



## Application for Licence Amendment

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

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<b>Licence Number</b>	L7967/2003/6
<b>Licence Holder</b>	Savannah Nickel Mines Pty Ltd
<b>ACN</b>	103 729 282
<b>File Number</b>	DER2013/001406-1
<b>Premises</b>	Savannah Project WARMUN WA 6740  Legal description  M80/179, M80/180 and M80/181  As defined by the Premises maps attached to the Revised Licence
<b>Date of Report</b>	22 June 2021
<b>Decision</b>	Revised licence granted

**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 L7967/2003/6 is held by Savannah Nickel Mines Pty Ltd (Licence Holder) for the Savannah Project (the Premises), located on mining tenements M80/179, M80/180 and M80/181. The operation processes nickel-copper-cobalt bearing ore by conventional crushing, milling and flotation plant to produce nickel concentrate.

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 L7967/2003/6 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 Amendment summary

On 13 August 2020, the Licence Holder submitted an application to the department to amend Licence L7967/2003/6 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The amendment proposes:

- to raise sections (Figure 1) of the valley fill tailings storage facility 1 (TSF1) by 4m, from 378 to 382mRL (Table 1), allowing storage of tailings produced from processing the Savannah North ore for the production period May 2022 – April 2027 (Table 2); and
- to construct a spillway to discharge excess water from a storm event greater than a 1 in 100 year annual exceedance probability (AEP) 72 hour storm event of 340mm, whilst maintaining the required total freeboard. This will allow emergency water release in excess of the design storage volumes.

The Licence Holder proposes the 4m lift to TSF1 to accommodate Stage 2<sup>1</sup> of the Savannah North ore body development which includes processing 4.6 million tonnes of ore, producing 3.9 million tonnes of tailings. Tailings produced from the Stage 2 development will be stored as:

- Cement stabilised tailings paste (2.3 million tonnes) in underground stopes; and
- Slurry in TSF1 with the proposed 4m raise providing 1.6 million tonnes of additional storage capacity.

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<sup>1</sup> Savannah Nickel commenced operations in 2004 and the site was placed under care and maintenance between September 2016 and September 2018. Stage 1 of the Savannah North ore body development commenced in 2019.

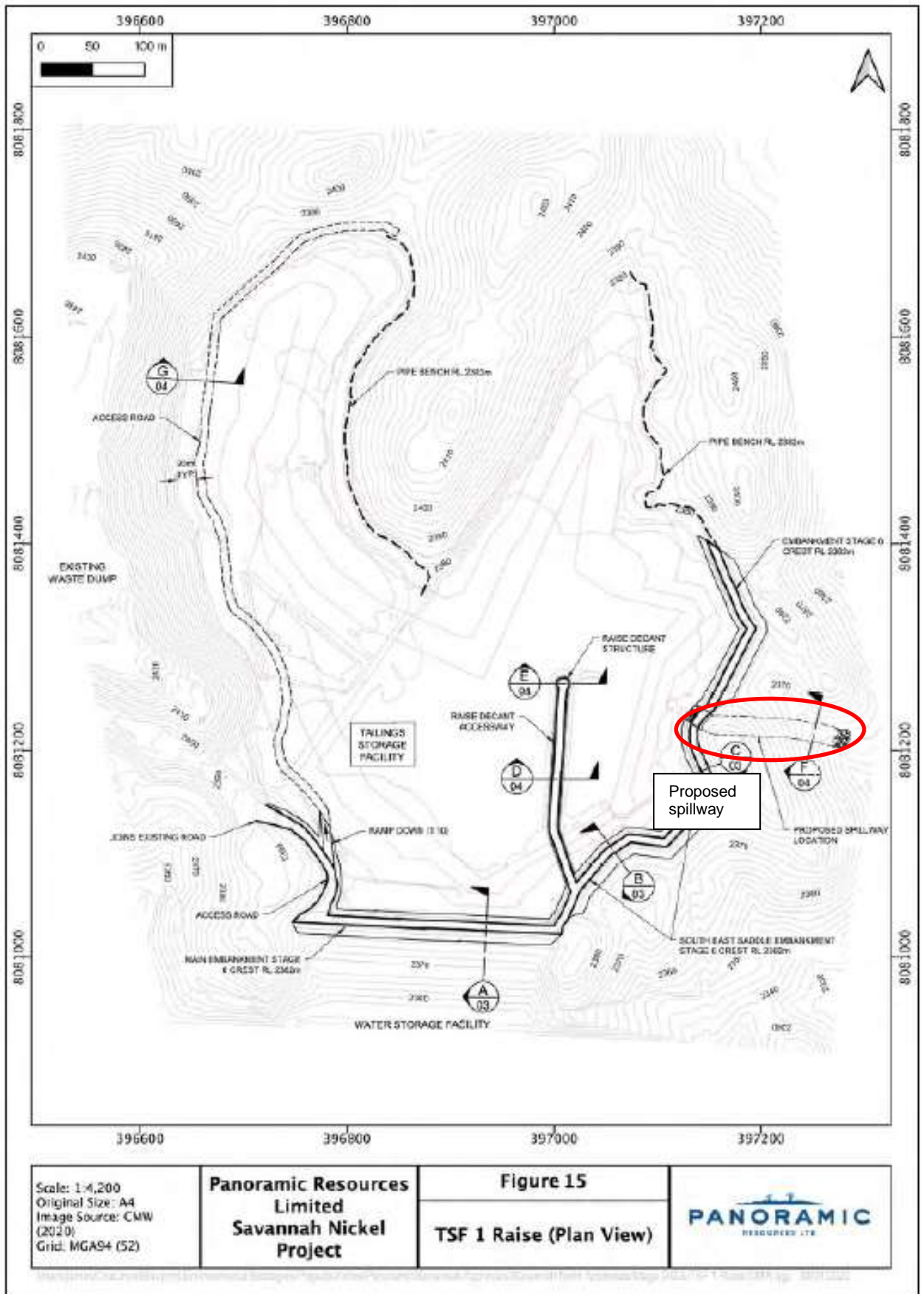


Figure 1: TSF1 – bold sections are proposed for lift

**Table 1: Estimated Additional Tailings Storage Volumes**

Crest RL (m)	Storage Volume (Mm <sup>3</sup> )	Storage Capacity
382	0.94	1.6 million tonnes

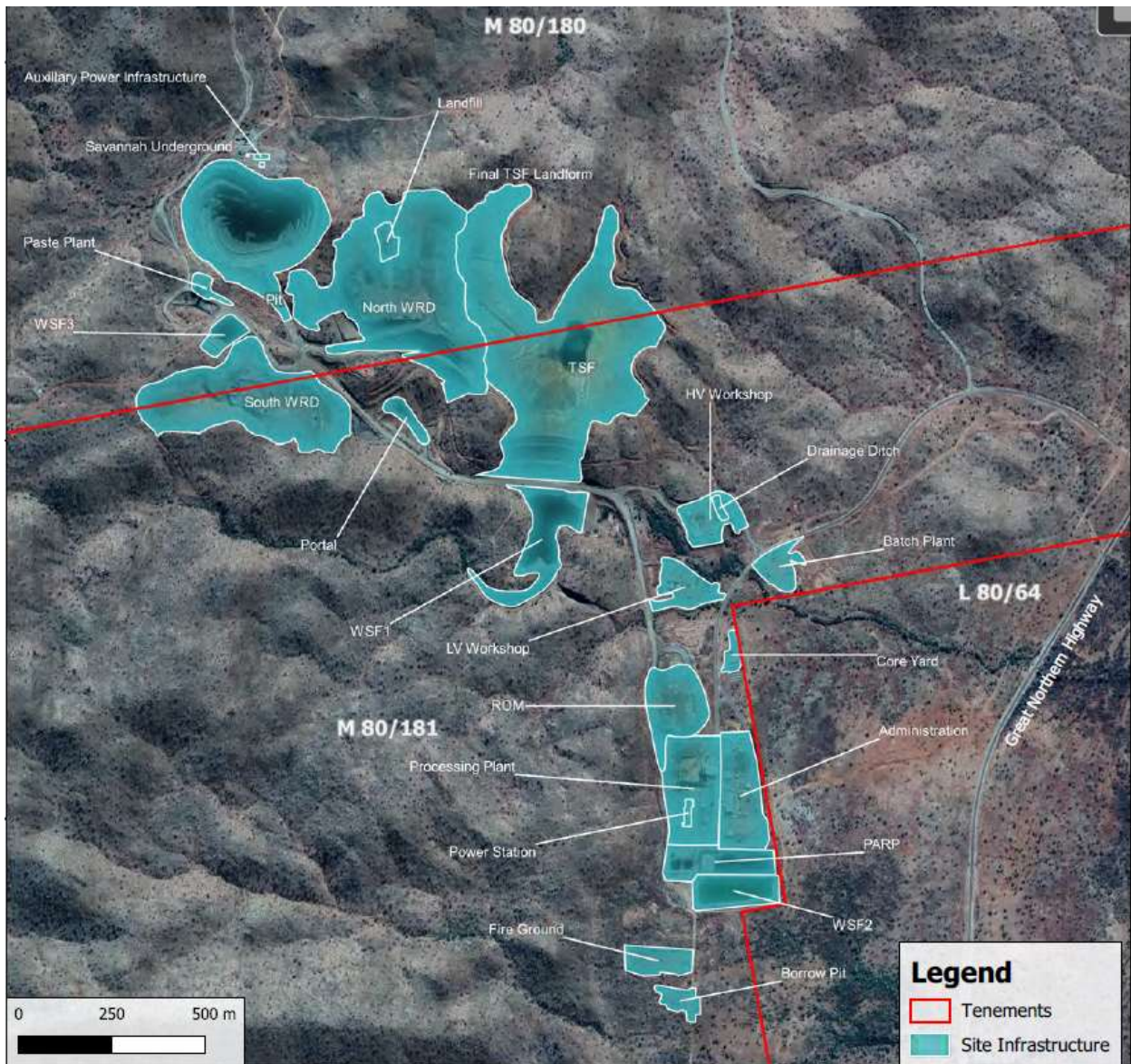
**Table 2: Tailings Production (May 2022 - April 2027)**

