



Application for Works Approval

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

Works Approval Number	W6904/2024/1
Applicant	Siberia Mining Corporation Pty Ltd
ACN	097 650 194
File number	DER2024/000043
Premises	Siberia Gold Operations Ora Banda-Davyhurst Road ORA BANDA, WA Mining tenement M24/960 As defined by the premises maps attached to the issued works approval
Date of report	12 June 2024
Decision	Works approval granted

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A/SENIOR MANAGER, RESOURCE INDUSTRIES

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

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1. Decision summary

This decision report documents the assessment of potential risks to the environment from emissions and discharges during the construction and operation of the premises. As a result of this assessment, works approval W6904/2024/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) 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 and overview of premises

On 31 January 2024, Siberia Mining Corporation Pty Ltd (the applicant) submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is in relation to Category 6 - dewatering activities at the Siberia Gold Operations (SGO) Sand King Mine which is located approximately 20 km north of Ora Banda and 58 km south of Menzies. The applicant is proposing to pump mine dewater from the proposed Sand King Underground Mine for discharge to the adjacent Palmerston, Bewick (both to the north of Sand King) or Missouri Open Pits (to the south of Sand King), via pipelines along existing cleared mining corridors.

The Siberia Gold Operations is a satellite mining operation that is part of the broader Ora Banda Mining Limited (OBM) Davyhurst Gold Project (DGP). The Siberia tenure has been the subject of historic and modern mining activity since the 1980's with the current pit mining campaign recommencing in Q3 - 2021.

The minesite has been extensively disturbed by a combination of pastoral, mining activities and town development over nearly 100 years. Prior to recommencing operations in 2021, the project had remained on care and maintenance since 2018.

Stage 1 Open Pit Mining recommenced at the Siberia Gold Operations in 2020 and is expected to be completed in Q4 FY24. Ore is hauled off site to the OBM operated Davyhurst Processing Plant approximately 37 km northwest.

The applicant is now proposing to commence the development of the Sand King Stage 2 Underground mine with decline development expected to extend 200 m below the natural surface based on current drilling.

The premises relates to the category and assessed production / design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6904/2024/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in works approval W6904.

While drill information has provided no information that ground water inflows will be substantial, fractured rock aquifer systems are difficult to detect, commonly have short term yields, and are recorded in the district, so a precautionary risk assessment approach has been adopted. Initial dewatering rates for the decline and underground stope development have been modelled for up to 20 L/sec.

Groundwater will initially be recovered by underground pumps, stored in the Sand King underground mine dewatering sumps to facilitate sediment settlement before being pumped via

bunded HDPE pipeline to the adjacent Palmerston, Bewick (both to the northeast of Sand King) or Missouri Open Pits (to the west of Sand King) within existing cleared mining corridors. Figures 1 and 2 outline the proposed pipeline routes, discharge, monitoring points and catch sump.

The applicant has a current Clearing Permit (6968/4) issued by the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS). The dewatering infrastructure is located within the approved mine disturbance envelope. The pipelines and catch sump will be situated in existing disturbed areas but limited local clearing will be required.

The mine water stored in the pits will be recovered on demand and recycled back for underground mining use and dust suppression. This operation is not part of the Category 6 dewatering application and is approved under Mining Proposal Reg ID 121808. The mine water will be pumped from the pits to four 32,000 L transfer tanks, consisting of a primary tank and three slave tanks situated on the edge of the Sand King Pit Crest, within the Sand King 'controlled drainage area'. Tank overflow will be directed back into the Sand King Pit via overflow pipes. Water utilization for dust suppression will vary according to seasonal temperature and rainfall. Refer to Section 2.2.3 and Table 2 for details on the modelled water balance. Flow meters and sample locations will be installed at the discharge locations for each pit and are shown on Figure 1 and Figure 2. Water recovered for underground use will be metered at the transfer tanks.

