Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Works Approval

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

Works Approval Number	W3093/2025/1
Applicant	Brightstar Resources Limited
ACN	100 727 491
File number	APP-0029938
Premises	Beta Gold Mine Legal description Within the mining tenement M38/009 As defined by the premises maps attached to the issued works approval
Date of report	21 May 2026
Decision	Works approval granted

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1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the premises. As a result of this assessment, works approval W3093/2025/1 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 16 July 2025, Brightstar Resources Limited (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 to undertake construction works relating to category 5 processing and beneficiation of ore at the premises. The premises is approximately 35 km south-east of town of Laverton.

The premises relates to the category and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W3093/2025/1. 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 W3093/2025/1.

Historically, the site was licensed as prescribed premises regulated under licences L8377/2009/1 and L8554/2011/1, the former licence was revoked, and the latter was surrendered following expiry in June 2016. Both licences previously authorised Category 5 activities for a design capacity of 450,000 tonnes per year.

2.3 Proposed Activities

The Beta Gold Mine (the premises) is located within the mining tenement M38/009 in the Shire of Laverton. The applicant is seeking approval to construct and operate:

- The Beta Gold Processing Plant (BGPP) with a proposed throughput of 1.5 million tonnes per annual period,
- Two in-pit Tailings Storage Facilities (TSFs; South Beta pit and Central Beta pit);
- A subsequent Donut Beta TSF constructed by combining the two in-pit TSFs with an embankment (repurposing North Beta pit as a water storage facility); and
- Associated pipeline infrastructure (Figure 1).

The premises additionally intends to accept and process ore from several mining projects within 200km from the premises including Cork Tree Well, Second Fortune, Jasper Hills (Fish and Lord Byron), Alpha, Beta, Menzies and Yunndaga projects.

A figure of the proposed site layout is included in Figure 1.