Tailings Storage	Cubic Metres	Tonnes
Tailings to TSF1	924,372	1,571,432
Underground paste storage	2,289,038	3,891,364
<b>Total</b>	<b>2,289,038</b>	<b>3,891,634</b>

There are no proposed changes to throughput capacity. This amendment is limited only to changes to Category 5 activities from the existing Licence. No other changes to the aspects of the existing Licence relating to Category 54 and 64 have been requested by the Licence Holder.

### **TSF1 and WSF1 summary**

Tailings are stored in the valley fill TSF1 under the existing Licence. Water Storage Facility 1 (WSF1) is immediately south TSF1 and is designed to capture seepage from TSF1 (Figure 2), to be diluted with stormwater, groundwater inflows and production water for re-use within the processing plant. WSF1 is an earth/rock fill dam with a capacity of approximately 132,362m<sup>3</sup>. Two additional water storage facilities WSF2 (capacity 46,111m<sup>3</sup>) and WSF3 (capacity 13,973m<sup>3</sup>) were constructed in 2010 whereby seepage water captured in WSF1 (and water from other sources in the premises) is preferentially pumped to these alternative storage locations. It is a condition of the existing licence that WSF2 and WSF3 have a 1.5mm HDPE liner to achieve a permeability of <10<sup>-9</sup>m/s or equivalent.



**Figure 2: Site Layout**

### 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 2017).

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 3 below. Table 3 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

**Table 3: Licence Holder controls**

Emission	Sources	Potential pathways	Proposed controls
<b>Construction – TSF1 embankment lift</b>			
Dust	Earthworks associated with embankment lifts, increased vehicle movements	Air/windborne pathway	<ul style="list-style-type: none"> <li>Use of water cart for dust suppression when generation of dust is visually observed.</li> </ul>
Noise	Earthworks associated with embankment lifts, increased vehicle movements	Air/windborne pathway	<ul style="list-style-type: none"> <li><i>Environmental Protection (Noise) Regulations 1997</i> apply at all times.</li> <li>All vehicles and equipment maintained to ensure they are operating efficiently and not unduly noisy.</li> <li>Where possible, mufflers and other noise attenuating equipment fitted.</li> </ul>
<b>Operation – TSF1</b>			
Dust	Erosion of deposited tailings and generation of dust	Air/windborne pathway	<ul style="list-style-type: none"> <li>Vehicle movements confined to defined roads and tracks.</li> <li>Tailings discharge methodology to continue as per current operations. Tailings form a surface hardpan limiting the generation of dust.</li> </ul>
<p>Tailings and contaminated water</p> <p>Historical and on-going seepage issues are described in Appendix 1</p>	<p>Deposition and storage in TSF1 after embankment raise.</p> <p>Contaminated water (metalloids and sulfate) in water storage WSF1</p>	<p>Seepage through base and embankments of TSF1 to soil and groundwater</p>	<p><u>The existing licence has conditions relating to TSF1 :</u></p> <ul style="list-style-type: none"> <li>Condition 3.4.1: requirement to monitor the daily volume for seepage recovery bores SMPB03 and SMPB12; and</li> <li>Condition 3.5.1: requirement to monitor ambient groundwater quality and surface water quality.</li> </ul> <p>The Licence Holder has also proposed the following controls as part of the Water Operating Strategy (AECOM, 2020b):</p> <ul style="list-style-type: none"> <li>Monthly groundwater level monitoring and quarterly groundwater quality monitoring at SMMB07, SMMB08, SMMB13, SMMB20 and SMMB27;</li> <li>Continued operation of seepage recovery bores and sumps to minimise the advance of the groundwater mound and solute plume downstream during the operational phase;</li> <li>If required (based on results of ongoing groundwater monitoring) installation of additional seepage recovery bores</li> </ul>



Emission	Sources	Potential pathways	Proposed controls
			<p>(triggers described in Appendix 1);</p> <ul style="list-style-type: none"> <li>• Use of pump to remove excess water from decant pond for transfer to process water pond and recycled through the process plant;</li> <li>• Reuse of water from WSF1 in the processing plant; and</li> <li>• Continued monitoring of groundwater dependent ecosystems and species within the creek lines in the vicinity of the project in accordance with <i>AECOM 2020b</i>, summarised in Appendix 1.</li> </ul>
<p>Tailings and contaminated water</p> <p>Historical and on-going seepage issues are described in Appendix 1</p>	<p>TSF1 and WSF1</p>	<p>Seepage through base and embankments of TSF1 to surface water (nearby Mine Creek and Fletcher Creek)</p>	<p><u>The existing licence has conditions relating to TSF1 :</u></p> <ul style="list-style-type: none"> <li>• Condition 3.4.1: requirement to monitor the daily volume for seepage recovery bores SMPB03 and SMPB12; and</li> <li>• Condition 3.5.1: requirement to monitor ambient surface water quality at WSF1 seepage, spillways, Mine Creek, Fletchers Creek.</li> </ul> <p><u>The Licence Holder has also proposed the following controls:</u></p> <p>In addition to seepage controls mentioned for control of seepage to groundwater (detailed above), surface water specific controls include:</p> <ul style="list-style-type: none"> <li>• Continued surface water monitoring along Mine Creek and Fletcher Creek (existing licence conditions); and</li> <li>• Implementation of additional management measures (e.g. additional recovery bores) where a sustained exceedance of target values is observed (described in Appendix 1).</li> </ul>
<p>Tailings and contaminated water</p>	<p>TSF1 and WSF1</p>	<p>Overtopping of TSF1 and direct discharge to land, surface water and contamination of soil and groundwater</p>	<p><u>The existing licence has conditions relating to TSF1:</u></p> <ul style="list-style-type: none"> <li>• Condition 1.2.4: minimum top of embankment freeboard of 300mm and “minimise volume of stored water by preferentially pumping decant water to the Process Water dam (PWD) for reuse in processing”;</li> <li>• Condition 3.4.1: monitoring of inputs (volumetric flow rate); and</li> <li>• Condition 3.5.1 ambient environmental monitoring.</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
			<p><u>The Licence Holder has also proposed the following controls:</u></p> <ul style="list-style-type: none"> <li>• Allowance of adequate freeboard to accommodate temporary storage of water on the TSF1 during a 1 in 100-year average recurrence interval (ARI) 72-hour storm event with excess water removed from TSF1 via a spillway during operations;</li> <li>• Design of the spillway to accommodate surface water flow resulting from a probable maximum precipitation (PMP) event (i.e. significantly greater than a 1:100 year ARI event);</li> <li>• Locating and constructing the spillway on competent natural rock of the adjoining hillside with additional armouring of the spillway;</li> <li>• Spigotting of tailings so that the tailings beaches slope and drain inwards (i.e. away from the embankments) ensuring that the supernatant pond is maintained around the decant tower and away from the main and saddle embankments;</li> <li>• Continued monitoring of the phreatic surface to ensure it remains at or below the levels assumed in the stability analysis;</li> <li>• Installation of two additional vibrating wire piezometers as part of the 4m raise;</li> <li>• Annual particle size distribution analysis;</li> <li>• Update TSF1 operating strategy to reflect additional monitoring requirements.</li> </ul>
Tailings and contaminated water	Existing pipelines from process	Tailings release due to pipeline leaks and spills	<p><u>The existing licence has conditions including:</u></p> <ul style="list-style-type: none"> <li>• Condition 1.2.6: automatic cut-offs and secondary containment; and</li> <li>• Condition 1.2.7: Daily visual integrity inspections.</li> </ul>
Contaminated stormwater (spillway)	TSF1 spillway – flooding from 1 in 100 year AEP 72 hour storm event of 340mm	Direct discharge to land, surface water and contamination of soil and	<ul style="list-style-type: none"> <li>• Spillway designed to accommodate surface water flow from a PMP event greater than a 1:100 year ARI event.</li> <li>• Locating and constructing the spillway on competent natural rock of the</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
		groundwater	adjoining hillside with additional armouring of the spillway with suitable materials to reduce the development of erosion rills and gullies.