2.2.1 Pipeline construction and operation

The proposed dewatering pipeline to the dewatering pits will be established in a v-notch drain within a bunded road corridor with spill overflows back into adjacent pits. The 160 mm HDPE pipe will be butt welded with pressure release air valves positioned at relevant high points and positioned in bunded corridor to Palmerston Pit, Bewick Pit and Missouri Pit.

A return water pipeline will also be placed in the bunded corridor from the pits back to the four 32,000 L transfer tanks situated on the western crest of the Sand King Pit in the designated 'controlled drainage area' (not part of the Category 6 application). The primary tank will have an overflow pipe back into the Sand King Pit.

The recycled water infrastructure (pipes and tanks) was approved as part of OBM Mining Proposal Reg ID 121808 (2024) and will be metered for reporting under section 5C of the *Rights in Water and Irrigation Act 1914* (RIWI Act) (GWL154498) and does not form part of the Category 6 dewatering activity.

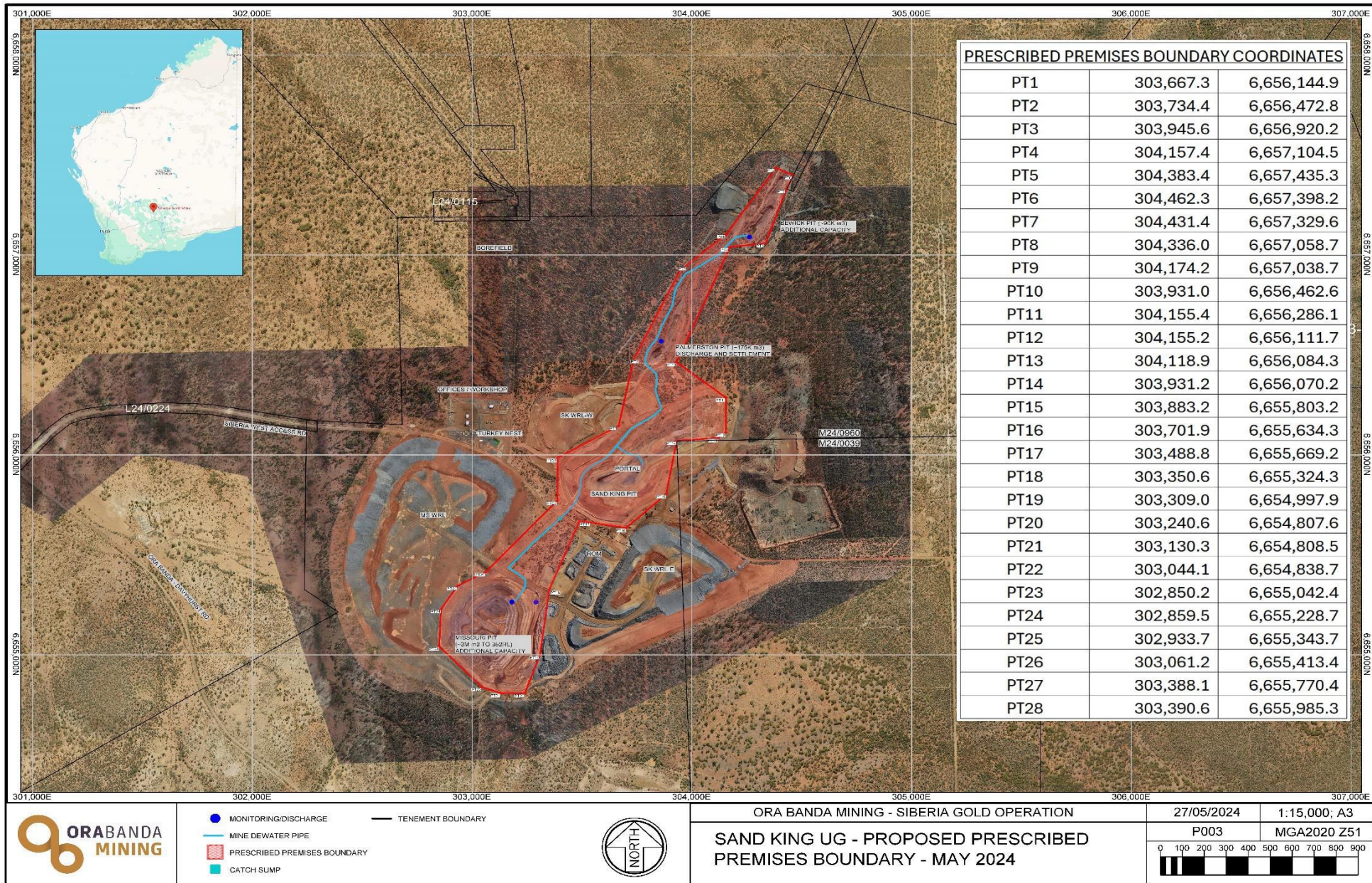


Figure 1: Prescribed premises boundary coordinates, pipeline infrastructure and monitoring points.

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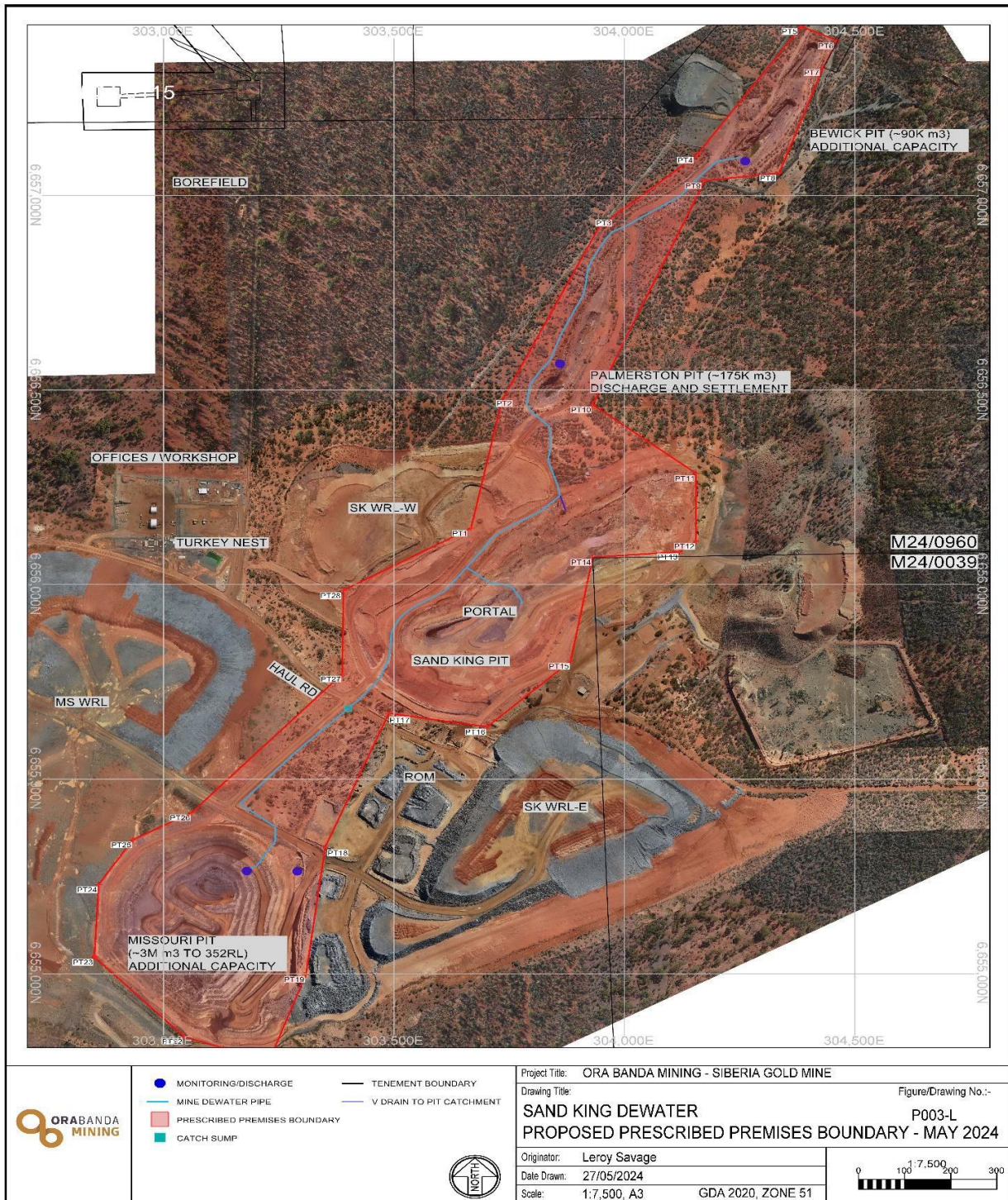