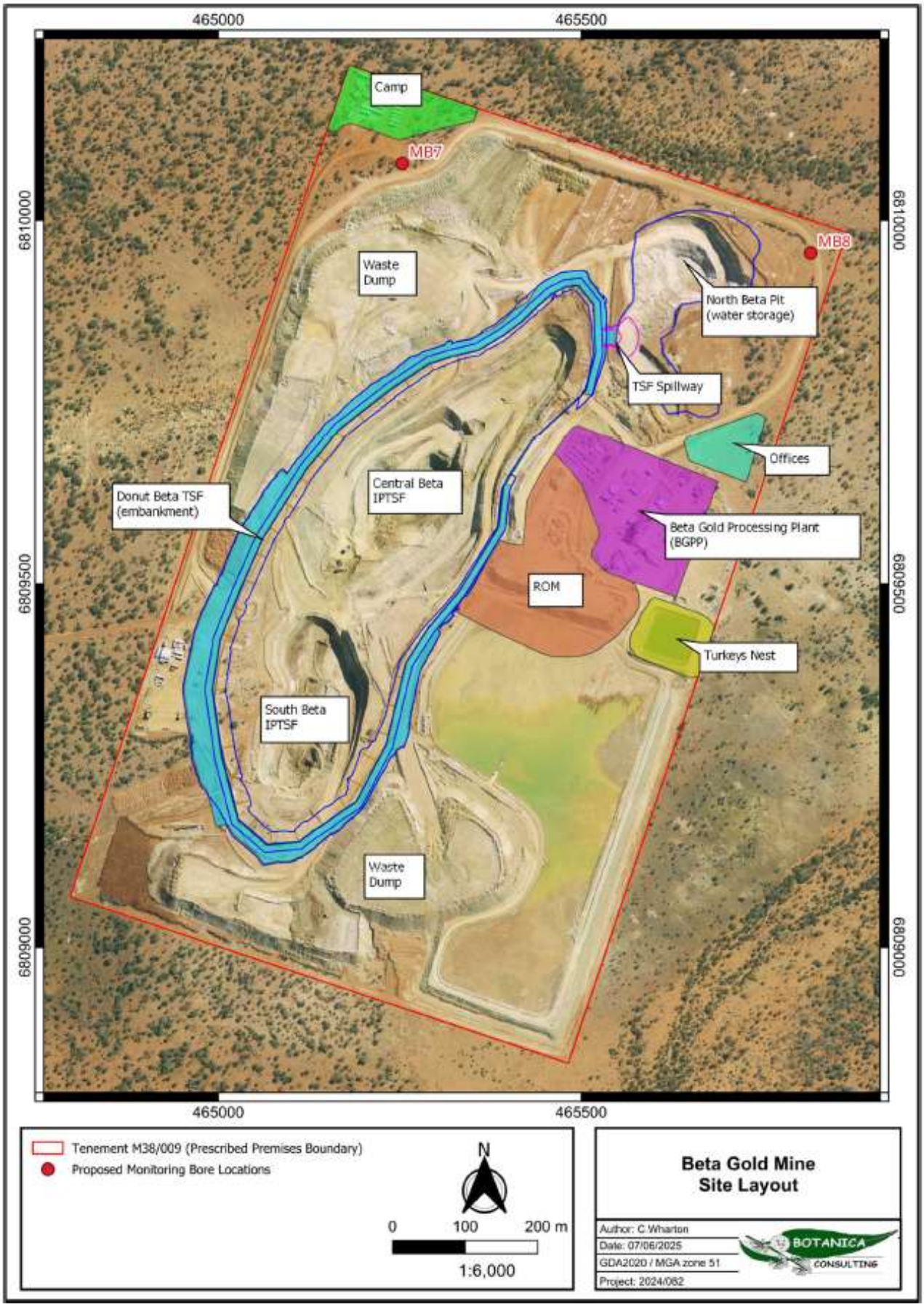

Figure 1: Site Layout - Beta Gold Project

2.3.1 Beta Gold Processing Plant (BGPP)

The project has an existing gold processing plant in place, however refurbishing the plant has been deemed impractical and it will be demolished. The applicant proposes to construct a new gold processing plant to replace the existing facility, which will include crushing, milling, gravity recovery, leaching, gold recovery (elution), and tailings disposal. The applicant anticipates operating the processing plant 24 hrs a day for 365 days per year at a nominal treatment rate of 188 dry tonnes per hour (t/h) with a grinding circuit utilisation of 91.3%.

The crushing process will involve only primary crushing. The crushed ore will be conveyed to a surge bin with a cast-off stockpile. The ore will then pass through a semi-autogenous grinding (SAG) milling in closed circuit with hydrocyclones. A portion of the mill discharge stream will undergo gravity concentration, with the gravity concentrate treated through intensive leaching and electrowinning. The remaining slurry will be processed through a hybrid carbon-in-leach (CIL) circuit consisting of two leach tanks and six adsorption tanks, followed by carbon acid washing, pressure Zadra elution and thermal regeneration. Gold will be recovered through smelting of electrowinning cathode sludge to produce doré. Final tailings will be thickened and pumped to the TSF, with supernatant water reclaimed from the TSF and returned to the plant to reduce demand for raw water. A schematic of the BGPP is shown in Figure 2.

Figure 2: Beta Gold Processing Plant Layout

2.3.2 Beta Tailings Storage Facilities

The tailing storage facilities for the project will be constructed in two stages (see Figure 3).

- **Stage 1**: The existing Central and South Beta pits will be used as two in-pit TSFs.
- **Stage 2**: Construction of a perimeter embankment around the Central and South Beta pits to form a single above ground TSF (referred to as the Donut TSF).