### 3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2017), 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.

The nearest town is Halls Creek, located approximately 100km (south west) of the Premises. There are also two aboriginal communities, Frog Hollow and Warmun communities located 10km and 40km north of the premises respectively. Given the distance, the township and the two aboriginal communities are not considered receptors for this application.

Table 4 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 2016)).

**Table 4: Sensitive environmental receptors and distance from prescribed activity**

Environmental receptors	Distance from prescribed activity
Groundwater	<ul style="list-style-type: none"> <li>The Licence Holder's supporting information (Panoramic Resources, 2020) indicates a shallow alluvium sand, silt gravel aquifer generally associated with creek lines present to a depth of 0 to 2m below ground level (bgl).</li> <li>Underneath the shallow aquifer is a fractured bedrock aquifer within the weathered bedrock zone that extends to approximately 15m bgl "thin and/or ephemeral in elevated areas and virtually fully saturated in low lying areas".</li> <li>Followed by fresh bed rock suggested to form an aquitard, with the exception of faults which act as groundwater conduits.</li> <li>Groundwater is recharged by seasonally by wet season rainfall.</li> <li>Groundwater discharges year-round along the low-lying reaches of the larger drainages such as Fletcher and Stoney Creeks via spring-type discharge during the wet season and evapotranspiration during the dry season.</li> </ul>
Surface water (Figure 3)	<ul style="list-style-type: none"> <li>The Premises is located within the Fletcher Creek catchment, part of the Ord River system, which also includes minor creeks such as Stoney Creek, as well as the local drainage line referred to as Mine Creek.</li> <li>TSF1 is located in the central area of the Premises which drains to Mine Creek</li> </ul>

Environmental receptors	Distance from prescribed activity
	<p>(immediately south of TSF1) which drains eastwards to Fletcher Creek (1.6km east of TSF1).</p> <ul style="list-style-type: none"> <li>• Stoney Creek (including Rademy Spring and Rademy Creek), 2 km north of the Premises.</li> <li>• Ord River - 12km south of the Premises (Fletcher Creek flows in a southerly direction towards Ord River).</li> </ul>
<p>Groundwater dependent ecosystems (GDE) associated with the ephemeral creeklines of Stoney and Fletcher Creeks</p> <p>3 flora species have been identified as key GDE species along these creek lines:</p> <p><i>Eucalyptus camaldulensis, Melaleuca Leucadendra and Lophostemon grandiflorus.</i></p>	<ul style="list-style-type: none"> <li>• Fletcher Creek located 1.6km east of the TSF1.</li> <li>• Stoney Creek (including Rademy Spring and Rademy Creek), 2km north of the Premises.</li> </ul>
<p>Two Priority 1 (P1) species occur within the Premises: <i>Acacia smeringa and Sorghum plumosum var. teretifolium</i></p> <p>No threatened flora listed under the EPBC Act were recorded by the survey undertaken by Outback Ecology in 2011.</p>	<ul style="list-style-type: none"> <li>• A review of an ecology survey undertaken in 2011 was conducted in May 2020 and determined both the Acacia and Sorghum occur extensively across the premises.</li> </ul>
<p>Three species of fauna protected under Federal and/or State legislation have been recorded within the premises.</p>	<ul style="list-style-type: none"> <li>• Gouldian Finch (Priority 4 Threatened fauna recorded within Fletcher Creek 1.6km east of TSF1 and sited within premises.</li> <li>• Other species listed as “recorded within the premises”.</li> </ul>
<p>Aquatic and hyporheic fauna and aquatic ecosystems</p>	<ul style="list-style-type: none"> <li>• Fletcher Creek located 1.6km east of TSF1.</li> <li>• Stoney Creek (including Rademy Spring and Rademy Creek), 2 km north of the Savannah Project.</li> </ul>
<p>Livestock</p>	<p>The nearest groundwater fed stock watering point is located approximately 6km from the Project.</p>

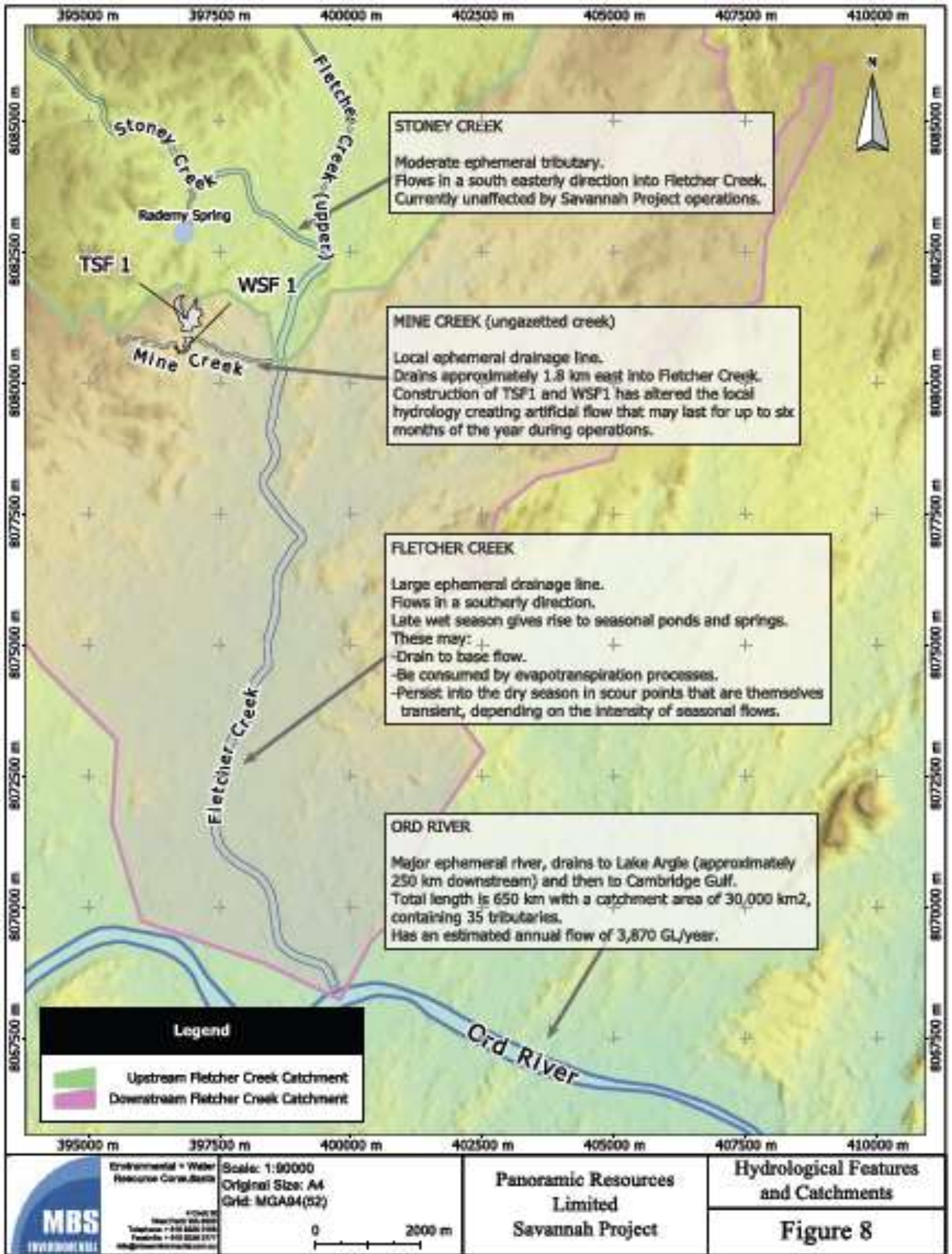


Figure 3: Distance to sensitive receptors

## 4. Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2017) 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 5.

The Revised Licence L7967/2003/6 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises.