Figure 2: Siberia Gold Operations – Category 6 dewatering pipeline infrastructure discharge and monitoring locations

2.2.2 Groundwater quality

Regional groundwater is typically saline to hypersaline. Mafic wall rocks in both the Missouri and Sand King Pits have historically produced limited inflows of groundwater from a depth greater than approximately 70 m below surface in the pits and historic shafts.

Water abstraction for mining and mineral processing in the Davyhurst - Siberia area has drawn upon aquifers underlying the Sand King Borefield, the palaeochannel aquifers underlying the

Battery Dam Borefield to the north and localised, low yielding fractured rock saline aquifers associated with shear zones within the pit environments.

The Sand King borefield is underlain by two aquifers, the lower and upper. The lower aquifer consists of semi-consolidated fine to coarse angular quartz sands and sandy clay overlying oxidised granite. The upper aquifer comprises homogenous siliceous magnesite and carbonate, with poorly developed sandy lenses. Overlying the upper aquifer is a clay unit consisting of puggy clay, chert, minor sand lenses and ironstone. The clay unit is overlain by approximately 10 m of alluvial sand and soil.

Aquaterra (2003) described the groundwater in the area as predominantly hyper saline (>30,000 mg/L TDS), ranging between 30,000 and 170,000 mg/L TDS. Salinity generally increases in a northerly and easterly direction towards the drainage sinks. Aquaterra believe the aquifers in the mine area are associated with the limited low yield fractured rock aquifers in the basalt pile and the Sand King Borefield.

Testing of the Sand King Borefield as part of groundwater licensing reporting (OBM 2022) showed that pH's were circumneutral at around 6.9 and total dissolved solids were hypersaline (39,000 mg/L – 44,000 mg/L). Sodium, magnesium, chloride and sulphate are the predominate ions, with chloride, manganese and total iron exceeding the drinking water and irrigation water guidelines (ANZECC/ARMCANZ Water Quality Guidelines 2000).

Recent sampling of the Siberia Project Pit void storages suggests that the groundwater is brackish to saline with total dissolved solids (TDS) ranging from 13,000 mg/L to 37,000 mg/L. Refer to Table 1.

The major ionic composition of the groundwater is salts of sodium and chloride with minor levels of sulphate, magnesium and calcium present. Most other ions are by comparison in low total concentration.

Table 1: Groundwater parameters of the Sand King, Missouri, Palmerston and Bewick pits

Pit name	Sample date	pH	Total dissolved solids (TDS) mg/L
Sand King Pit	19.07.2023	8.2	37,000
Palmerston Pit	19.07.2023	8.1	13,000
Bewick Pit	Dry	-	-
Missouri Pit	19.07.2023	7.5	21,000

2.2.3 Siberia Mining gold project water balance

The applicant believes a conservative allowance of groundwater inflows is up to 630,000 kL (20 L/sec) per annum, of which approximately 80% will be utilised for mine use, road maintenance and dust suppression. Table 2 outlines the proposed water balance for the Siberia Underground Operations.

Active storage capacity for of each of the discharge pits with a 5 m freeboard allowance is 170,000 kL for Palmerston, 90,000 kL for Bewick and 9,780,000 kL for Missouri. This capacity equates to over 15 years respectively of discharge at 20 L/s without losses or recycle considerations. After allowing for mine use, dust suppression, road maintenance and evaporation, the residual volume will be approximately 111,250 kL per annum.

