



## Application for Licence Amendment

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

---

<b>Licence Number</b>	L8345/2009/3
<b>Licence Holder</b>	Greenstone Resources (WA) Pty Ltd
<b>ACN</b>	100 341 599
<b>File Number</b>	2011/009446-1
<b>Premises</b>	King of the Hills Gold Mine (KOTH) LEONORA WA 6438  Legal description –  Part of mining tenements M37/67, M37/76, M37/90, M37/201, M37/222, M37/248, M37/330, M37/410, M37/429, M37/449, M37/451, M37/457, M37/547, M37/548, M37/572, M37/573, M37/574 and M37/1105  As defined by the Premises maps attached to the Revised Licence
<b>Date of Report</b>	2 October 2023
<b>Decision</b>	Revised licence granted

Melissa Chamberlain  
**A/MANAGER, RESOURCE INDUSTRIES  
REGULATORY SERVICES**

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

# Table of Contents

<b>1. Decision summary</b>	<b>1</b>
<b>2. Scope of assessment</b>	<b>1</b>
2.1 Regulatory framework	1
2.2 Application summary	1
2.2.1 Works Approval W6426/2020/1	1
2.2.2 Tailings Storage Facility 5 construction	2
2.2.3 Tailings Storage Facility 5 operation	5
<b>3. Risk assessment</b>	<b>5</b>
3.1 Source-pathways and receptors	5
3.1.1 Emissions and controls	5
3.1.2 Receptors	6
3.2 Risk ratings	8
3.3 Detailed risk assessment for tailings storage facility seepage	9
3.3.1 Overview of potential risk events	9
3.3.2 Source: characterisation of emissions	9
3.3.3 Pathway	10
3.3.4 Groundwater data	11
3.3.5 Proposed seepage controls and existing licence conditions	12
3.3.6 DWER assessment and regulatory controls	13
<b>4. Consultation</b>	<b>15</b>
<b>5. Conclusion</b>	<b>15</b>
5.1 Summary of amendments	15
<b>References</b>	<b>16</b>
<b>Appendix 1: Additional tables and figures</b>	<b>17</b>
<b>Appendix 2: Summary of Licence Holder’s comments on risk assessment and draft conditions</b>	<b>19</b>
<b>Appendix 3: Application validation summary</b>	<b>20</b>
Table 1: Approved and constructed embankment Stage heights	2
Table 2: Licence Holder controls	5
Table 3: Sensitive human and environmental receptors and distance from prescribed activity	6
Table 4. Risk assessment of potential emissions and discharges from the Premises during operation	8
Table 5: Standing water levels in monitoring bores around TSF5	12
Table 6: Consultation	15
Table 7: Summary of licence amendments	15
Table 8: Total element results for KOTH tailings material during TSF4 TLO	18

# 1. Decision summary

Licence L8345/2009/3 is held by Greenstone Resources (WA) Pty Ltd (Licence Holder), a wholly owned subsidiary for Red5 Limited, for the King of the Hills Gold Mine (KOTH, the Premises), located within part of Mining Tenements M37/67, M37/76, M37/90, M37/201, M37/222, M37/248, M37/330, M37/410, M37/429, M37/449, M37/451, M37/457, M37/547, M37/548, M37/572, M37/573, M37/574 and M37/1105 in Leonora, 6438.

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 L8345/2009/3 has been granted.

The Revised Licence issued as a result of this amendment consolidates and 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 6 June 2023, the Licence Holder submitted an application to the department to amend Licence L8345/2009/3 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- authorise ongoing operations for infrastructure constructed in Works Approval W6426/2020/1 limited to:
  - Stage 1 (operational height of RL 413.0 m) Tailings Storage Facility (TSF) 5 starter embankment.

This amendment is limited only to changes to Category 5 activities from the existing Licence. No changes to the aspects of the existing Licence relating to Category 6, 52, 54 and 89 have been requested by the Licence Holder.

#### 2.2.1 Works Approval W6426/2020/1

The works approval W6426/2020/1 granted on 23 October 2020, authorised the construction of Category 5 infrastructure TSF5 embankment raises Stage 1 – 4 (RL 412.5m – 422.5m). In addition to this, the works approval required the construction of additional monitoring bores located around TSF5. The construction of the monitoring bores was deemed compliant with a report submitted to the department on 22 December 2021.

As discussed in the previous amendment report to Licence L8345/2009/3 (June 2023, DWER reference *DWERDT799775*), there were changes made to the proposed and constructed design of TSF5 that differed from the design approved in W6426/2020/1. The Licence Holder stated that these changes were made following the results of a hydrogeological investigation required by condition 2 of the works approval. Due to this, the assessment of the Critical Containment Infrastructure Report for TSF5 indicated several non-compliances and deviations to the design outlined in the works approval. The assessment of these deviations indicated that the changes to design did not increase the risk to the environment. The department also considered comments received from the Department of Mines, Industry Regulation and Safety (DMIRS) that the new design was accepted under the revised mining proposal and raised no concerns with these changes. Section 2.2.2 discusses the changes to the construction of TSF5 from the

specifications in the works approval. The department was notified of the commencement of time-limited operations (TLO) on the 20 April 2023. Current conditions on the works approval allow for 180 calendar days of TLO and therefore authorised TLO is projected to end on 17 October 2023.

The Standpipe piezometer construction report was provided to the department with the submission of this application on 6 June 2023.

## 2.2.2 Tailings Storage Facility 5 construction

### TSF design

Constructed design of TSF5 has been assessed and approved under Mining Proposal Reg ID 114652. Based on the ANCOLD (2019) guidelines, the consequence rating for TSF5 has been assessed as “High A”. The Hazard rating under the Department of Mines and Petroleum (DMP, now DMIRS) Code of Practice (2013) is “Category 1 – High” (CMW, 2022).

### Constructed design

The construction for TSF5 began in 2004 but was limited to the clearing of the footprint and dumping of mine waste for the embankment. Stage 1 starter embankment construction will provide a storage capacity of 5.8 million tonnes (Mt) of tailings upon completion which is equivalent to about 1.4 years tailings deposition, assuming an ore processing rate of 4.0 Mt per annum (pa) and tailings dry in-situ density of 1.4 t/m<sup>3</sup>. At the maximum approved embankment height of RL 422.5 m, it should provide a storage of 8 Mt (CMW, 2023).