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

**Table 5: Risk assessment of potential emissions and discharges from TSF1 during construction and operation**

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence holder 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				
<b>Construction</b>								
Earthworks associated with construction of spillway, embankment lifts, increased vehicle movements	Dust	Air/windborne pathway causing impacts native vegetation and priority flora species	Native vegetation and priority flora adjacent to works	Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A	N/A  Construction works take place for a limited duration only and are unlikely to cause impacts to adjacent native vegetation and priority flora species.
<b>Operation</b>								
Erosion of deposited tailings and generation of dust	Dust	Air/windborne pathway causing impacts native vegetation and priority flora species	Native vegetation and priority flora adjacent to works	Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A	N/A
Deposition and storage in TSF1 after embankment raise  Contaminated water in WSF1	Seepage (contaminated water)	Seepage associated with additional input through base and embankments causing mounding of groundwater, impacts to groundwater quality, groundwater dependent ecosystems and fauna (including aquatic) and health of native vegetation.	Groundwater dependent ecosystems, and fauna (including aquatic and hyporheic fauna)  Rootzones of native vegetation.	Refer to Section 3.1 and Appendix 1 – Seepage management	C = Moderate L = Likely <b>High Risk</b>	N	<u>Existing conditions</u> 3.4.1 - monitoring of seepage at seepage recovery bores SMPB03 and SMPB12  <u>Modifications to existing conditions</u> <b>1.2.9 – construction requirements</b> <b>3.5.1 - groundwater monitoring – high risk bores added</b>  <u>New conditions</u> <b>1.2.10 – embankment elevation and freeboard height</b> <b>1.2.11 - TSF1 operation</b> <b>1.2.12 – requirement to submit a</b>	Refer to Appendix 1.

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence holder 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				
							<u>seepage management plan</u> <b>1.2.13 – implementation of seepage management plan</b> <b>4.2.1 – reporting on seepage management in the annual environmental report</b> <b>4.2.4 &amp; 4.2.5 – compliance reporting requirements</b>	
	Seepage (contaminated water)	Seepage associated with additional input through base and embankments causing impact to surface water	Surface water Mine Creek located directly south of TSF1 Fletcher Creek, located 1.6 km east Adjacent native vegetation and priority flora	Refer to Section 3.1 and Appendix 1 – Seepage management	C = Moderate L = Likely <b>High Risk</b>	N	<u>Existing conditions:</u> 3.4.1 - monitoring of seepage at seepage recovery bores SMPB03 and SMPB12 3.5.1 - surface water monitoring (WSF1 seepage, spillways, Mine Creek, Fletchers Creek) <u>New conditions</u> <b>1.2.12 – requirement to submit a seepage management plan</b> <b>1.2.13 – implementation of seepage management plan</b>	Refer to Appendix 1 – Seepage Management
	Tailings and seepage (contaminated water)	Overtopping of TSF1 causing impacts to surface water quality, aquatic fauna, health of native vegetation, and contamination of soil and groundwater	Mine Creek located directly south of TSF1 Fletcher Creek, located 1.6 km east Protected fauna Aquatic fauna and ecosystems Surrounding native	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	N	<u>Existing conditions</u> 1.2.4 - minimum embankment freeboard of 300mm and “minimise volume of stored water by preferentially pumping decant water to the Process Water dam (PWD) for reuse in processing” 3.4.1 - monitoring of inputs (volumetric flow rate) 3.5.1 - ambient environmental monitoring	Existing controls are considered sufficient to prevent over-topping. The height of the new embankment lift and associated operating height (inclusive of freeboard) will be placed on the licence as a regulatory control.



Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence holder 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				
			vegetation				<u>New conditions</u> <b>1.2.10 – listing embankment height and operating height</b> <b>4.2.4 &amp; 4.2.5 – compliance reporting requirements</b>	
Tailings delivery line and water return lines (to and from TSF1)	Tailings and contaminated water	Pipeline burst or leak causing impacts to surface water quality, aquatic fauna, health of native vegetation, and localised soil contamination	Mine Creek located directly south of TSF1  Fletcher Creek, located 1.6 km east  Protected fauna  Aquatic fauna and ecosystems  Soils and surrounding native vegetation	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	<u>Existing conditions:</u> 1.2.6 - automatic cut-offs and secondary containment 1.2.7 - daily visual integrity inspections <u>Modifications to conditions</u> <b>4.3.1 – modified to include notification requirements in the event of a pipeline breach</b>	During this amendment condition 4.3.1 has been updated to include notification requirements in the event of a pipeline breach.
TSF1 spillway – flooding from 1 in 100 year AEP 72 hour storm event of 340mm	Tailings and contaminated storm water	Overtopping of TSF1 into spillway during heavy rainfall event causing impacts to surface water quality, aquatic fauna, health of native vegetation, and contamination of soil and groundwater	Mine Creek located directly south of TSF1  Fletcher Creek,  Protected fauna  Aquatic fauna and ecosystems	Refer to Section 3.1 – no controls proposed	C = Moderate L = Unlikely <b>Medium Risk</b>	N	<u>Modifications to conditions</u> <b>1.2.7 – updated inspections to include the spillway</b> <b>1.2.9 – spillway installation requirements added</b> <b>4.3.1 – modified to include notification requirements in the event of a discharge via the spillway</b> <b>4.2.4 &amp; 4.2.5 – compliance reporting requirements</b>	During this amendment the requirement for visual inspections and notification within 12 hours of a release have been placed on the licence as a regulatory control.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk Assessments* (DWER 2017).

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

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## 5. 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 Halls Creek advised of proposal (10/09/2020)	None received	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal (10/09/2020)	<p>DMIRS provided comment on (17/03/2021) stating the following:</p> <ul style="list-style-type: none"> <li>The geotechnical aspects of the TSF1 lift from 378mRL to 382mRL approved under Reg ID 85384 were assessed during the approval process, and provided the proponent fully complies with the design, construction specifications and operating procedures, the raise should perform to meet regulatory expectations.</li> <li>Stability was considered in the assessment, and embankment stability analyses were found to meet the ANCOLD guidelines and are acceptable to DMIRS.</li> </ul>	N/A
Department of Biodiversity, Conservation and Attractions (DBCAs) advised of proposal (10/09/2020)	<p>DBCAs provided the following comments on (18/11/2020):</p> <ul style="list-style-type: none"> <li>Potential impact to P1 species <i>Boronia jucunda</i> within proposed clearing area</li> <li>Recommends further groundwater monitoring in the catchment area;</li> <li>Consideration given to any metals/metalloids in bioavailable form;</li> <li>Consideration given to rate of acid accumulation if greater than that moving seasonally; and</li> <li>Recommends assessment for long-term metal and metalloids contaminant sinks in Fletchers Creek.</li> </ul>	<p>The department notes the comments.</p> <p>Refer to Appendix 1 – Seepage Management. The department will require the Licence Holder to submit a seepage management plan to manage significant additional seepage (and potential for higher metal and solute loadings) associated with the proposed works.</p>
Licence Holder was provided with draft amendment on (4/05/2021)	Refer to Appendix 3	Refer to Appendix 3

## 6. 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.

### 6.1 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
N/A	Redundant text summarising previous amendments removed. Licence history updated to reflect this amendment.
N/A	Interpretation updated to new licensing format. Redundant conditions 1.1.1, 1.1.2, 1.1.3 and 1.1.4 removed.
N/A	Definitions updated to include reference to the “Department”, “qualified hydrogeologist”, “qualified geotechnical engineer”, “Annual Exceedance Probability” and “metres relative level”.
1.2.7	Updated to include weekly spillway inspections.
1.2.9	Amended to include construction requirements for the spillway; TSF1 lift and monitoring instrumentation. Administrative update to remove reference to timeframes (not present in the table) and include Figure references.
1.2.10	New condition to include height of TSF1 Stage 2 embankment lift.
1.2.11	New condition to allow operation of the TSF1 after compliance with other conditions met.
1.2.12	New condition for the requirement to submit a seepage management plan.
1.2.13	New condition for implementation of the seepage management plan.
3.5.1	Inclusion of additional monitoring bores for quarterly groundwater quality sampling.
4.2.1	Administrative update: reference to DWER website placed on reporting requirement for Annual Audit Compliance Report. Requirement for reporting against seepage management placed in the Annual Environmental Report.
4.2.4 & 4.2.5	New conditions including reporting requirements for infrastructure listed in conditions 1.2.9 and 1.2.10.
4.3.1	Administrative update to include reporting requirements in the event of a pipeline breach. Updated to include reporting requirements in the event of a discharge via the spillway.
N/A	Schedule 1 (maps) updated to include figure captions; map of TSF1 and proposed sections for lift; and updated maps with recent aerial imagery.