The applicant has stated that monthly field water quality monitoring (EC, pH) will be undertaken in conjunction with the water meter readings from the pit crest discharge location(s) that were actively discharging during the month. Freeboard monitoring will be undertaken by visual inspection of the surveyed freeboard line painted 5 m below the pit crest on the pit access ramp wall, and a monthly survey of the pit pond surface relative level (RL). The applicant will adapt inspection frequency based on a 6-monthly review of mine abstraction data.

Table 2: Proposed Siberia Gold Operations water balance – supplied by applicant

FACTOR	DESCRIPTION	Make Loss Use kL/day	Interval (Days)	Volume for Storage-Discharge kL/Yr	COMMENTS/ASSUMPTIONS/SOURCE
INPUTS	Annual Rainfall (267.9mm) – 6.4mm/Day	-	42	-	42 rain days year. Annual Evaporation 3208mm; Pan F=0.67
	Groundwater Inflow Allowance -SK UG Dewatering	1,728	365	630,000	Worse case modelling for Licencing purposes 20l/s
	Groundwater Inflow Allowance – Missouri Pit -0.5L/s	43.2	365	15,768	Current estimate – not monitored
	TOTAL INFLOW	1,771	-	646,768	
	Rainfall - Palmerston Pit Catchment (13,710m ²)	87	42	3,654	Pit pond is ephemeral – winter months
	Rainfall - Bewick Pit Catchment (12,709m ²)	81	42	3,402	Pit pond is ephemeral - winter months
	Rainfall - Missouri Pit Floor Catchment (90,700m ²)	580	42	24,360	Limited area pit pond is permanent
	Rainfall - Sand King Pit Floor Catchment (43,500m ²)	278	42	11,676	Limited area pit pond is permanent
	Total Pit Catchment Day Input R(6.4)x160,620m ² /1000	1028	42	43,176	Low annual rainfall has limited influence on pit water balance
	TOTAL INPUTS	-	-	689,944	
LOSS	Pit Evaporation Estimate: Allow 3,208mm per year for 3 Voids (117,120m ³). SK not a storage void. No seepage loss considered due to very low HC for basalt.	P/B-136 (M- 467)	365	49,694 (170,606)	Total average annual evaporative loss of 220,300kL calculated for continuous discharge into 3 storages. With 14l/s recycle factor only 2 pits(26,419m ³) are required for 6l/s storage
	TOTAL LOSSES			49,694	
USAGE RECYCLE	Dust Suppression (Mine Environs and ROM) -Tanker	150	220	33,000	25kL Mine Tanker – 6 trips/day - 220days
	Dust Suppression (Sib H/R to DHurst - Tanker	250	220	55,000	50kL Road Tankers, 70km round trip – 5 trips/day-220 days
	Mining Use - Storage Tanks (recycled)	1,209	365	441,500	Wash Down underground workings, Equipment wash down
TOTAL MINE USAGE			529,000		
STORAGE	Year 1 abstraction for storage/reuse @ 20L/s is +ve	-	-	111,250	Y#1 PWB residual is +111,250kL suggesting that @20L/s
	Storage capacity (kL) to 5m Freeboard-Berwick	-	-	90,000	supply for UG will not require supplement from SK Borefield
	Storage (kL) to 5m Freeboard-Palmerston	-	-	170,000	Two Pit Storage capacity is adequate with Pit 3
	Storage capacity(kL) to 5m Freeboard-Missouri	-	-	9,780,000	Contingency storage.

Assumptions- Evaporation Annual Mean-Leon-3,473mm/Kal 2,943mm- DoA -Tech Bull 65; Missouri Inflow – Allow 0.5l/s – no usage monitoring data

2.2.4 Monitoring bore network

The Sand King Borefield remained in care and maintenance until December 2021, when the Siberia Gold Operation recommenced full-scale mining. The applicant is aware of seven (7) bores currently on the Sand King Borefield Register with three historic bores either decommissioned or destroyed. Refer to Figure 3.