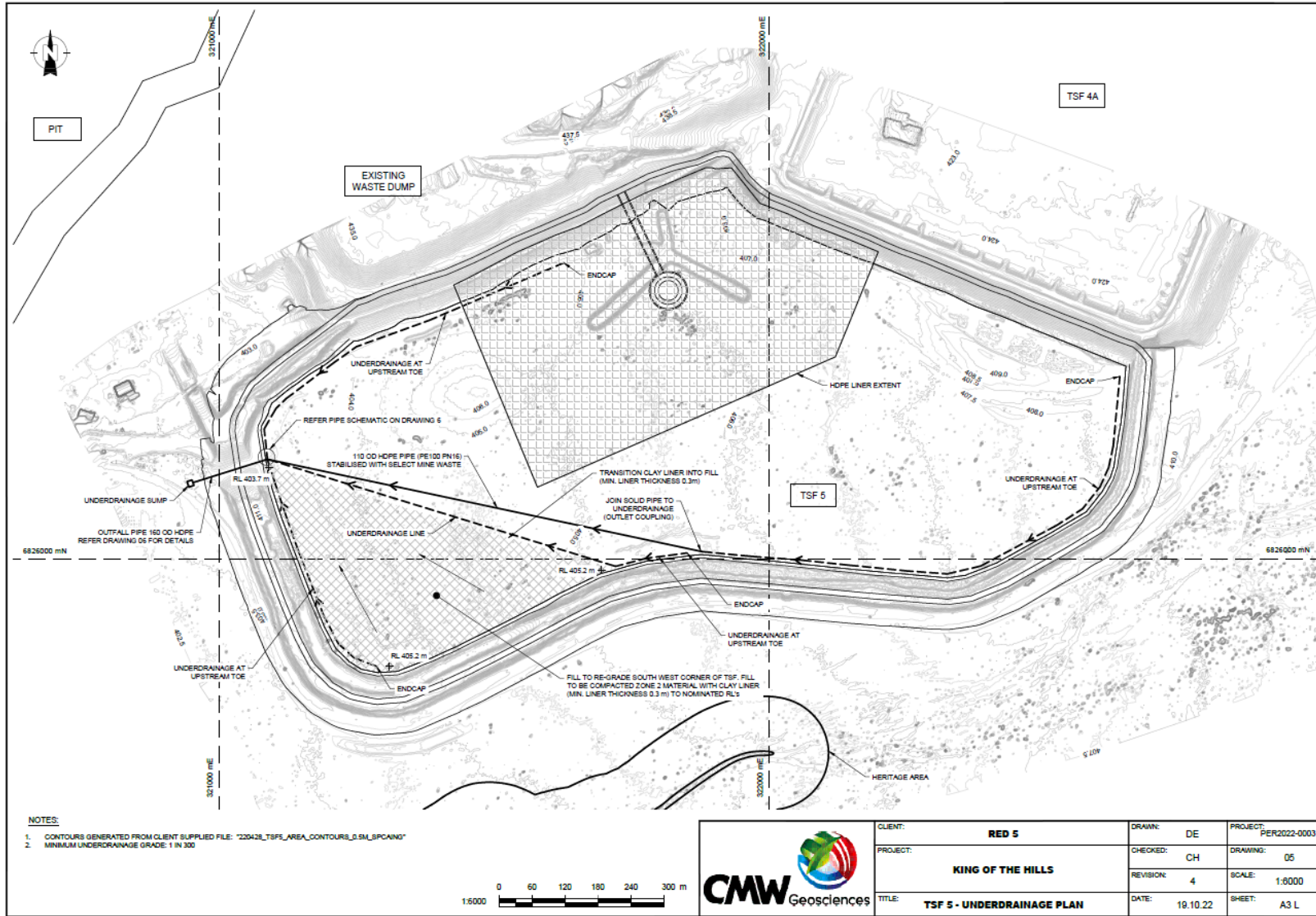
The main design changes from the construction authorised under W6426/2020/1 were:

- changes from the two cells to a single celled facility;
- changes to aspects of the underdrainage system including:
  - the removal of finger drains across the basin, and instead the toe drain around upstream embankment is composed of slotted pipe wrapped in geotextile cloth designed to intercept up to 544 L/min of seepage that may occur from discharge of tailings; and
  - single underdrainage recovery sump located in the northern end of the western embankment;
- the cut-off trench in the upstream zone of the embankment was constructed to 1.0 m instead of 2.0 m deep;
- changes to decant system with a pump from a tower to a rock ring central design; and
- changes to proposed embankment raises and number of stages (see Table 1).

See Figures 1 and 2 that show the as constructed design of TSF5.

**Table 1: Approved and constructed embankment Stage heights**

Stage	Approved construction height (mRL)	New proposed construction height (mRL)
1	412.5	413.0
2	415.5	417.
3	418.0	422.5
4	422.5	-



**Figure 1: Underdrainage design of TSF5**

Licence: L8345/2009/3

IR-T15 Amendment report template v3.0 (May 2021)