## References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2016, *Guideline: Environmental Siting*, Joondalup, Western Australia.
3. DWER 2017, *Guideline: Risk Assessments*, Joondalup, Western Australia.
4. Environmental Research Institute of the Supervising Scientist 2009, *Ecotoxicological Assessment of Seepage Water from the Savannah Nickel Mine*.
5. Panoramic Resources 2020, Savannah Project Licence Amendment (L7967/2003/6) Supporting Document trim reference A1923779AECOM 2020, Savannah TSF Raise Groundwater Assessment, trim reference A1923779.
6. AECOM 2020b Savannah Nickel Mine Water Operating Strategy, trim reference DWERDT407469.
7. Savannah Nickel Annual Environmental Report 2018 trim reference A1739917.
8. Savannah Nickel Annual Environmental Report 2020 trim reference DWERDT366898.
9. Savannah Nickel response to request for further information 2021(a) trim reference A1976614.
10. Savannah Nickel response to request for further information 2021(b) trim reference DWERDT428473.

## Appendix 1: TSF1 Seepage Issues

### Site Seepage Issues

Seepage from TSF1 and from previous operational practices, including the use of WSF1 (downstream of TSF1), have been significant (Table 8). Seepage reported for the 2015/2016 period prior to the site entering care and maintenance was 1,633m<sup>3</sup>/day. Seepage for the 2019/2020 period was reportedly 1,411m<sup>3</sup>/day (Savannah Nickel RFI response, 2021b).

**Table 8: Seepage summary**

Reporting period	Tonnes of ore processed	Seepage reported
2015/2016	870,541	1,633m <sup>3</sup> /day
2019/2020	388,759	1,411m <sup>3</sup> /day

Seepage modelling for 2019 indicated 2,032m<sup>3</sup>/day (a higher seepage rate than 1,411m<sup>3</sup>/day) (Savannah Nickel RFI response, 2021a). Modelled seepage predictions were higher as they were based on long-term average rainfall and tailings deposition. Lower than predicted inputs for the 2019 period resulted in an actual seepage rate lower than predicted in the AECOM modelling. Seepage is predicted to increase by 24% with the TSF1 lift proposed by this amendment (AECOM, 2020).

### Groundwater levels

AECOM (2020) reports groundwater depth and quality beneath TSF1 and WSF1 as directly affected by seepage and fluctuates in response to the levels and quality in those source areas. Monitoring bore data show that the water table close to TSF1 and WSF1 has risen by approximately 10m from 2009 to 2019 and responds to non-seasonal fluctuations based on the levels of water in the decant pond and WSF1. Groundwater modelling conducted by AECOM (2020) predicts the 4m TSF1 lift proposed in this amendment will:

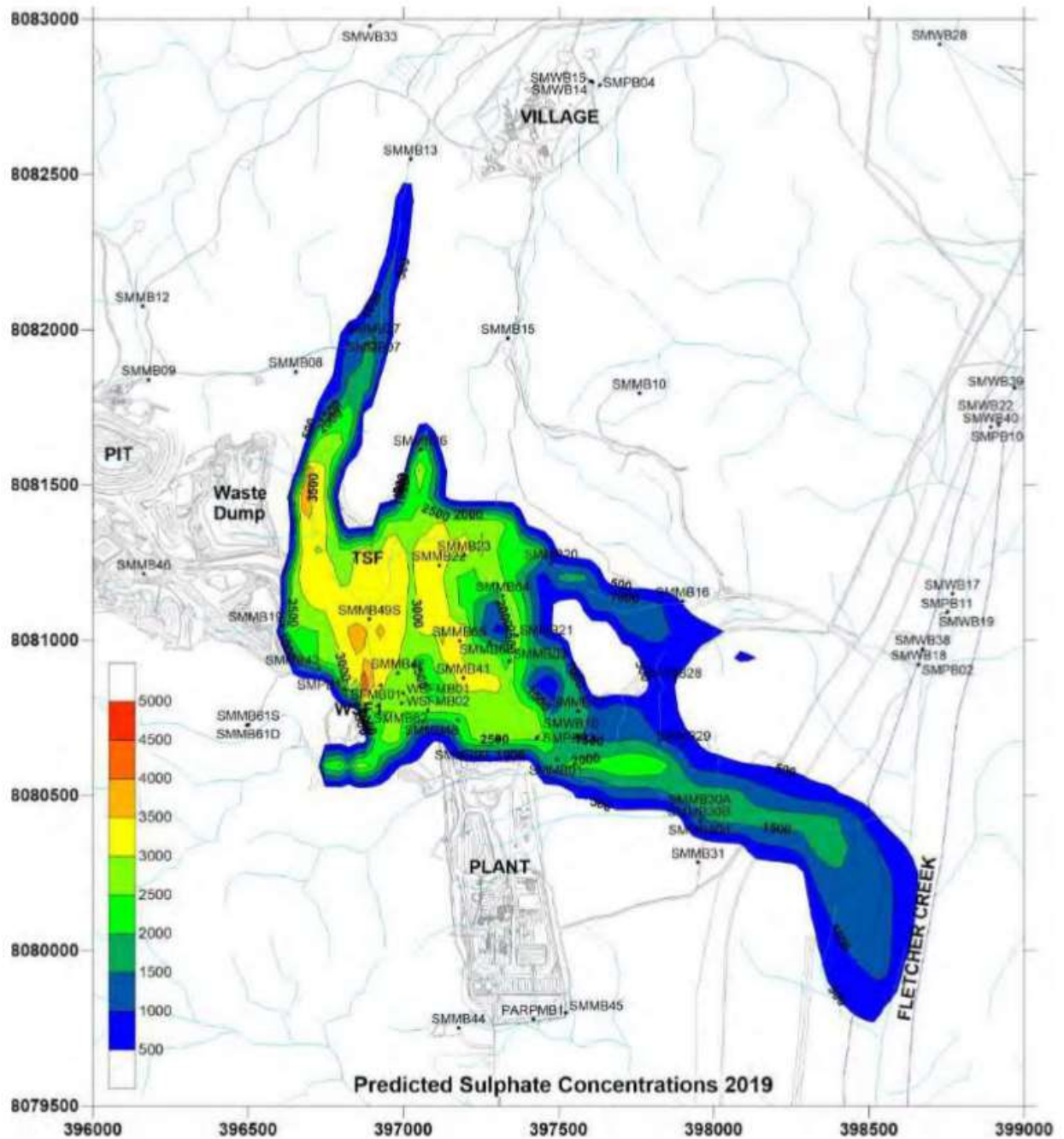
- increase groundwater levels by up to 5.5m within the area of TSF1; and
- influence groundwater within a zone of a few hundred metres of TSF1 due to high permeability of the weathered/fractured surficial geology and the low permeability of the underlying bedrock.

### Groundwater quality

Seepage from TSF1 and WSF1 has resulted in elevated concentrations of TDS, sulfate and other substances including nickel, copper and selenium in surface and groundwater downstream (south-east) of the facilities (AECOM, 2020).

The suite of analytes and associated licence trigger values for the groundwater bores for reporting periods from 2 July 2019 to 21 June 2020 are listed in Appendix 2 (Savannah Nickel Annual Environmental Report 2020). It should be noted that some trigger values are based on observed data ranges rather than guidelines or ecotoxicological assessment, these are noted in the table. All analytes listed for the 2019-2020 AER were below nominated trigger values.

Elevated sulfate is of on-going concern for the Premises (Figure 4). Sulfate concentrations in SMMB01, SMMB02 and SMMB03 have increased over time (Appendix 2). AECOM (2020) indicates that the lift to TSF1 will result in increased solute loadings along flow paths to the north, east and south-west and seepage-affected groundwater will continue migrating to the east, south and south west and continue to mix with native groundwater.