Bores SKWB06B and SKWB07 are listed on the applicant’s borefield register as observation bores within proximity of the Sand King Pit and associated dewatering storage pits and the applicant states that SKWB03 has also been utilised as a monitoring bore.

The applicant’s ‘2020 Groundwater Licence Operating Strategy for the Sand King Borefield’ requires that annual standing water levels (SWL), field EC, and pH were taken during care and maintenance, and monthly SWL’s, field EC and pH are taken during operations, along with an annual major component analysis on groundwater from active production and monitoring bores.

Previous reporting of the SWL in the Sand King bores (Hydrosolutions 2008) ranged between

21 m (SKWB02) and 31.35 m (SKWB03). Bore test reports from 2016 indicate SWL for SKWB03 was at 29.65 m, SKWB06 was 30.45 m and SKWB08 was 26 m.



Figure 3: Siberia Gold Operations - Sand King borefield location

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 construction and operation which have been considered in this decision report are detailed in Table 3 below. Table 3 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 3: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Construction and installation of dewatering infrastructure (pipelines, bunds, pumps) Vehicle movements	Air/windborne pathway causing impacts to health and amenity	<ul style="list-style-type: none"> Visual dust monitoring to ensure health and amenity is not impacted. Follow established Dust Suppression Procedure Establish vehicle speed limit to fit environmental and road conditions on Pipeline Inspection Track as required.
Operation			
Hypersaline water	Operation of pipelines transferring hypersaline water (pumps, overtop of catch sump, etc.)	Direct discharge to land resulting in impacts to soil structure and vegetation health	<ul style="list-style-type: none"> Pipeline inspections once every 24 hours. Adequate and maintained containment bunds. Clay lined catch sump 10 m x 10 m x 1.5 m between Sand King underground mine and Missouri Pit Water pressure will not exceed the design criteria for the pipeline sections. Water flow meters fitted on tank / pit discharge locations. Pipeline bunds direct flow back into adjacent pit voids
	Discharge of hypersaline water from Sand King underground sediment sump into Palmerston,		<ul style="list-style-type: none"> Mine water pumped directly to Palmerston, Bewick and Missouri Pits Monthly field water quality monitoring (EC, pH) will be undertaken from the receiving pit discharge sampling locations.

Emission	Sources	Potential pathways	Proposed controls
	Bewick, or Missouri Pit.	Seepage through walls of pit resulting in groundwater mounding causing impacts to vegetation health at ground surface	<ul style="list-style-type: none"> Baseline pit water monitoring conducted which confirms pit waters have similar compositions. Monthly field water monitoring conducted (pH, EC, and TDS) at active storages with quarterly analysis of major components and total recoverable hydrocarbons (TRH) Adherence to RIWI Act groundwater licence GWL154498 Operating Strategy and abstraction volumes. Cumulative water abstraction volumes are tracked monthly during operations.
		Overtopping of pit(s) causing impacts to vegetation health	<ul style="list-style-type: none"> Monthly water volume and visual pit level monitoring Monthly survey of discharge pit water surface RL. Installation of 5 m freeboard markers on the discharge pit ramps.
Hydrocarbons	Operation of pumps, fuel storage tank rupture, etc.	Spills or leaks impacting native vegetation	<ul style="list-style-type: none"> Appropriately designed and maintained service truck for infrastructure servicing and maintenance. Hydrocarbon spill kits readily available at generator refueling site. Hydrocarbon management and spill procedure included as part of employee induction. Collection of waste oil and grease as per Site Waste Management Plan. Small quantities of hydrocarbons stored within active machinery. Waste hydrocarbons are stored and removed off site for reuse/disposal. Stored hydrocarbons are banded. Quarterly water monitoring from active discharge pits to include TRH.

3.1.2 Receptors

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

Table 4 below provides a summary of potential human and environmental receptors that may be impacted because of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental Siting* (DWER 2020)).