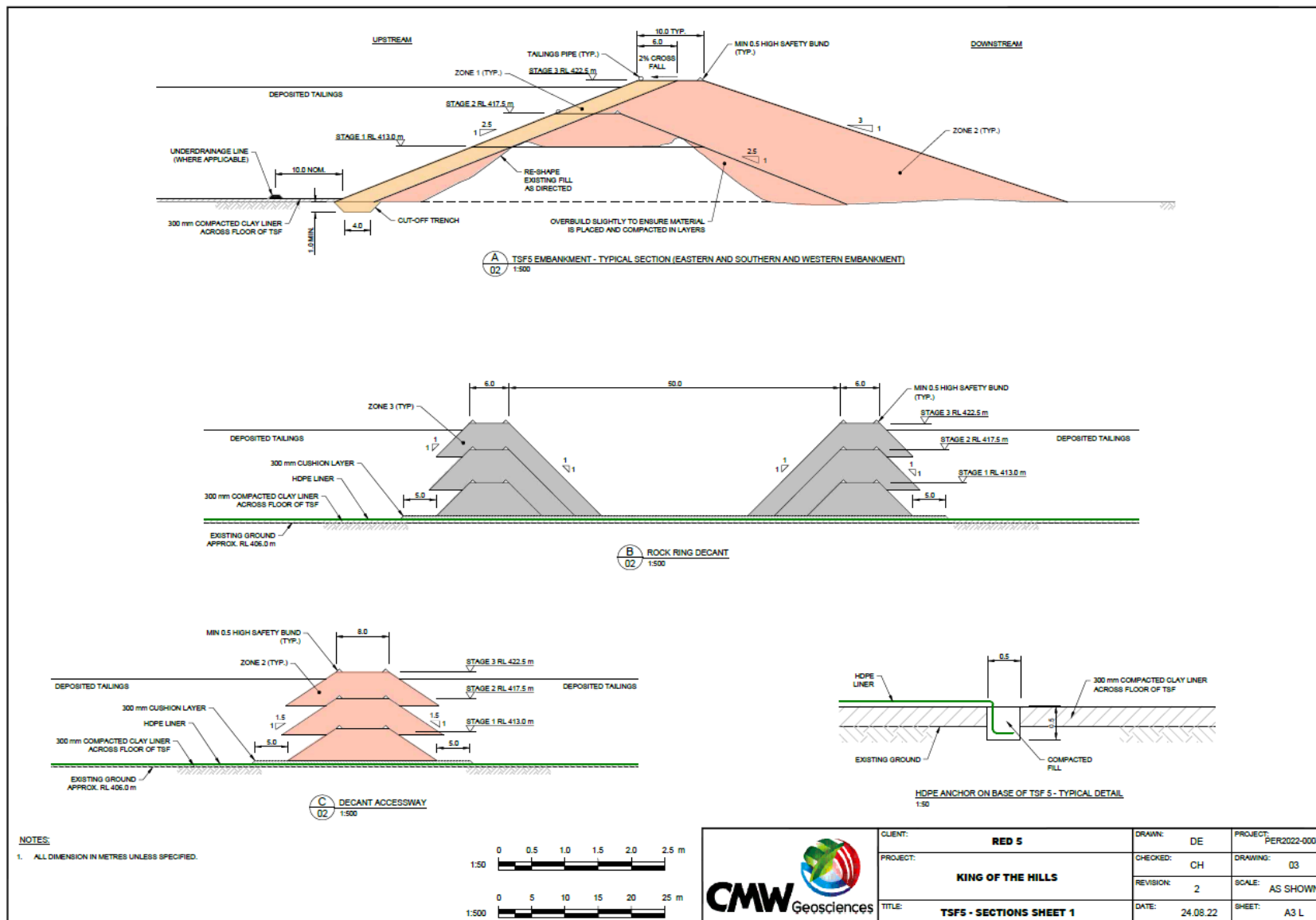


Figure 2: Rock-ring decant design

Licence: L8345/2009/3

IR-T15 Amendment report template v3.0 (May 2021)

### 2.2.3 Tailings Storage Facility 5 operation

There are no expected departures from the operational requirements conditioned within the works approval W6426/2020/1 and the current licence conditions. Tailings will be transported from the processing area to TSF5 through HDPE constructed pipelines (which are installed within earth-bunded corridors with scour pits or sumps, fitted with isolation valves and flow/leak detection sensors). These are connected to distribution pipelines fitted with spigots located at 25 m intervals along the crest. Deposition will occur sub-aerially in a cyclic basis to assist in maximum water removal. The supernatant that forms around the decant ring will be recycled and will be used in processing. The supernatant will be maintained at a minimum volume and size.

#### Inspections and monitoring

Inspection conditions for tailings delivery / return water pipelines, embankment freeboard and size and location of decant pond from the W6426/2020/1 will be transferred onto the Licence. Current licence conditions involve quarterly monitoring of bores for several parameters including standing water levels (SWL) and a suite of metals. Monitoring of the SWL includes a limit of no less than 4 metres below ground level (mbgl), and a trigger level of 6 mbgl with an associated condition to submit a seepage management plan. The existing condition, placed on the licence during the last amendment granted on 29 June 2023, requires the installation and monitoring of an additional 3 monitoring bores located around TSF5. These are discussed further in Section 3.3.

## 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**

Emission	Sources	Potential pathways	Proposed controls
Tailings discharge	Tailings seepage from TSF	Seepage through TSF floor and embankment to soils and groundwater	<ul style="list-style-type: none"><li>• TSF will undergo annual audits by a suitably qualified geotechnical engineer;</li><li>• Installed monitoring bores downstream between the TSF and surface water receptor;</li><li>• Supernatant pond size will be reduced as much as possible and decant water will be re-used for process water;</li><li>• Groundwater monitoring for quality and standing</li></ul>

Emission	Sources	Potential pathways	Proposed controls
Process / return water			<p>water levels (SWL) taken at quarterly basis in bores around TSF4 and TSF5;</p> <ul style="list-style-type: none"> <li>Constructed toe drain will capture potential lateral seepage from embankment and drain into collection sump to be pumped into supernatant pond; and</li> <li>20 Vibrating wire piezometers (VWP) and 7 Standpipe Piezometers (SPs) installed in the walls of the TSF5.</li> </ul>
	Embankment failure	Direct discharge to land	<ul style="list-style-type: none"> <li>The phreatic surface in embankments will be monitored monthly via VWP and SPs.</li> </ul>
	Overtopping of TSF		<ul style="list-style-type: none"> <li>Freeboard at TSF to be maintained to allow capture of rainfall from a 1% annual exceedance probability (AEP) 75 hour event; and</li> <li>Daily inspections.</li> </ul>
	Pipeline failure		<ul style="list-style-type: none"> <li>Pipelines constructed within bunds to capture spills and ruptures;</li> <li>Scour pits and sumps to be constructed along bunds to contain spills;</li> <li>Tailings and return water pipelines fitted with flow and leak detection sensors;</li> <li>Inspections of pipeline integrity; and</li> <li>Isolated valves have been incorporated.</li> </ul>

### 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 below provides a summary of potential human and 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
Residential Premises – pastoralist	<p>Approximately 3 km south of the premises</p> <p><b>Screened out as a sensitive receptor due to distance – no pathway exists given the distance.</b></p>
Aboriginal heritage sites	<p>Department desktop survey has identified:</p> <ul style="list-style-type: none"> <li>Wanangari Pool (site No. 22420) – located just south-west of TSF4 (located on footprint of approved TSF5); and</li> <li>Sullivan Creek / Lake Raeside – located 800 m west of processing plant.</li> </ul>



Environmental receptors	Distance from prescribed activity
Threatened/Priority Flora – <i>Frankemia georgei</i> (P1)	Located approximately 1 km north-west of the Premises
Priority flora - <i>Stenathemum patens</i> (P1)	Department desktop survey has identified: Located within 2.6 km of TSF4 Cell B.
Underlying groundwater (non-potable purposes)	<p>Located on Goldfields Groundwater Area</p> <p>Depth to groundwater monitored in bores around TSF5 ranged from 12 to 16 mbgl.</p> <p>Major tributary of the Sullivan Creek palaeovalley occurs immediately south of the TSFs with smaller northerly branches extending under TSFs.</p> <p>Historical information has indicated that groundwater levels were approximately 45 mbgl prior to mining activities.</p> <p>There are no known nearby water users.</p>
Surface water – Sullivan Creek, minor non-perennial watercourse	<p>Approximately 2.5 km west of TSF5, with surface water draining from the tributary located directly south of TSF5.</p> <p>Sullivan Creek drains into Lake Raeside located over 17 km south-west of the activities.</p>

### 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 in-complete 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 L8345/2009/3 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. Category 5 activities (deposition of tailings into TSF 5)