**Figure 4: AECOM 2020 modelled 2019 sulfate concentrations**

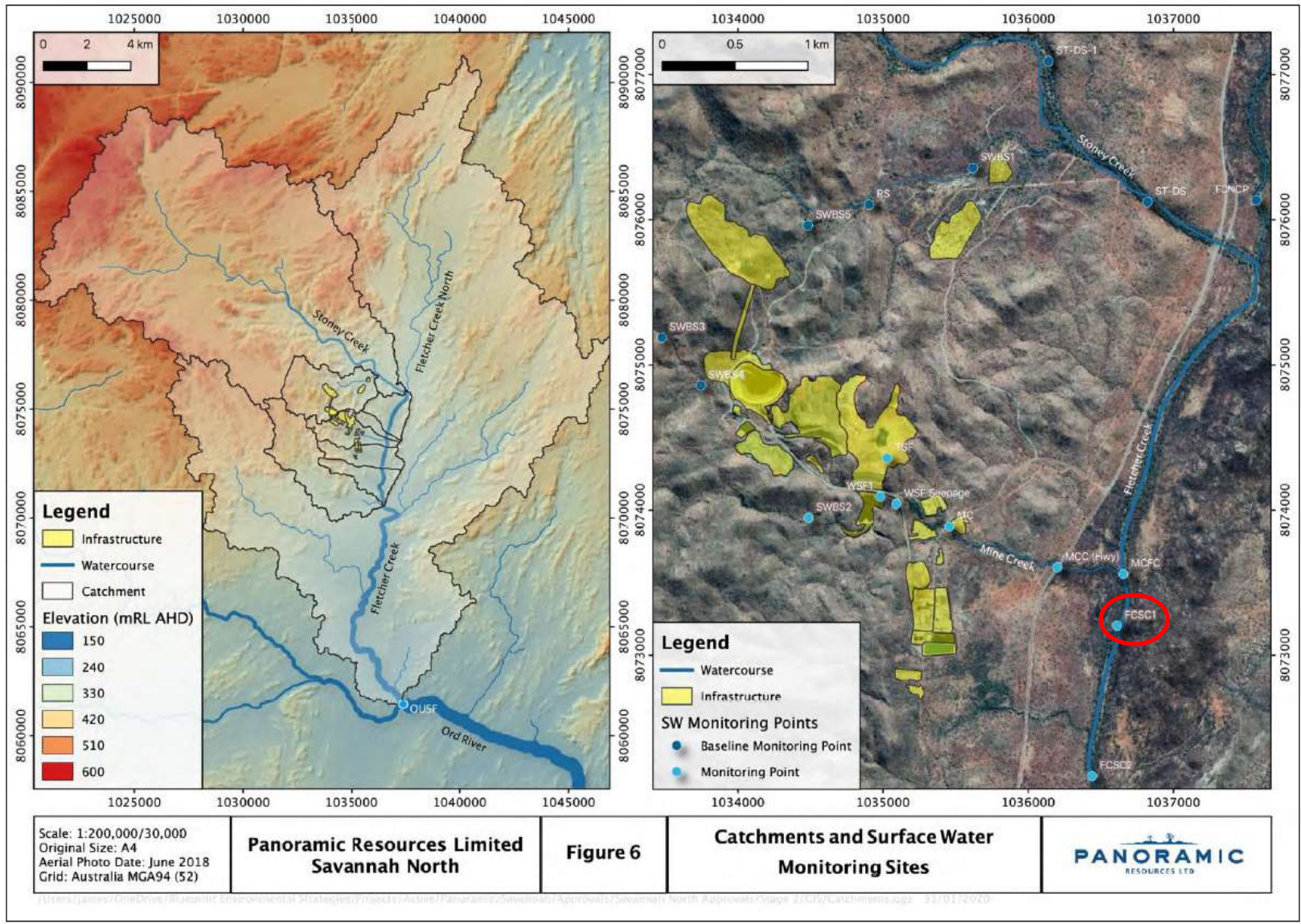
Surface water

Seepage impacts have been recorded along Mine Creek and the western side of Fletcher Creek. Once at Fletcher Creek, seepage-affected groundwater discharges near FCSC1 (Figure 5). AECOM (2020a) suggests that groundwater might be migrating along a fracture system and dispersing as far south as monitoring point SMMB32 (Figure 6).

The existing licence has requirements for monitoring at Fletchers Creek, Mine Creek and spillways associated with WSF1 seepage (Figure 5). Fletcher Creek has a site-specific sulfate trigger value of 350mg/L, with a maximum limit of 700mg/L as determined by an ecotoxicological assessment prepared by the Environmental Research Institute of the Supervising Scientist (2009). Sulfate concentrations have been generally below the 350mg/L trigger limit (and the

700mg/L maximum) since the site went into care and maintenance in 2016. Prior to 2016 however, concentrations exceeding the maximum limit (700mg/L) were recorded. There have also been elevated concentrations of nickel and copper detected at surface water monitoring points, but these have been below assigned trigger levels.

Modelling by AECOM (2020) indicates that the proposed works will result in higher solute loading of surface water, particularly increased concentrations of sulfate at Mine Creek. Mine Creek has a target sulfate concentration of 1,800mg/L which modelling (AECOM, 2020) predicts will be exceeded at the beginning of the wet season due to the first flush effect, but not at other times.



**Figure 5: Catchment and surface water monitoring sites – location of FCSC1 outlined in red**

Licence: L7967/2003/6



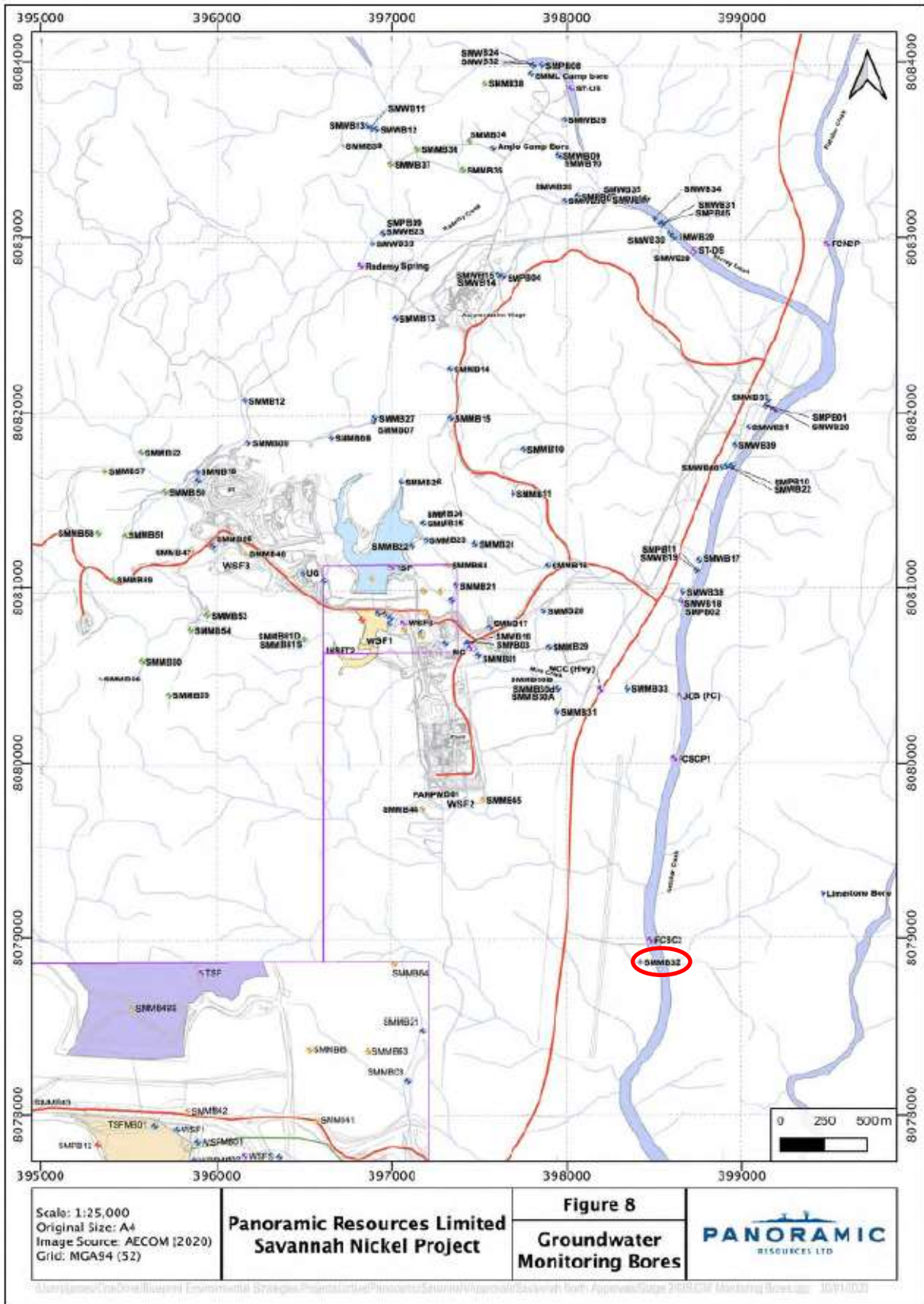


Figure 6: Groundwater monitoring bores – location of SMMB32

## Seepage Management

Seepage sumps and recovery bores currently operate on a continuous basis with the intent to reduce groundwater mounding and the downstream solute plume. Seepage is intercepted by two production bores SMBP03 and SMPB12 located alongside Mine Creek and WSF1 (Figure 7). AECOM (2020a) indicates these bores are drawing the water table down within distances of 250m and 130m respectively but neither are effective at capturing all the seepage due to complex fracture systems, which allows seepage to reach low-lying areas of Mine Creek, the western side of Fletcher Creek and dispersing as far south as monitoring point SMMB32 (Figure 6).