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

Human receptors	Distance from prescribed activity
Ora Banda Mining Davyhurst mine accommodation	35 km west of the premises <i>Not considered further as a sensitive receptor</i>
Environmental receptors	Distance from prescribed activity
<p>Native vegetation</p> <p><i>Note, no threatened and/or priority flora were recorded in the Siberia survey area, conducted prior to recommencement of mining operations in 2019.</i></p> <p><i>Survey area was of 52 ha between the decommissioned TSF and the Missouri open pit, to smaller northern areas of infrastructure (Palmerston and Bewick pits).</i></p>	Adjacent to Palmerston and Bewick pits (between 50 – 100 m), 370 – 440 m from Sand King and Missouri pits.
<p>Surface waters including dams</p> <p>There are no permanent watercourses or other surface water features in the Project area.</p> <p>Stream flows occurs only after heavy storms or after persistent low intensity rainfall. The area has long term low erratic rainfall and high evaporation, and the applicant considers risks associated with flooding are very low.</p> <p>There are no known beneficial users of surface water within the disturbance envelope of the Siberia Gold Operations.</p>	Surface water dams adjacent to the Project area are utilised by the pastoralist to provide seasonal water for stock purposes and these will not be disturbed by the mining operations. All bores within the disturbance envelope are managed under GWL 154498(4).
Groundwater	<p>Depth to groundwater in the vicinity of the Sand King pit range between 25 m to 30 m.</p> <p>Recent sampling of the Siberia Project Pit void storages suggests that the groundwater at both these pits are brackish to saline with Total Dissolved Solids (TDS) ranging from 13,000 mg/L to 37,000 mg/L.</p> <p>The major ionic composition of the groundwater is salts of sodium and chloride with minor levels of sulphate, magnesium and calcium present.</p>
Aboriginal and other heritage sites	<p>No Registered Aboriginal Heritage sites identified within M24/960.</p> <p>The nearest identified sites are:</p> <ul style="list-style-type: none"> >5 km west of premise boundary – Registered site Rowe’s Rock (water source) >9 km southeast of premises boundary – Lodged site Paddy’s Knob (mythological) <p>Due to the distance of these nearest identified sites, there is unlikely to be a risk event and therefore they have not been considered further in this assessment.</p>

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and considers 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 applicant 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 applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 5.

Works approval W6904/2024/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 5 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. Category 6 dewatering activities. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence application.

Table 5: Risk assessment of potential emissions and discharges from the premises during construction, and operation

Risk events					Risk rating ¹	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood			
Construction								
Construction of dewatering infrastructure (pipelines, bunds, pumps) Vehicle movements	Dust	Air/windborne pathway causing impacts to vegetation health from dust deposition	Surrounding native vegetation	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 1	N/A
Operation (including time-limited-operations operations)								
Operation of dewatering equipment (pumps, etc.)	Hydrocarbons	Spills or leaks impacting native vegetation	Surrounding native vegetation	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	N/A

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Risk events					Risk rating ¹	Applicant controls sufficient?	Conditions of works approval ²	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood			
Transfer of hypersaline water between Sand King underground mine sediment sump and Palmerston, Bewick, or Missouri pit(s).	Hypersaline water from Sand King mine	Pipeline leak or rupture	Surrounding native vegetation	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Condition 1 Condition 6	Pipeline is to be installed in banded corridors that support spillway back into the adjacent pit. The pipeline corridor to the Missouri pit includes a 150 kL catch sump. Pipeline will be inspected every 24 hours.
		Overtopping of Sand King underground mine to Missouri Pit pipeline catch sump causing impacts to vegetation health	Surrounding native vegetation	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Condition 1 Condition 6 Condition 7	Catch sump forms part of pipeline corridor between Sand King underground mine and Missouri Pit. The applicant believes the capacity of the catch sump is adequate to contain any spills or leaks, and the Delegated Officer notes that Missouri Pit is a contingency dewatering location.
		Seepage through base and walls of pit resulting in groundwater contamination and mounding causing impacts to vegetation health via root uptake	Native vegetation	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 Condition 7 Condition 10 Condition 11 (Addition of discharge pit water sampling)	The Delegated Officer considers the risk of groundwater mounding impacting the root zone of vegetation to be low, given the predicted residual dewater discharge volume of about 111,250 kL per annum and capacities of the receiving pits (primarily Palmerston and Bewick), groundwater depth (about 20-25 mbgl at the Sand King borefield) and the upper aquifer being a clay unit overlain by about 10 m of alluvial sand and soil. The Delegated Officer considers the licence holder proposed controls to mitigate the risk of seepage impacting native vegetation to be generally sufficient, primarily the monitoring of water quality.
		Overtopping of Palmerston, Bewick, or Missouri pit(s) causing impacts to vegetation health.	Surrounding native vegetation	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Condition 1 Condition 6 Condition 7	N/A.