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 operation**

Risk Event					Risk rating <sup>1</sup>	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls		
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood					
<b>Operation</b>										
Deposition of tailings into TSF5	Process water	<b>Pathway:</b> pipeline rupture direct discharge to land <b>Impact:</b> contamination of soils and surface water	Nearby minor water course (Sullivan creek ~2.5km west of the TSF) Native vegetation adjacent to the TSFs	Refer to section 3.1.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Condition 1: operational requirements of infrastructure Condition 4: inspections	The works approval required pipelines to be constructed within bunds, fitted with isolation valves and with leak detection sensors (existing conditions on licence L8345/2009/3 also requires this). Existing licence condition for inspection of pipelines integrity to ensure they are observed to be in working order will minimise the chance of rupture. The Delegated Officer has determined that no additional regulatory controls are required.		
		<b>Pathway:</b> leachate by seepage through TSF walls and floor <b>Impact:</b> contamination of groundwater to nearby water receptors	Localised groundwater Surface water receptors: Nearby minor water course (Sullivan creek ~2.5km west of the TSF) and Lake Raeside (17km from premises)		C = Moderate L = Unlikely <b>Medium Risk</b>					
	Tailings	<b>Pathway:</b> leachate by seepage through TSF walls and floor <b>Impact:</b> mounding of groundwater causing vegetation death	Native vegetation adjacent to the TSFs		C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 1: operational requirements of infrastructure Condition 4: inspections Condition 12: groundwater monitoring Condition 13: 6 mbgl SWL trigger limit management action Condition 21: Construction of 3 additional groundwater monitoring wells around TSF5	Refer to Section 3.3		
		<b>Pathway:</b> leachate by seepage through TSF walls and floor <b>Impact:</b> contamination of groundwater impacting groundwater dependent vegetation			C = Moderate L = Possible <b>Medium Risk</b>					
		<b>Pathway:</b> overtopping of TSF <b>Impact:</b> contamination of soils, native vegetation and nearby surface water	Soils and adjacent vegetation Nearby minor water course (Sullivan creek ~2.5km west of the plant)		C = Minor L = Unlikely <b>Medium Risk</b>				Condition 1: operational requirements of infrastructure Condition 3: freeboard Condition 4: inspections Condition 10: tailings volumetric monitoring	The Delegated Officer has determined that the freeboard limits, inspections and process monitoring will be sufficient in mitigating the risk of overtopping.
		<b>Pathway:</b> direct discharge to land from embankment failure <b>Impact:</b> contamination of soils and surface water	Nearby minor water course (Sullivan creek ~2.5km west of the TSF) Native vegetation adjacent to the TSFs		C = Moderate L = Unlikely <b>Medium Risk</b>				Condition 1: operational requirements – VWP and SP monitoring Condition 4: inspections	It is noted that embankment stability is assessed and conditioned by DMIRS. The Delegated Officer has determined no additional regulatory controls are required

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. **Underline text** depicts additional regulatory controls imposed by department.

## 3.3 Detailed risk assessment for tailings storage facility seepage

### 3.3.1 Overview of potential risk events

Seepage occurring as a result of deposition of tailings into tailings storage facilities has the potential to impact groundwater quality and mounding of the water table. This may result in the following risk events which will be further assessed in the sections below:

- water table mounding may impact the health of adjacent native vegetation;
- contaminated seepage impacting potential groundwater dependent vegetation; and
- flow of seepage impacted groundwater may result in contamination of nearby surface water and creek line Sullivan Creek (~2.5 km west of TSF5) and in time, Lake Raeside (~17 km south of TSF5).

### 3.3.2 Source: characterisation of emissions

#### Tailings characterisation

Tailings for the deposition into TSF5 are expected to be similar to what is currently deposited into TSF4. Geochemical characteristics of the tailings slurry liquor was analysed for a suite of metals, pH and salinity during TLO for TSF4. The resulting total element and supernatant analysis are summarised below. Values were compared against Australian and New Zealand and Conservation Council (ANZECC) 2000 *Short-term irrigation guidelines*:

- the total element concentrations (Table 8, Appendix 1) and water quality parameters:
  - average pH of 8.81 (ranged from 8.32 – 9.27);
  - average salinity of 6,170 mg/L TDS (ranged from 5,700 – 6,700 mg/L); and
  - enrichment of cobalt (average reading of 0.5 mg/L against ANZECC limit 0.1 mg/L), copper (average reading of 8.34 mg/L against ANZECC limit of 5 mg/L), and mercury (average reading of 0.003 mg/L against ANZECC limit of 0.002 mg/L).
- supernatant concentrations of TSF4:
  - pH ranged from 7.7 – 8.8;
  - salinity ranged between 1,410 – 13,000 mg/L TDS – noting there was an increasing trend throughout the duration of TLO;
  - enrichment of copper (most recent sample reached a maximum concentration of 7.88 mg/L against ANZECC limit 5 mg/L);
  - no other exceedances, but a noted increase in heavy metal concentrations detected in the pond; and
  - increasing trend of Weak Acid Dissociable (WAD) cyanide levels throughout TLO with most recent samples reaching maximum levels of 16.8 mg/L.

#### Estimated seepage

Tailings slurry will be deposited into TSF5 at ~43% solids content by weight (CMW, 2022). Based off the initial design, the conclusions below were summarised in W6426/2020/1 Decision report (DWER reference A1946178) from the preliminary design of TSF5 (Knight Piesold, 2020):

- The seepage assessment used steady state flow assumptions. Considering the short operation of the facility, it is not expected that steady state conditions will be reached. Due to this and assuming there is a palaeochannel underneath TSF5, the “upper-bound scenario” was used:

- As the original design for TSF5 was 2 celled, seepage estimates were made for each separate cell as below:
  - For Cell B: expected seepage from 60 kL/day (360 kL/day using upper bound limits) during Stage 1, decreasing to < 5 kL/day (47 kL/day using upper bound limits) during the final stage for the design; and
  - For Cell A: was expected to have better seepage performance. Expected seepage from < 21 kL/day (< 220 kL/day upper bound estimates) during Stage 1, decreasing to < 3 kL/day (< 30 kL/day using upper bound estimates) in the final stage for the design.

The major benefits of the new design were to allow a slower rate of rise and therefore more time for the tailings to dry and consolidate. The expected return system would be more efficient and the decant pond could be kept further away from the embankment, improving seepage rates.

The estimated seepage loss with the new design is modelled on TSF5 filled to its highest currently authorised height of RL 422.5 m noting that slightly higher rates are expected in the shorter term as it is filled with tailings. The modelled seepage rates will vary from 0.25 L/s (21.6 kL/d) for a decant pond 250 m away from the embankment to 0.43 L/s (37.15 kL/d) for a decant pond against the embankment which is considered the worst-case scenario.

Expected mounding due to seepage was modelled (Rockwater, 2022) to predict rise of water level given the assumptions that it is in an unconfined aquifer of infinite extent, uniform permeability and specific yield and constant slope. It was determined that there will be an expected 0.9 m water level rise from 21 kL/d seepage rate and a 1.6 m rise from 37 kL/d. The greatest increase of water level is likely to be observed in monitoring bore MB20-3(s) (screen of 13 – 16 mbgl) and MB20-3(d) (screen of 55 – 58 mbgl).

Given that historical groundwater monitoring of seepage from TSF4 indicated heights of 3 – 4 mbgl, it suggests that water level rise may possibly exceed what has been modelled.