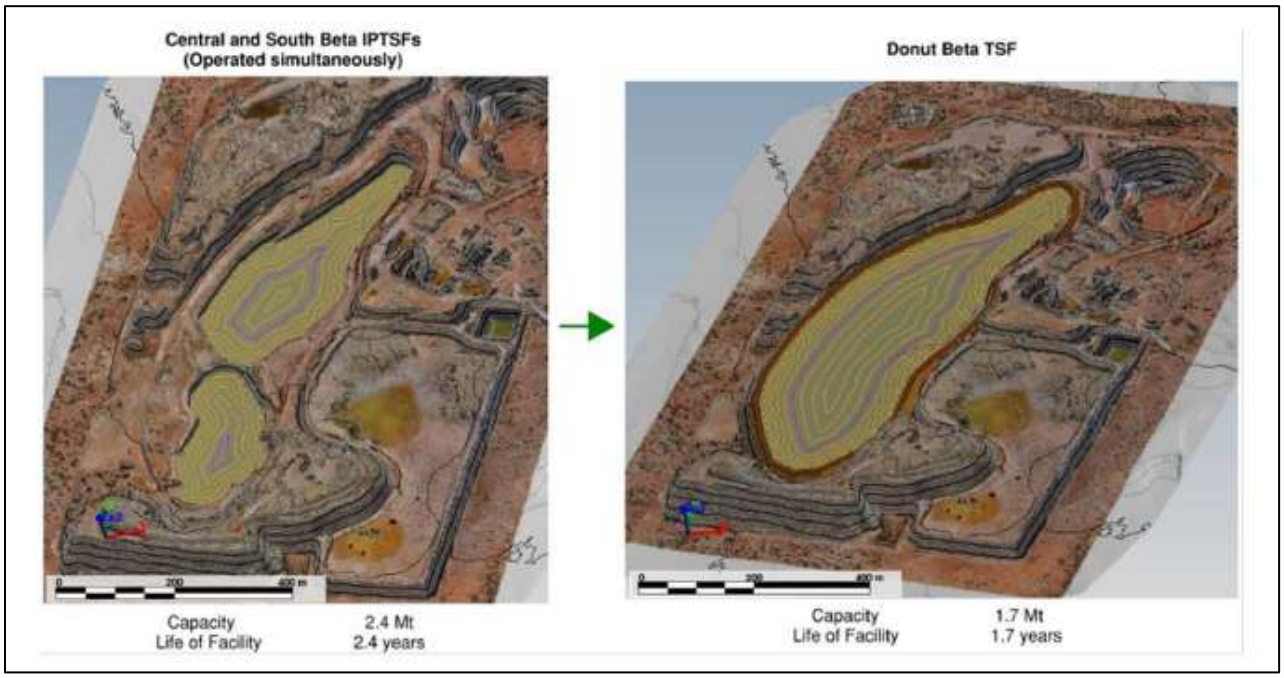

Figure 3: Beta Tailings Storage Facilities Plan

The Central Beta Pit is expected to provide approximately 1.55 million tonnes (Mt) of tailings storage capacity, while the South Beta Pit will provide around 0.42 Mt, based on an assumed tailings density of 1.2 t/m³. The expected design life of these in-pit TSFs is approximately 2.3 years. The Donut Beta TSF will provide an additional 1.4 Mt of storage capacity, with a design life of 1.7 years. Collectively, the facilities will provide a total tailings storage capacity of approximately 3.37 Mt over a four-year period.

In-pit TSFs – Stage 1

The existing Central and South Beta pits will be utilised to store tailings from the Beta Gold Processing Plant. The pits will act as natural containment structures, with floors comprising in-situ, low-permeability materials. The applicant proposes to place a compacted clay layer in selected localised areas to further reduce seepage risk. Tailings will be deposited via multiple spigots along the perimeter, forming an inward-sloping beach with central ponding. No decant structure is proposed; instead, supernatant water will be recovered using a pontoon-mounted decant system or a land-based pump and turret system. Surface water will be diverted away from the pits by constructing a 0.5 m perimeter bund around the Central and South Beta in-pit TSFs. A minimum operational freeboard of 500 mm will be maintained to accommodate a 1:100-year, 72-hour storm event.

Donut Beta TSF – Stage 2

A continuous perimeter embankment approximately 10 m in height will be constructed around the Central and South Beta pits using waste rock sourced from existing waste dumps at the Beta Gold Project, creating the Donut Beta TSF. The embankment is expected to be constructed to its full design height in a single stage to accommodate the expected tailings volume and avoid future raises. Extra coarse waste rock may be placed on the outer embankment layer to improve long-term erosion resistance, enabling progressive rehabilitation of the downstream face following construction.

Tailings will be deposited via multiple spigots along the perimeter, forming an inward-sloping beach with central ponding. No decant structure is proposed; supernatant water will be recovered using a pontoon-mounted decant system or a land-based pump and turret system. A minimum operational freeboard of 500 mm will be maintained to accommodate a 1:100-year, 72-hour storm event.

