 to 6.
Condition 14	Condition number changed from 6 to 14.
Condition 15, Table 7	Condition number changed from 7 to 15. Table number changed from 5 to 7.
Condition 16, Table 8	Condition number changed from 8 to 16. Table number changed from 6 to 8. Updated references from ‘map’ to ‘figure’.
Condition 17	Condition number changed from 9 to 17.
Condition 18, Table 9	Condition number changed from 10 to 18. Table number changed from 7 to 9. Updated references from ‘map’ to ‘figure’.
Condition 19	Condition number changed from 11 to 19.
Condition 20	Condition number changed from 12 to 20.
Condition 21	Condition number changed from 13 to 21.
Condition 22	Condition number changed from 14 to 22.
Condition 23, Table 10	Condition number changed from 15 to 23. Table number changed from 8 to 10. Updated references from ‘map’ to ‘figure’.
Condition 24, Table 11	Condition number changed from 16 to 24. Table number changed from 9 to 11. Updated references from ‘map’ to ‘figure’.
Condition 25	Condition inserted. Requirement for the Licence Holder to undertake monitoring of an annual water balance for TSF 2A and TSF 2B.

Condition no.	Proposed amendments
Heading: Ambient environmental quality monitoring	Reformatted to remove numbering.
Condition 26, Table 12	Condition inserted. Table 12 inserted. Condition to monitor the baseline ambient environmental conditions prior to the operation of TSF 2B and monthly during operation.
Condition 27, Table 13	Condition number changed from 17 to 27. Table number changed from 10 to 13. Updated references from ‘map’ to ‘figure’.
Condition 28	Condition number changed from 18 to 28.
Condition 29	Condition number changed from 19 to 29.
Condition 30	Condition number changed from 20 to 30.
Condition 31, Table 14	Condition number changed from 21 to 31. Table number changed from 11 to 14. In-table references updated, plus inclusion to submit the annual water balance.
Condition 32, Table 15	Condition number changed from 22 to 32. Table number changed from 12 to 15.
Condition 33, Table 16	Condition number changed from 23 to 33. Table number changed from 13 to 16. In-table references updated.
Definitions, Table 17	Table number changed from 14 to 17. Updated references from ‘map’ to ‘figure’, inclusion of new definitions.
Schedule 1: Maps	Text formatting updates. Insertion of Figure 9 to Figure 12.
	Updated Figure 2, map to include Wet TSF 2B.
	Updated Figure 4, to show current sprayfield coverage of approximately 6.7 ha. Table 9: Emissions to land permits up to 16.5 ha, therefore this is an administrative amendment and there is no risk assessment required.
	Updated Figure 5, map to include Wet TSF 2B.
	Updated Figure 6, include Wet TSF 2B and revised route for the Dirty Surface Water Drainage Direction.
	Updated Figure 8 “Proposed Mobile Crusher Location” added to the licence in 2019, to remove the word “Proposed” as it is assumed the locations would no longer be proposed once the licence amendment was granted.
Schedule 2	Updated N1 form.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Karara Mining Limited (KML) 2022a, *Karara Mining – L8721/2013/2 Licence Amendment Application*, dated 27 January 2022.
5. KML 2022b, *Re: Response to Request for Further Information for Application for an Amendment to Licence (L8721/2013/2)*, dated 22 April 2022.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
Application type					
Works approval	☐				
Licence	☐	Relevant works approval number:		None	☐
		Has the works approval been complied with?		Yes ☐ No ☐	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes ☐ No ☐ N/A ☐	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes ☐ No ☐	
		Date Report received:			
Renewal	☐	Current licence number:			
Amendment to works approval	☐	Current works approval number:			
Amendment to licence	☒	Current licence number:	L8721/2013/2		
		Relevant works approval number:		N/A	☒
Registration	☐	Current works approval number:		None	☐
Date application received		27/01/2022			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Karara Mining Limited (070 871 831)			
Premises name		Karara Minesite Beneficiation Plant			
Premises location		Mining Lease M59/721, Mining Lease M59/644, Mining Lease M59/645, General Purpose Lease G59/38, Miscellaneous Licence L59/99, Miscellaneous Licence L59/109.			
Local Government Authority		Shire of Perenjori			
Application documents					
HPCM file reference number:		2012/008499-1			
Key application documents (additional to application form):		Surface water drainage figure Infrastructure Figure Landform Figure LICENCE HOLDER Wet Tailings Storage Facility 2B Detailed Design Report TSF Construction and Operations Environmental Risk			

	Assessment
Scope of application/assessment	
Summary of proposed activities or changes to existing operations.	Licence amendment Construction of Tailings Storage Facility (TSF) Wet TSF 2B to operate as an emergency backup should the Wet TSF 2A and tailings not operate at full capacity and efficiency. Once dry, dry stacking will occur over West TSF 2B.

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	**Assessed production or design capacity**	**Proposed changes to the production or design capacity (amendments only)**
Category 5: Processing or beneficiation of metallic or non-metallic ore.	2.7 million m^3 storage capacity for wet tailings.	No change to existing licence.

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes ☐ No ☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☒
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☒ No ☐	Ministerial statement No: MS 805 EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No ☒	Reference No: Clearing has been approved under the MS805
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	Certificate of title ☐ General lease ☒ Expiry: G59/38 28/08/2029 Mining lease / tenement ☒ Expiry: M59/644 & M59/645 on 09/04/2027 & M59/721 on 15/07/2029 Other evidence ☒ Expiry: L59/99 on 9/3/2031 and L59/109 on 18/9/2031.
Has the applicant obtained all relevant planning approvals?	Yes ☐ No ☐ N/A ☒	Approval: Expiry date: If N/A explain why? Approval has been granted under Part IV of the Environmental Protection Act 1986 and Ministerial Statement 805 applies to this site.

Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☐ No ☒	CPS No: N/A Clearing is approved under MS805
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes ☐ No ☒	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes ☐ No ☒	Application reference No: Licence/permit No: GWL171229
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☐ No ☐	Name: Gascoyne Groundwater Area Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes ☐ No ☒ N/A ☐ Regional office: Mid-West Gascoyne
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☒
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☐ No ☒	
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No ☒	
Is the Premises subject to any EPP requirements?	Yes ☐ No ☒	

Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☐ No ☒	Classification: N/A Date of classification: N/A