### 3.3.3 Pathway

#### Hydrogeology

The premises lies in the Leonora Domain of the Noseman-Wiluna greenstone belt. The area comprises of a 15 km wide zone of metamorphosed mafic, ultra mafic and felsic volcanic rocks. Smaller granitic intrusions occur within the belt, with the eastern margin of one closely associated with the KOTH orebody (Rockwater, 2022).

As noted previously, there is not a lot of reliable, consistent data from this premises. Several bores are located in the Tarmoola pit used historically for dewatering. The location and concentration of these bores along the north-eastern margin suggests they targeted a fracture zone possibly associated with contact, fault or shear in the mafic-ultramafic sequence.

There is a tertiary palaeovalley sand aquifer that runs parallel to Sullivan creek where there are seven production bores drilled to a depth of about 80 m, to supply water to the project. It has been noted that there are several monitoring bores located in this borefield, monitored and reported as part of the Groundwater Licence GWL 204011 (See Figure 3 Appendix 1). In the monitoring bores most closely associated with the major tributary, the SWL were recorded between 7.18 – 9.53 mbgl during the reporting period between January 2020 to July 2021. Water quality measures were also taken from the production bores for this period and produced the following results:

- pH ranged from 7.5 – 8.2;
- salinity ranged from of 2,210 – 4,447 mg/L TDS ; and
- electrical conductivity (EC) ranged from 2,480 – 6,540  $\mu$ S/cm.

There is a major tributary to this palaeovalley that occurs immediately south of TSF5, with smaller tertiary branches extending northwards beneath the footprint. In Rockwater (2022) it was confirmed that the major tributary has a width of 400 m and a maximum depth of 56 m as measured in the constructed bore MB20-3d. The base of this palaeovalley is filled with ferruginous gravel interbedded with clay and is overlain by heavily over-printed by dolomite that coarsens upwards. Average permeabilities of the weather mafic bedrock, palaeovalley clay and ferruginous gravels are approximately 0.045, 0.055 and 0.56 m/d respectively. During permeability tests, it was detected that the ferruginous gravel in the quaternary cover and upper part of the palaeovalley form the only significant aquifer. From the geology profile an intervening layer of clay was identified which restricts the zone of interest for seepage and management for TSF5 to the top 20 m of soil. The gravels located at a greater depth may be permeable as well but hydraulically isolated from the surface and potential seepage due to the intervening layers of clay. The premises lies on top of the Sullivan Creek catchment area which drains towards Lake Raeside located about 17 km from TSF5.

### 3.3.4 Groundwater data

#### Groundwater quality

From the limited data that has been conducted around TSF5, the baseline<sup>1</sup> water quality prior to deposition is:

- fresh to brackish, with TDS ranging between 580 – 4,900 mg/L;
- slightly alkaline, with pH ranging between 7.2 - 9.1; and
- low in concentrations of other analytes of concern, with no elevated levels of metals detected in the groundwater.

Noting conclusions from the Rockwater (2022) hydrogeological investigations, it was determined that due to the intervening layer of clay, the extent of seepage is likely to impact the top 20 m of the soil profile. The seven pairs of clustered bores around TSF5 were constructed with a 3 m screen. The base of the screen for all the deep bores ranges from 60-58 mbgl and the base of the screen for the shallow bores are all 16 mbgl. Drawing from the conclusions of the investigation suggests that seepage may be, if only initially, contained in the top 20 m of the soil

#### Groundwater levels

It was advised that prior to mining activities, groundwater levels were about 45 mbgl. The premises went into care and maintenance (C&M) in the early 2000s. Historically there was significant seepage issues occurring from the eastern margin of TSF4 cell A which triggered the installation and use of seepage recovery bores. As the premises came out of C&M, TSF4 Cell B was authorised as a dewatering discharge location. However, this saw recorded SWL in existing monitoring bores begin to rise to the point where it exceeded the 4 mbgl limit in one of the bores adjacent to the eastern embankment of Cell B. Deposition of tailings at the premises only recommenced on 21 June 2022 in TSF4 Cell A.

Seven sets of clustered shallow and deep bores were drilled and installed along the southern and western edge of TSF5 embankments in June 2021. Groundwater levels recorded in these bores are shown in Table 5. No recent data has been provided since deposition into TSF5 began and therefore no assumptions can be made on the impacts to SWL from seepage. Trends of groundwater level and quality should be revised in future amendments as more samples become available to understand the impacts of these activities.

---

<sup>1</sup> Noting that this premises has historical seepage issues and deposition in TSF4 began in mid-2021 and therefore this is not a true baseline and only representative of the groundwater quality prior to deposition into TSF5.

Noting that groundwater levels upstream from TSF5 (taken from around TSF4) range from 6 to 8 mbgl.

**Table 5: Standing water levels in monitoring bores around TSF5**

TSF5 Monitoring Bore	Standing Water Levels (mbgl)		
	June 2021 <sup>2</sup>	July 2022 <sup>3</sup>	September 2022 <sup>4</sup>
MB20-1(s)	12.08	12.46	11.94
MB20-1(d)	14.26	12.96	12.43
MB20-2(s)	13.16	13.56	13.15
MB20-2(d)	14.54	15.28	14.85
MB20-3(s)	13.805	14.25	13.83
MB20-3(d)	14.54	15.66	15.23
MB20-4(s)	-	15.42	15.01
MB20-4(d)	15	15.92	15.44
MB20-5(s)	15.35	14.45	14.1
MB20-5(d)	13.78	14.68	14.3
MB20-6(s)	13.99	15.16	-
MB20-6(d)	13.98	15.2	-
MB20-7(s)	13.73	14.92	14.36
MB20-7(d)	13.49	14.86	14.37

### 3.3.5 Proposed seepage controls and existing licence conditions

#### Proposed controls and monitoring

The Licence Holder proposes the following controls to manage seepage from TSF5:

- constructed controls such as underdrainage and decant system that will reduce seepage;
- TSF will undergo annual audits by a suitably qualified geotechnical engineer;
- the supernatant pond size will be reduced as much as possible and kept away from the embankment; and

<sup>2</sup> This value was calculated from in field data taken in metres below reference point (mbrp) from the top of the casing. Also noting this value was taken at the time these monitoring bores were first drilled and therefore may be considered to have some inaccuracies in the precision.

<sup>3</sup> Monitored during Time-limited operations for TSF4.

<sup>4</sup> Taken during the Hydrogeological investigation conducted as per compliance with condition 2 of W6426/2020/1.

- groundwater monitoring program for water quality parameters and SWL taken at a quarterly basis for the bores constructed around TSF5 and TSF4.