In addition, seepage is intercepted by a sump pump at the downstream toe of WSF1. The recovered water is reused for ore processing and/or mining purposes. AECOM (2020a) suggested additional seepage recovery bores may be required, depending on future monitoring outcomes.

AECOM (2020) prepared the "Savannah Nickel Mine Water Operating Strategy" (SNM operating strategy) to address management of impacts to groundwater including those relating to seepage. The SNM operating strategy includes impact management triggers such as:

1. Data reliability triggers for quality assurance and control;
2. Impact prevention triggers to identify whether any changes are within the expected range;
3. Impact response triggers associated with unplanned discharges including spills or significant leaks requiring immediate intervention; and
4. Should the management responses not be effective in limiting the severity or extent of an impact, the SNM operating strategy includes a contingency program.

Most relevant to the on-going management of seepage issues are the impact prevention triggers for select monitoring bores. Specific impact prevention trigger actions include:

- Monitoring site water balance to minimise the water level in WSF1;
- Ensuring all seepage interception systems are in good working order; and
- All WSFs are maintained in good working order to minimise seepage and that levels are maintained below the maximum operating levels.

Contingency measures for trigger breaches at Fletcher and Stoney Creek for known issues, including seepage are summarised in Table 9. They include a contingency to install further seepage recovery bores should the management response prove ineffective.



Figure 7: Locations of seepage recovery bores SMPB12 and SMPB03

**Table 9: Fletcher and Stoney Creek Contingency Actions**

Issue	Management objective	Management Response	Contingency Action
TSF seepage	Recovery of elevated sulphate levels	Prioritise water usage from WSF1, interception drain, SMPB03 and SMPB12	Review monitoring data and site water balance. Refine seepage recovery methods to improve recovery.
WSF seepage	Reduce seepage likelihood	Review water management procedure Routine inspection of WSFs Maintain low water levels in WSF 1	Revise predictions and investigate alternative sites for seepage recovery. If required, install and recover seepage from additional sites.
Dewatering drawdown	Contain contaminated waters within the dirty water circuit	Utilise recycled water from WSFs and recovery bore network Maintain water levels in WSF1 low	Review the site water balance. Refine water management protocols. Investigate alternative containment methods.
Water supply abstraction drawdown	Maintain compliance to groundwater level triggers Abstraction to not impact vegetation health	Prioritise recycled water from WSFs and recovery bore network Implement borefield hierarchy operation	Review site water balance to reduce water demands. Review and revise the water use hierarchy. Equip and operate non-operating bores.
WSF overflow	Reduce likelihood of unplanned/uncontrolled discharges	Prioritise recycled water from WSFs and recovery bore network	Review the site water balance. Reduce bore abstractions. Redistribute water to other storages. Investigate alternative water storage methods.

### Additional regulatory controls imposed

Seepage is predicted to increase by 24% after the proposed lift to TSF1. Given elevated sulfate concentrations and solute loading, and proximity to sensitive groundwater dependent ecosystems and creek lines, the environmental risk rating is high. The Licence Holder has proposed additional seepage recovery measures as a contingency only. A requirement for additional seepage recovery measures will be placed on the licence as regulatory controls.

Conditions 1.2.12 and 1.2.13 include requirements for the Licence Holder to submit a revised seepage management plan. The seepage management plan must be submitted to the department within three months after the issue of this licence amendment; and implemented within 3 months thereafter. The Licence Holder will also be required to submit a seepage summary within the Annual Environmental Report as required by condition 4.2.1.

The department notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, the department may initiate amendments to the licence under the EP Act.

The groundwater impact assessment by AECOM (2020) also indicated that SMMB07, SMMB08, SMMB13, SMMB20 and SMMB27 should be included in groundwater quality monitoring as being in areas of concern for increased seepage. A requirement for quarterly monitoring of these bores has been placed on the licence as a regulatory control.

## Appendix 2: Groundwater Quality Data

### SMMB01 STANDING WATER LEVELS AND GROUNDWATER QUALITY

PARAMETER	UNITS	TRIGGER LEVEL	LIMIT	Averaging Period	2/07/2019	15/12/2019	18/04/2020	21/06/2020
Standing Water Level	mbgl	-	-	Spot Sample	6.44	7.54	6.24	6.91
pH Field	pH Units	6.5 -8.5	-	Spot Sample	7.57	6.93	6.88	6.93
Electrical Conductivity	µS/cm	5000	-	Spot Sample	2326	3515	3567	3493
Total Dissolved Solids	mg/L	4000	-	Spot Sample	1515	2288	2321	2269
Total Recoverable Hydrocarbons	mg/L	-	-	Spot Sample	<0.1600	<0.1600	<0.1600	<0.1600
Aluminium	mg/L	5	-	Spot Sample	<0.01	<0.01	<0.01	<0.01
Ammonia-N	mg/L	2.5	-	Spot Sample	0.03	0.02	<0.02	<0.02
Arsenic	mg/L	0.5	-	Spot Sample	0.001	0.003	0.002	0.003
Cadmium	mg/L	0.01	-	Spot Sample	0.0001	<0.0001	<0.0001	<0.0001
Calcium	mg/L	-	-	Spot Sample	190	390	520	450
Chloride	mg/L	-	-	Spot Sample	22	27	32	59
Chromium	mg/L	0.05	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/L	1	-	Spot Sample	0.002	<0.001	<0.001	<0.001
Copper	mg/L	2	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Iron	mg/L	0.3	-	Spot Sample	0.14	<0.01	<0.01	<0.01
Lead	mg/L	0.1	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Magnesium	mg/L	-	-	Spot Sample	220	390	330	470
Manganese	mg/L	20	-	Spot Sample	0.11	0.01	0.01	<0.01
Mercury	mg/L	0.002	-	Spot Sample	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	3	-	Spot Sample	0.011	0.003	0.003	0.003
Nitrate-N	mg/L	-	-	Spot Sample	1.4	0.07	0.26	0.32
Potassium	mg/L	-	-	Spot Sample	15	11	16	12
Selenium	mg/L	0.02	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Silicon	mg/L	-	-	Spot Sample	25	24	25	24
Silver	mg/L	0.02	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Sodium	mg/L	-	-	Spot Sample	58	94	110	100
Sulphate	mg/L	4000	-	Spot Sample	1,100	2,200	2,400	2,400
Zinc	mg/L	3	-	Spot Sample	0.36	0.061	0.12	0.015

NB Shaded areas indicate trigger values have been exceeded.