A spillway is proposed to reduce the risk of the Donut TSF embankment overtopping during an extreme rainfall event. Although the TSF is designed as a non-releasing facility with sufficient freeboard, the applicant considers the spillway is an additional safeguard. The spillway would direct any overflow into the North Beta Pit through the western pit wall. Stability assessment shows that a 14 m spillway width is needed to prevent erosion of the pit wall and protect the downstream embankment. The spillway is to operate only during a 1:1000 AEP, 144-hour rainfall event, with no discharge expected until after 96 hours and a peak flow of about 0.3 m^3/s. A buttress is proposed to be constructed for the pit wall to further reduce any erosion risk from potential flows.

The department wishes to emphasise that the spillway is only to be used as an emergency measure during extreme rainfall events. It should not be used for routine decant or operational water management. Water levels within the TSF should be managed through the approved decant and water management systems, with the spillway acting solely as a backup overflow option during very rare storm conditions.

2.3.3 Water Storage at North Beta Pit and decant water management

The applicant is seeking approval to utilise the North Beta Pit as a temporary water storage facility including decant water recovered from the TSFs during operations. Other sources of water to be discharged to the North Beta Pit include stormwater overflow generated from disturbed operational areas, stormwater from extreme rainfall and flood events where temporary storage is required, and groundwater from the production bores. The pit will be incorporated into the site's surface water management system through the installation of pipelines and ancillary infrastructure, enabling the controlled transfer of water to and from the pit as per operational requirements.

A pontoon-mounted or a land-based pump and turret system will be installed in both the Central and South in-pit TSFs and maintained for water recovery from the Donut Beta TSF. The decant pump will have a dewatering capacity of 60 m^3/hr and will be activated when the decant pond depth reaches 0.5 m or greater. Using the decant delivery pipeline network, the recovered water will be transferred to the North Beta Pit for temporary storage and subsequently pumped back to the Beta Gold Processing Plant for reuse throughout operations.

The applicant has committed to maintaining a minimum operational freeboard of 500 mm at the North Beta Pit to mitigate overtopping risk. Daily routine inspections will be undertaken to verify compliance with the freeboard requirement.

Supporting documents included in the application indicate that there will be a decant water pipeline connecting the TSF to the process water pond located at the eastern corner of the premises, to be used in the processing plant. It is noted that the process water pond is to incorporate a level indicator; however, volumes and operational details for this process water pond was not provided within the supporting documentation. The applicant is required to ensure that the capacity of this process water pond is adequate to manage the decant water return. Any potential risk events associated with this infrastructure will be addressed during the risk assessment process, and appropriate regulatory controls will be applied to manage those risks.

2.3.4 Commissioning and time limited operation

Dry, wet, and product commissioning will be undertaken to confirm that the processing plant operates as designed. The in-pit TSFs will also be commissioned concurrently with the processing plant to enable testing and inspection of tailings delivery systems, return water pipelines, and associated pumping infrastructure.

The applicant is seeking approval to operate under time-limited operations for a period of 180 calendar days, pending the issue of a prescribed premises licence.

It has been determined that a separate commissioning period will not be conditioned within the works approval, as emissions and discharges are expected to be similar during commissioning and operational phases. Commissioning activities will therefore occur under, and be captured by, time-limited operations.

2.4 Tailings characterisation and seepage

2.4.1 Waste rock characterisation

Based on the supporting information, the preferred source of fill material for the donut TSF embankment construction is the adjacent Beta waste dumps, selected primarily due to their proximity to the Donut TSF embankment footprint and the convenience of material availability. Static Acid Base Accounting (ABA) results indicate that the waste dump material is generally non-acid forming (NAF), with three samples showing buffering capacity and one sample (sample 3) falling near the uncertain range (Table 1). Overall sulfur concentrations are low, suggesting a low risk of acid generation.