### Existing licence conditions

There are existing licence conditions (some which were conditioned by the Delegated Officer in the previous amendment<sup>5</sup>) which have been considered to mitigate and manage the risk of seepage from TSF5:

- condition 4, Table 2: Inspection of infrastructure:
  - requires to the daily inspection of tailings storage facilities embankment freeboards and tailings storage decant pond size and locations;
- condition 12, Table 8: Monitoring of ambient groundwater:
  - requires the monitoring of seven clustered shallow and deep bores<sup>6</sup> around TSF5 for following parameters: SWL (mbgl); pH; Electrical conductivity ( $\mu\text{cm/S}$ ); Total dissolved solids (mg/L); Weak acid dissociable (WAD) cyanide; and a suit of metals<sup>7</sup>; and
  - includes SWL trigger level of 6 mbgl and limit of 4 mbgl;
- condition 13 – Groundwater level management trigger and limit:
  - requires the Licence Holder to submit a seepage management plan to the department if the trigger level specified in Table 8 (6 mbgl) is exceeded;
- condition 21, Table 11: Groundwater monitoring well construction requirements:
  - following internal advice during the previous amendment, the requirement to construct an additional three monitoring bores around TSF5 was conditioned to better define the extent, shape, and height of the groundwater mounding, as well as detect groundwater flow to the southern boundary where there appears to be relatively dense, possibly groundwater dependent vegetation; and
  - the additional bores<sup>8</sup> have been conditioned within Table 8 to be part of the monitoring program once constructed and functional;
- condition 22 – Construction report:
  - the Licence Holder is required to construct these additional bores before 30 October 2023 and submit a report to the department within 30 days of construction.

### 3.3.6 DWER assessment and regulatory controls

DWER has assessed the risk for the following:

- Water table mounding may impact the health of adjacent native vegetation.

The consequence rating for the tailings seepage impacts to native vegetation is considered to be **moderate** as inundation of root zones can lead to vegetation stress or death. The likelihood rating is considered **unlikely** as internal advice recommended that the presence

---

<sup>5</sup> (June 2023, DWER reference *DWERDT799775*)

<sup>6</sup> MB20-1(S), MB20- 1(D), MB20-2(S), MB20-2(D), MB20- 3(S), MB20-3(D), MB20-4(S), MB20- 4(D), MB20-5(S), MB20-5(D), MB20- 6(S), MB20-6(D), MB20-7(S) and MB20- 7(D).

<sup>7</sup> Cadmium, Copper, Lead, Mercury, Zinc, Arsenic, Chromium, Iron, Magnesium, Nickel, Sodium, Potassium, Calcium Chloride and Cobalt.

<sup>8</sup> MB20-8, MB20-9, and MB20- 10.

of the ferruginous gravel will limit the extent to which mounding could occur.

The overall risk rating for potential impacts to native vegetation is therefore **medium**.

Current licence conditions that require groundwater quality and level monitoring, and the seepage management trigger limit of 6 mbgl is considered sufficient in managing this risk, and no additional regulatory controls will be conditioned.

- Contaminated seepage impacting groundwater dependent vegetation.

The consequence rating for contamination of groundwater impacts to native vegetation is considered as **moderate** as it can lead to vegetation stress or death. The likelihood rating is considered **possible** due to the presence of palaeochannels located underneath and hydraulically down gradient from TSF5 creating a preferential pathway for seepage. Technical advice sought from the department's Principal Hydrogeologist recommended that the most significant risk from seepage is what appears to be groundwater dependent vegetation near the south-eastern margin of the facility.

The overall risk rating for potential impacts to groundwater dependent vegetation is therefore **medium**.

In the previous amendment, this risk was addressed by the requirement to install an additional monitoring bore at this location. The monitoring of this bore and the others around TSF5 will detect contamination at this area and inform the risks to this vegetation. No additional regulatory controls are required.

- Flow of seepage impacted groundwater may result in contamination of nearby surface water and creek line Sullivan Creek (~2.5 km west of TSF5) and Lake Raeside (~17km south of TSF5).

The consequence rating for the tailings seepage impacts on the surface water features is considered as **moderate** given the salinity and potential contaminants in the seepage. The likelihood rating is considered as **unlikely** due to:

1. hydrogeological technical advice indicating the risk of groundwater discharging to land surface near TSF5 is low due to the presence of ferruginous gravels; and
2. that the slow groundwater flowrate and effect of natural attenuation processes in an aquifer for seepage contamination to reach Lake Raeside.

The overall risk rating for potential impacts to surface water features is therefore **medium**.

At this stage, surface water quality monitoring is not recommended, and no additional regulatory controls are required. The department's internal technical advice suggested that if the monitoring bores along the southern margin of TSF5 (located upgradient from the Sullivan Creek tributary) detect significant levels of groundwater contamination, additional investigations should be considered and carried out to assess whether environmental impacts would take place on riparian vegetation and hyporheic fauna in the creek.

The Delegated Officer has determined that given outcomes of previous assessments and current conditions on the licence, that no additional regulatory controls will be implemented at this time. However, as ongoing operations may increase the risk of seepage and therefore adversely impact groundwater levels and quality, a continuing review on groundwater trends should be considered.



## 4. Consultation

Table 6 provides a summary of the consultation undertaken by the department.

**Table 6: Consultation**

Consultation method	Comments received	Department response
Local Government Authority (Shire of Leonora) advised of proposal on 19 July 2023.	None received.	N/A.
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 19 July 2023.	None received.	N/A.
Licence Holder was provided with draft amendment on 20 September 2023.	Refer to Appendix 1.	Refer to Appendix 1.

## 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 7 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 7: Summary of licence amendments**

Condition no.	Proposed amendments
Cover page	Updated Premises name.
Condition 1, Table 1	Addition of operational requirements for TSF5.
Condition 4	Fixing clerical errors to numbering.
Condition 5, Table 3	Addition of TSF 5 as an authorised discharge location for deposition of tailing.
Condition 6, Table 4	Fixing clerical errors to numbering / referencing.
Condition 10, Table 6	Addition of TSF 5 for process monitoring: <ol style="list-style-type: none"> <li>1. Volumes of tailings deposited; and</li> <li>2. Volumes of water recovered.</li> </ol>

Figure 11	Updated to have new monitoring bore labelled.
Figure 12	Additional Figure to show location of TSF 5 VWP and SPs.

## References

1. Australian and New Zealand Environment and Conservation Council (ANZECC) 2000, *Australian and New Zealand Guidelines for Fresh and Marine Water Quality: The Guidelines*, Australia.
2. CMW Geosciences Pty Ltd (CMW) 2022, *Tailings Storage Facility (TSF5) Design report. REF PER2022-0003AC Rev 1*, Perth, Western Australia.
3. CMW Geoscience Pty Ltd (CMW) 2023, *Tailings Storage Facility (TSF5) Construction, REF2022-0003AQ Rev 1*, Perth, Western Australia.
4. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
5. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
6. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
7. Knight Piesold Pty Limited (Knight Piesold) July 2020, *Tailings Management Final Feasibility Study Report, prepared for Red 5 Ltd, PE801-00015/20, Rev 0*.
8. Rockwater Hydrogeological and Environmental Consultants (Rockwater) 2022, *King of the Hills Gold Mine: TSF5 Hydrogeological Investigation*, Perth, Western Australia.