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

Note 2: Proposed applicant controls are depicted by standard text. **bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

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

Table 6: Consultation

Consultation method	Comments received	Department response
Application advertised on DWER's website on 4 April 2024	None received	N/A
City of Kalgoorlie-Boulder advised 4 April 2024	None received	N/A
Applicant was provided with draft documents on 14 May 2024	<p>The applicant provided a response to the draft on 27 May 2024.</p> <p>A recent internal review of the proposed Cat 6 dewatering at Sand King has separated the water recycling infrastructure (including the four 32,000 L transfer tanks) from the works approval application. The applicant notes that the water recycling from the dewatering pits is approved under Mining Proposal Reg ID 121808.</p> <p>The applicant has clarified that water from the Sand King underground mine will be collected in an underground sediment settling sump and pumped directly to the discharge pit location(s). There will not be raw water sumps on the surface or inside Sand King Pit. There will be only one catch sump on the pipeline route between Sand King underground mine and Missouri Pit, which will be clay lined and have a constructed dimension of 10 m x 10 m x 1.5 m.</p> <p>The applicant has requested that the ambient pit surface water monitoring condition be adjusted to allow for sampling to be done at the transfer tanks. The applicant states that sampling of water quality will still be done monthly and quarterly at the discharge point into each pit.</p> <p>Testing of return water to transfer tanks is already a control in the GWL154498 groundwater licence operating strategy (GLOS).</p>	<p>The Delegated Officer has noted the clarification regarding the proposed dewatering process and has revised this decision report and works approval accordingly.</p> <p>The Delegated Officer further notes that sand king dewatering water discharged to the assessed pits is to be used for dust suppression and recycled for mining use (i.e. not discharge to land).</p> <p>The Delegated Officer agrees that monitoring of Palmerston, Bewick and Missouri pit water quality is adequately captured under the GLOS (Condition 6.3 and Table 3) specified under GWL154498, however, the Delegated Officer notes the GLOS states a 'once yearly' sampling frequency for major component analysis and dissolved metal and metalloids shall be conducted, while condition 11 of the works approval specifies quarterly testing during time limited operations. The requirement to undertake quarterly sampling provides a more accurate representation of the water quality and therefore provides a better understanding of environmental risk. Sampling frequency and requirements may be further considered as part of the subsequent licence assessment.</p> <p>The Delegated Officer does not consider the proposed change to condition 11 for transfer tank sampling will significantly increase risk and agrees that sampling can be done at the transfer tanks, as proposed.</p>

5. Conclusion

Based on the assessment in this decision report, the Delegated Officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. Aquaterra 2003, *Hydrogeological Report – Siberia Project. A report prepared for Siberia Mining Corporation*, Subiaco, Western Australia
2. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
4. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
5. Hydrosolutions Pty Ltd 2008, *Sand King Borefield , Siberia Project GWL 154498 (1) - Annual Groundwater Monitoring Report, 2007 for Davyhurst Gold Pty Ltd*, Willetton, Western Australia
6. Ora Banda Mining (OBM 2022), *Siberia Mining Corporation Mine Water Supply annual groundwater monitoring summary*, Subiaco, Western Australia
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8. Siberia Mining Corporation Pty Ltd 2024, *Application form: Works Approval Category 6 Dewatering at Siberia Gold Operations*, Subiaco, Western Australia