**SMMB02 STANDING WATER LEVELS AND GROUNDWATER QUALITY**

PARAMETER	UNITS	TRIGGER LEVEL	LIMIT	Averaging Period	2/07/2019	15/12/2019	15/04/2020	21/06/2020
Standing Water Level	mbgl	-	-	Spot Sample	4.17	5.29	3.64	4.46
pH Field	pH Units	6.5 -8.5	-	Spot Sample	7.54	7.02	6.84	6.96
Electrical Conductivity	µS/cm	5000	-	Spot Sample	3204	4081	4236	4233
Total Dissolved Solids	mg/L	4000	-	Spot Sample	2080	2652	2750	2750
Total Recoverable Hydrocarbons	mg/L	-	-	Spot Sample	<0.1600	<0.1600	<0.1600	<0.1600
Aluminium	mg/L	5	-	Spot Sample	<0.01	<0.01	<0.01	<0.01
Ammonia-N	mg/L	2.5	-	Spot Sample	<0.02	<0.02	0.04	0.02
Arsenic	mg/L	0.5	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Cadmium	mg/L	0.01	-	Spot Sample	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	mg/L	-	-	Spot Sample	270	450	590	570
Chloride	mg/L	-	-	Spot Sample	32	31	35	74
Chromium	mg/L	0.05	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/L	1	-	Spot Sample	<0.001	0.001	<0.001	0.001
Copper	mg/L	2	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Iron	mg/L	0.3	-	Spot Sample	0.06	<0.01	0.01	<0.01
Lead	mg/L	0.1	-	Spot Sample	0.001	<0.001	<0.001	<0.001
Magnesium	mg/L	-	-	Spot Sample	330	470	400	470
Manganese	mg/L	20	-	Spot Sample	1.2	0.92	0.71	0.88
Mercury	mg/L	0.002	-	Spot Sample	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	3	-	Spot Sample	0.022	0.006	0.007	0.007
Nitrate-N	mg/L	-	-	Spot Sample	0.59	<0.01	<0.01	<0.01
Potassium	mg/L	-	-	Spot Sample	19	14	19	15
Selenium	mg/L	0.02	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Silicon	mg/L	-	-	Spot Sample	20	21	21	22
Silver	mg/L	0.02	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Sodium	mg/L	-	-	Spot Sample	77	120	140	140
Sulphate	mg/L	4000	-	Spot Sample	1,900	2,600	3,000	3,100
Zinc	mg/L	3	-	Spot Sample	0.42	0.13	0.11	0.022

NB Shaded areas indicate trigger values have been exceeded.

**SMMB03 STANDING WATER LEVELS AND GROUNDWATER QUALITY**

PARAMETER	UNITS	TRIGGER LEVEL	LIMIT	Averaging Period	2/07/2019	16/12/2019	18/04/2020	18/04/2020
Standing Water Level	mbgl	-	-	Spot Sample	7.86	8.81	6.87	7.82
pH Field	pH Units	6.5 -8.5	-	Spot Sample	7.51	6.82	6.8	6.88
Electrical Conductivity	µS/cm	5000	-	Spot Sample	3291	3548	3663	3139
Total Dissolved Solids	mg/L	4000	-	Spot Sample	1489	2308	2379	2039
Total Recoverable Hydrocarbons	mg/L	-	-	Spot Sample	<0.1600	<0.1600	<0.1600	<0.1600
Aluminium	mg/L	5	-	Spot Sample	<0.01	<0.01	<0.01	<0.01
Ammonia-N	mg/L	2.5	-	Spot Sample	0.03	0.04	0.07	<0.02
Arsenic	mg/L	0.5	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Cadmium	mg/L	0.01	-	Spot Sample	<0.0001	<0.0001	0.0001	<0.0001
Calcium	mg/L	-	-	Spot Sample	280	540	700	650
Chloride	mg/L	-	-	Spot Sample	22	26	29	58
Chromium	mg/L	0.05	-	Spot Sample	0.001	<0.001	<0.001	<0.001
Cobalt	mg/L	1	-	Spot Sample	<0.001	0.001	0.004	0.001
Copper	mg/L	2	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Iron	mg/L	0.3	-	Spot Sample	0.04	<0.01	<0.01	<0.01
Lead	mg/L	0.1	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Magnesium	mg/L	-	-	Spot Sample	160	290	260	210
Manganese	mg/L	20	-	Spot Sample	<0.01	0.22	0.27	0.04
Mercury	mg/L	0.002	-	Spot Sample	<0.0001	<0.0001	<0.0001	<0.0001
Nickel	mg/L	3	-	Spot Sample	0.003	0.005	0.018	0.008
Nitrate-N	mg/L	-	-	Spot Sample	0.68	0.08	0.03	0.46
Potassium	mg/L	-	-	Spot Sample	20	17	26	19
Selenium	mg/L	0.02	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Silicon	mg/L	-	-	Spot Sample	23	23	24	24
Silver	mg/L	0.02	-	Spot Sample	<0.001	<0.001	<0.001	<0.001
Sodium	mg/L	-	-	Spot Sample	51	110	110	89
Sulphate	mg/L	4000	-	Spot Sample	1,100	2,200	2,500	2,000
Zinc	mg/L	3	-	Spot Sample	0.053	0.11	0.15	<0.005

NB Shaded areas indicate trigger values have been exceeded.

## Appendix 3: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
Definitions	Request modification of definition for "suitably qualified hydrogeologist" to remove requirement to be recognised by an Australian professional group or organisation. Reasoning give are that hydrogeologists do not necessarily register with professional groups/organisations.	Definition modified



## Appendix 4: Application validation summary

SECTION 1: APPLICATION SUMMARY						
Application type						
Works approval	<input type="checkbox"/>					
Licence	<input type="checkbox"/>	Relevant works approval number:		None	<input type="checkbox"/>	
		Has the works approval been complied with?			Yes	<input type="checkbox"/>
		Has time limited operations under the works approval demonstrated acceptable operations?			Yes	<input type="checkbox"/>
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?			Yes	<input type="checkbox"/>
		Date Report received:-				
Renewal	<input type="checkbox"/>	Current licence number:	-			
Amendment to works approval	<input type="checkbox"/>	Current works approval number:	-			
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L7967/2003/6			
		Relevant works approval number:		N/A	<input checked="" type="checkbox"/>	
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>	
Date application received		13/08/2020				
Applicant and Premises details						
Applicant name/s (full legal name/s)		Savannah Nickel Mines Pty Ltd				
Premises name		Savannah Project				
Premises location		M80/179, M80/180 and M80/181 WARMUN WA 6740				
Local Government Authority		Shire of Halls Creek				
Application documents						
HPCM file reference number:		DER2013/001406				
Key application documents (additional to application form):		<ul style="list-style-type: none"> <li>Groundwater and Surface Water Impact Assessment (AECOM 2020a &amp; 2020b)</li> <li>Savannah North Dewatering Assessment (AECOM 2019)</li> <li>Waste Rock Characterisation (MBS 2020)</li> </ul>				

	<ul style="list-style-type: none"> <li>• Tailings Characterisation (RGS 2020)</li> <li>• TSF 1 Raise Design (CMW 2020)</li> <li>• Independent 3rd-Party Geotechnical Review (L&amp;MG SPL 2020)</li> <li>• Fletcher and Stoney Creek Borefields Groundwater Level Criteria</li> <li>• Vegetation Monitoring Site Locations</li> </ul>	
<b>Scope of application/assessment</b>		
Summary of proposed activities or changes to existing operations.	Raise TSF 1 by 4m, allowing storage of tailings produced from processing Savannah North ore.	
<b>Category number/s (activities that cause the premises to become prescribed premises)</b>		
<b>Table 1: Prescribed premises categories</b>		
<b>Prescribed premises category and description</b>	<b>Assessed production or design capacity</b>	<b>Proposed changes to the production or design capacity (amendments only)</b>
Category 5: Processing or beneficiation of metallic or non-metallic ore	950,000 tonnes per annual period	950,000 tonnes per annual period (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"/>	Referral decision No: NA Managed under Part V <input type="checkbox"/> Assessed under Part IV <input 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"/>	Ministerial statement No: NA EPA Report No: NA
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No: NA
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input checked="" type="checkbox"/> Expiry: M80/179 (expiry 15/06/2029) M80/180 (expiry 15/06/2029) M80/181 (expiry 15/06/2029) Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: NA Expiry date: NA

		<p>If N/A explain why?</p> <p>Located in the Shire of Halls Creek. The project is not within the Town Planning Scheme and there are no planning issues associated with the premises.</p>
<p>Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>CPS No: N/A</p> <p>Clearing exemption:</p> <p>5.1 ha of clearing will be undertaken in accordance with the ten hectare per tenement, per financial year exemption for clearing as authorised under Part V of the <i>Environmental Protection Act 1986</i>.</p>
<p>Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Application reference No: N/A</p> <p>Licence/permit No: N/A</p>
<p>Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Application reference No: NA</p> <p>Licence/permit No: (GWL)153527(6)</p> <p>Groundwater abstraction at the Project is undertaken in accordance with Groundwater Licence. No changes to the Groundwater Licence are required as part of this proposal.</p>
<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A</p> <p>Type: NA</p> <p>Has Regulatory Services (Water) been consulted?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p> <p>Regional office: NA</p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A</p> <p>Priority: N/A</p> <p>Are the proposed activities/landuse compatible with the PDWSA (refer to <a href="#">WQPN 25</a>)?</p> <p>Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/></p>

Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i> )	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>Dangerous Goods Safety Act 2004</i> <i>Mining Act 1978</i> <i>Rights in Water and Irrigation Act 1914</i>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	NA
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	NA
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Classification: N/A Date of classification: N/A