## Appendix 1: Additional tables and figures

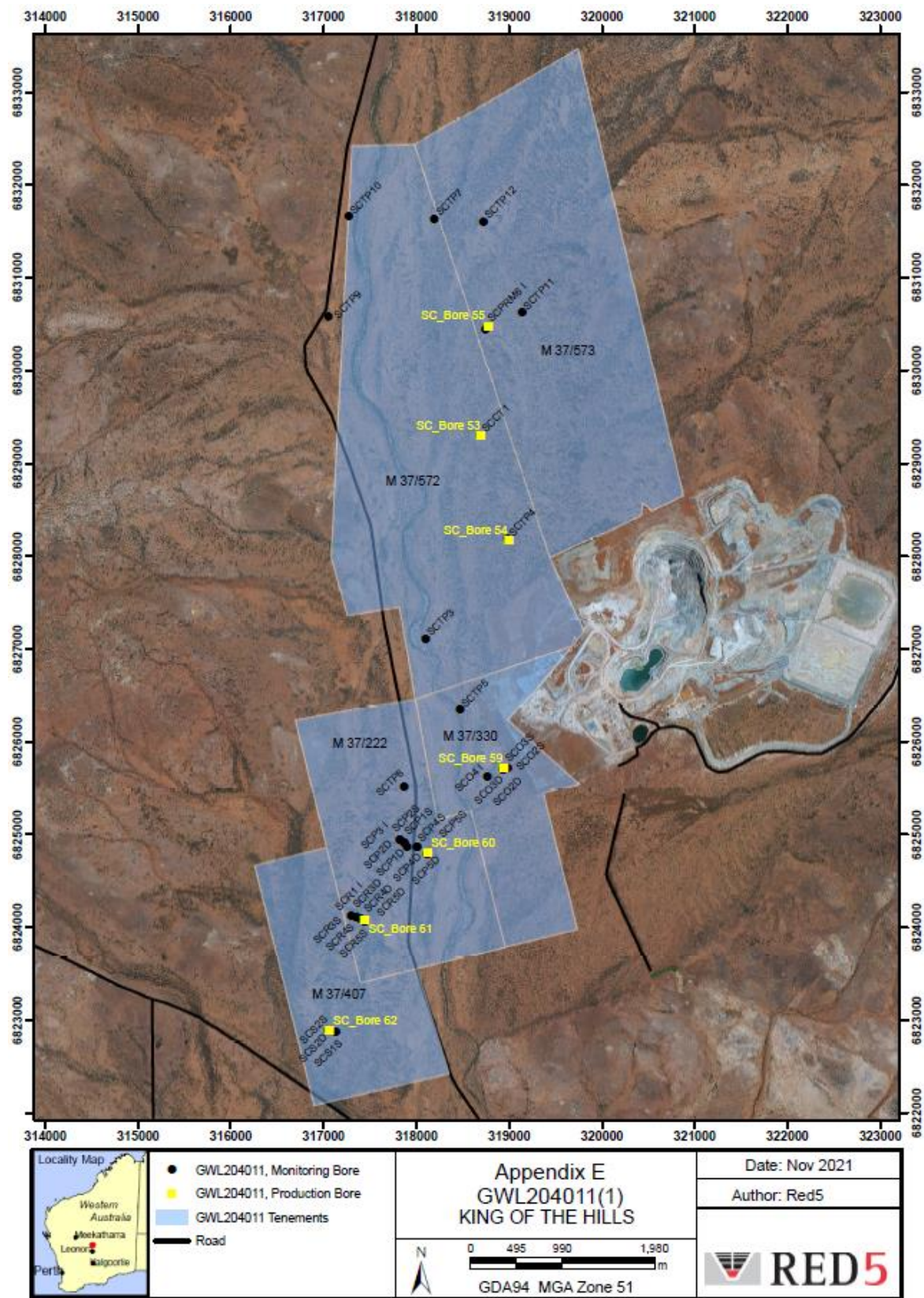


Figure 3: Production bores (yellow) and monitoring bores (black) in Sullivan Creek borefield - GWL204011

**Table 8: Total element results for KOTH tailings material during TSF4 TLO**

ANALYTE	UNIT	Tailing Slurry Sample 08/09/20 22	Tailing Slurry Sample 08/09/20 22	Tailing Slurry Sample 09/09/20 22	Tailing Slurry Sample 09/09/20 22	Tailing Slurry Sample 10/09/20 22	Tailing Slurry Sample 10/09/20 22	Tailing Slurry Sample 11/09/20 22	Tailing Slurry Sample 11/09/20 22	Tailing Slurry Sample 12/09/20 22	Tailing Slurry Sample 12/09/20 22
Ag	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Al	mg/l	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
As	mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B	mg/l	<b>0.95</b>	<b>0.70</b>	<b>0.75</b>	<b>0.75</b>	<b>0.80</b>	<b>0.65</b>	<b>0.65</b>	<b>0.75</b>	<b>0.70</b>	<b>0.65</b>
Ba	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Be	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bi	mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ca	mg/l	<b>485</b>	<b>555</b>	<b>520</b>	<b>480</b>	<b>510</b>	<b>535</b>	<b>555</b>	<b>555</b>	<b>535</b>	<b>520</b>
Cd	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ce	mg/l	<0.001	<0.001	<b>0.001</b>	<b>0.002</b>	<b>0.001</b>	<b>0.002</b>	<b>0.002</b>	<b>0.002</b>	<b>0.002</b>	<b>0.002</b>
Co	mg/l	<0.5	<0.5	<b>0.5</b>	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cr	mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cu	mg/l	<b>8.8</b>	<b>8.4</b>	<b>7.2</b>	<b>3.4</b>	<b>7.4</b>	<b>8.2</b>	<b>9.4</b>	<b>9.8</b>	<b>10.6</b>	<b>10.2</b>
Fe	mg/l	<b>8.0</b>	<b>6.0</b>	<b>4.0</b>	<b>1.0</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>3.0</b>	<b>4.0</b>	<b>4.0</b>
Hg	mg/l	<0.002	<0.002	<b>0.002</b>	<b>0.004</b>	<b>0.004</b>	<b>0.004</b>	<b>0.004</b>	<0.002	<b>0.004</b>	<b>0.002</b>
K	mg/l	<b>110</b>	<b>100</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Li	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mg	mg/l	<b>34.0</b>	<b>12.0</b>	<b>14.0</b>	<b>20.0</b>	<b>2.0</b>	<b>6.0</b>	<2.0	<b>4.0</b>	<b>8.0</b>	<b>12.0</b>
Mn	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mo	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Na	mg/l	<b>1536</b>	<b>1366</b>	<b>1254</b>	<b>1270</b>	<b>1212</b>	<b>1314</b>	<b>1364</b>	<b>1352</b>	<b>1416</b>	<b>1396</b>
Nb	mg/l	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ni	mg/l	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1.0</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>	<b>1.5</b>
Pb	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Rb	mg/l	<b>0.059</b>	<b>0.067</b>	<b>0.068</b>	<b>0.052</b>	<b>0.060</b>	<b>0.072</b>	<b>0.066</b>	<b>0.068</b>	<b>0.066</b>	<b>0.055</b>
Sb	mg/l	<b>0.076</b>	<b>0.052</b>	<b>0.040</b>	<b>0.028</b>	<b>0.024</b>	<b>0.020</b>	<b>0.016</b>	<b>0.016</b>	<b>0.012</b>	<b>0.012</b>
Se	mg/l	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sn	mg/l	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sr	mg/l	<b>5.4</b>	<b>5.2</b>	<b>4.8</b>	<b>6.8</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.2</b>	<b>5.0</b>
Ta	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Th	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ti	mg/l	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tl	mg/l	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
U	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
V	mg/l	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
W	mg/l	<b>0.06</b>	<b>0.05</b>	<b>0.04</b>	<b>0.05</b>	<b>0.08</b>	<b>0.07</b>	<b>0.07</b>	<b>0.07</b>	<b>0.08</b>	<b>0.07</b>
Zn	mg/l	<b>0.2</b>	<b>0.2</b>	<0.2	<0.2	<b>0.4</b>	<b>0.2</b>	<b>0.2</b>	<b>0.4</b>	<b>0.2</b>	<0.2
pH	-	8.47	8.72	8.32	8.29	9.39	8.77	9.27	9.36	8.87	8.64
TDS	mg/l	6700	6300	5800	5700	5800	6000	6200	6300	6500	6400