Table 1: Static Acid Base Accounting – Beta Waste Dump samples

Sample	pH (pH units)	Total sulphur (%)	Maximum potential acidity (%)	Acid Neutralising Capacity (kg H_2SO_4/t)	Net Acid Generation (kg H_2SO_4/t)	Net Acid Producing Potential (kg H_2SO_4/t)
WD sample 1	7.6	0.03	0.92	26.6	11	-25.7
WD sample 2	8.4	0.02	0.61	85.2	0	-84.6
WD sample 3	6.5	0.13	3.98	2.6	7	1.4
WD sample 4	7.3	0.08	2.45	25.9	0	-23.5
WD sample 5	6.6	0.01	0.31	0.7	20	-0.4

However, the department notes that only five waste rock samples were analysed for acid-forming potential. This dataset is insufficient and not representative of the material variability across the entire landform. A more robust sampling and testing program is required, along with a system that reliably ensures only demonstrably NAF material is selected for construction material. This will be conditioned within the works approval.

In addition, the department notes that material from the waste rock landforms to be used to construct the Donut in-pit TSF embankment may be dispersive and consists of clayey-oxide material which is not a suitable material for construction due to it's high risk of erosion. The TSF design report indicates that waste dump material will require erosion protection to minimise dispersity. It is proposed that the embankment will incorporate erosion protection material from waste materials generated at the Menzies and Laverton gold projects. Erosion protection material is required to be durable and non-acid forming to ensure long-term embankment stability and to minimise the risk of environmental harm. This will be conditioned in the works approval.

2.4.2 Tailings Characterisation

The characteristics of the tailings play a critical role in determining their behaviour, management requirements, and long-term performance. Tailings testing has been completed using pilot samples from Cork Tree Well, which is one of the eight potential ore receiving pits. A summary of the geotechnical test results for the above site is presented in Table 2 below.

Table 2: Summary of tailings geotechnical test results of Cork Tree Well Tailings

Parameter	CTW Oxide 1	CTW Oxide 2	CTW Transition 1	CTW Transition 2	CTW Fresh 1	CTW Fresh 2
P_{80} (µm)	80	80	100	100	100	90
Fines content (<75 µm)	78	77	71	68	59	77
Liquid limit (%)	42	42	31	32	26	27
Plasticity Index (%)	16	16	7	9	Non-plastic	Non-plastic
Particle Density (t/m3) *	2.86 (2.87)		2.85 (2.35)		2.87 (2.84)	
Soil Classification	Low plasticity SILT with sand	Low plasticity SILT with sand	Low plasticity SILT with sand	Low plasticity sandy CLAY/SILT	Non-plastic sandy SILT	Non-plastic SILT with sand

*Results taken from salt corrected test procedure where liquor was dissolved the salt. Lower results are given on the standard soil classification certificates (no salt correction).

The metallurgical tailings samples displayed generally consistent properties, with the oxide and transition materials demonstrating low plasticity, and the fresh tailings samples classified as non-plastic.

Laboratory testing was undertaken to assess the settlement behaviour and consolidation properties of the tailings. Three samples (one from each pilot sample type) from Cork Tree Well were tested at a solids concentration of 55%. Based on the results and considering the applied vertical pressure and reduced permeability during consolidation, the average dry density of the tailings deposited in the central part of the pit is estimated to be approximately 1.5 t/m³.

Geochemical testing was carried out on samples representing tailings produced from processing underground ore sourced from the various weathering zones at Cork Tree Well. Results have indicated that the tailings samples are NAF.

The department does not consider the tailings characterisation work comprehensive enough to reliably determine the likely nature of the tailings material that will be produced over the life of the operation. Only one tailings sample, from a single ore source at Cork Tree Well, has been tested, even though ore is expected to be sourced from eight different pits including Cork Tree Well, Second Fortune, Jasper Hills (Fish and Lord Byron), Alpha, Beta, Menzies and Yunndaga projects. Results from one location cannot be assumed to represent all future tailings, and therefore the applicant cannot claim that all tailings will be NAF.

2.4.3 Seepage

The applicant has undertaken a transient seepage analysis as part of the TSF feasibility study using SEEP/W software (WSP, 2025). Seepage modelling results indicate that the maximum inferred seepage rate is approximately 400 m³/day, with the preferred seepage pathway trending southwest of the TSFs. The deposited tailings are expected to consolidate over time, reducing permeability in the lower layers of the deposit. Consequently, seepage through the pit walls is

likely to decrease progressively as consolidation occurs.