## Appendix 2: Summary of Licence Holder’s comments on risk assessment and draft conditions

Condition	Summary of Licence Holder’s comment	Department’s response
Table 8: Groundwater monitoring program – monitoring of metal parameters.	Licence Holder queried whether the metal parameters are to be dissolved or total measurements.	The department confirms that these measurements are to be taken and recorded for <b>dissolved</b> measurements to more accurately described the risk of contamination to groundwater. The department notes that previous results were provided as filtered meaning there will be continuity with past data. Table 8 has been reflected to indicate this.
Condition 13 Note 1: Monitoring bores should be kept separate from seepage recovery to ensure continuity and reliability of monitoring data. Conversion of monitoring bores into seepage recovery bores will therefore not be accepted.	Licence Holder has requested to change this to “ <i>Any proposed conversion of monitoring bores into seepage recovery bores must be explicitly justified, including with proposed alternative monitoring bore locations, by the suitably qualified hydrogeologist for consideration by DWER in submitted plan</i> ”.	As discussed in the previous amendment, the conversion of monitoring bores to seepage recovery bores will impact the continuity and reliability of the monitoring data. The department maintains that it is best practice to drill additional bores for seepage recovery purposes. The department understands that schedule and resourcing limits may cause a delay between detection of groundwater mounding and the installation of seepage recovery bores. The purpose of the trigger level is to ensure that the Licence Holder has adequate time to implement mitigation measures (i.e., seepage recovery bores) to manage groundwater levels.
Amendment Report – Section 3.3.6, page 14	Licence Holder has commissioned studies for the conservative assessment of potential paleochannels in this vicinity of TSF5. In light of its low-risk findings Red5 requests consideration of risk-based approach wording to be made out to remove potential ambiguity in interpretation. Licence Holder requests the following change ( <i>in italics</i> ):  “However, as ongoing operations are likely to increase the risk of seepage and adversely impact groundwater conditions, there should be future assessments on long-term impacts of seepage <i>if the 6 mbgl trigger level is every triggered or changes in environmental receptors are observed</i> ”.	The department notes that whilst current licence conditions have been implemented to manage impacts of groundwater mounding to receptors, ongoing operations and future embankment lifts to TSF5 may change the consequence and likelihood of seepage. Therefore, trends in groundwater levels and quality should be reviewed through subsequent licence amendments related to the operation of TSF5. The department has made changes to the wording of this section to better describe the intent.
Figure 4	Licence Holder has provided updated figure as requested in draft package.	N/A.

## Appendix 3: Application validation summary

SECTION 1: APPLICATION SUMMARY			
<b>Application type</b>			
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L8345/2009/3
		Relevant works approval number:	W6426/2020/1
Date application received	6 June 2023		
<b>Applicant and Premises details</b>			
Applicant name/s (full legal name/s)	Greenstone Resources (WA) Pty Ltd		
Premises name	King of the Hills Gold Mine		
Premises location	Mining tenements – M37/67, M37/76, M37/90, M37/201, M37/222, M37/248, M37/330, M37/410, M37/429, M37/449, M37/451, M37/457, M37/547, M37/548, M37/572, M37/573, M37/574 and M37/1105		
Local Government Authority	Shire of Leonora		
<b>Application documents</b>			
HPCM file reference number:	DER2021/000125~2		
Key application documents (additional to application form):	<ul style="list-style-type: none"> <li>King of the Hills Project – VWP and Standpipe Piezometer Construction Completion</li> <li>Mining Proposal – King of the Hills Project – Revision 4, Version 0</li> <li>TSF5 Hydrogeological Investigation King of the Hills</li> <li>W6426 Cat 5 KoTH Time Limited Operations (TLO) Report</li> </ul>		
<b>Scope of application/assessment</b>			
Summary of proposed activities or changes to existing operations.	<p>Operation of TSF5 following construction A critical containment infrastructure report was submitted to DWER prior to TLO. All construction activities related to the facilities initial construction have been completed. TLO commenced on 20 April 2023 and is permitted for up 180 days (17 October 2023).</p> <p>Further TSF5 lifts as permitted by W6426/2020/1 are to be carried out as required by W6426.</p>		
<b>Category number/s (activities that cause the premises to become prescribed premises)</b>			
<b>Table 1: Prescribed premises categories</b>			
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	6 000 000 tonnes per annum	No change	
Category 6: mine dewatering	1 000 000 tonnes per annual period	No change	
Category 52: Electric power generation	Up to 27.7 MW in aggregate	No change	
Category 54: Sewage facility	146.25 m3/day	No change	
Category 89: Putrescible landfill	Less than 5 000 tonnes per day	No change	
<b>Legislative context and other approvals</b>			

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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Mining lease / tenement <input checked="" type="checkbox"/>
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Subject to <i>Mining Act 1978</i>
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: 8938/1
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Licence/permit No: GWL63771(8) & GWL204011(2)
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any other Acts or subsidiary regulations?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>Mining Act 1978</i>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Classification: Several "Possibly contaminated – investigation required" sites within the footprint of the activity on the premises Date of classification: 6 September 2016