Seepage from the Beta TSFs is expected to remain localised within the vicinity of the pits. Under normal operating conditions, with the decant pond maintained and tailings fully saturated, groundwater levels outside the tenement are predicted to vary by less than 1 m (WSP, 2025).

Based on ore characteristics (only from Cork Tree Well), the applicant has provided predicted seepage water quality data, including expected contaminant concentrations. This information supports the assessment of potential impacts on surrounding groundwater from seepage through the proposed in-pit and Donut TSFs. The expected seepage water quality is presented in Table 3 below. It is noted that as testing was only done on one type of ore the seepage water quality data is not very representative of the expected seepage quality. Further testing of the tailings during operation will therefore be required.

Table 3: Expected seepage water quality data

Parameter	CTW Oxide – Slurry Water	CTW Transition – Slurry Water	CTW Fresh – Slurry Water
pH	7.62	7.98	7.77
TDS (mg/L)	23,000	25,400	24,600
Sulfate as SO4 (mg/L)	2,450	2,980	4,090
Chloride (mg/L)	10,200	11,500	9,500
Calcium (mg/L)	1,640	1,490	1,060
Magnesium (mg/L)	453	600	1,000
Sodium (mg/L)	5,350	6,330	5,510
Potassium (mg/L)	164	261	393
Free Cyanide (mg/L)	<0.004	<0.004	<0.004
Total Cyanide (mg/L)	0.144	0.151	0.298
WAD Cyanide (mg/L)	<0.004	<0.004	<0.004

2.4.4 Water balance

The applicant has conducted a water balance study as part of the application. The model quantifies all water entering, leaving, and stored within the TSFs, including rainfall, evaporation, seepage, tailings slurry, and return water. GoldSim commercial software was used to simulate the water balance, generating 100 statistical realisations to probabilistically evaluate the range of potential water balance scenarios for the TSFs.

Based on the results, tailings bleed water and consolidation water were identified as the primary inflow sources for both the Central and South in-pit TSFs, with stormwater runoff becoming more significant during the wet season. Decanting from the in-pit TSFs is expected to be the main outflow mechanism. Under the proposed design, decanting would only take place when the pond depth is greater than 0.5 m, which is the operating limit for a pontoon-style decant system (WSP, 2025). However, the applicant has also proposed using a land-based pump and turret system to recover decant water based on the operational performance. Which is better suited to shallower decant ponds.

Supporting documentation indicates that surface water flow for the premises is in a westward direction across the site towards lake Carey. The natural ground level slopes slightly to the

southwest and is subject to sheet flows after rainfall events. Upstream catchment size and management can significantly alter the risk profile of a TSF and needs to be clearly defined. The upstream catchment area that has the potential to report to the in-pit TSFs have not been clearly outlined in the application. However, it has been stated that stormwater will need to be diverted away from the facilities. This is a critical consideration in managing the TSFs.

2.4.5 Regional hydrogeology

Groundwater is present across the region within a range of hydrogeological settings, including paleochannel deposits as well as weathered and fractured rock aquifers. The fractured bedrock is characterised by deep chemical weathering up to 150 m, with secondary permeability (Botanica Consulting, 2025).

Groundwater levels in the region are typically about 25 m below ground level (mbgl). Water quality is neutral to alkaline (pH 7–8) and can be highly saline, with some areas recording up to 81,000 mg/L for total dissolved solids (TDS). Salinity is influenced by topography and depth and generally increases toward palaeodrainage systems. Within the area, TDS ranges from 1,000 to 7,000 mg/L, indicating brackish to saline conditions (Botanica Consulting, 2025).

2.4.6 Local hydrogeology

Six groundwater monitoring bores (Figure 4) already exist on the premises. The applicant conducted baseline groundwater monitoring in July 2025 and collected both field measurements and laboratory test results. Table 4 presents the groundwater quality data obtained from this monitoring.

Table 4: Baseline groundwater monitoring results - July 2025

Parameter	Units	BSMB1	BSMB2	BSMB3	BSMB4	BSMB5	Beta SW Corner
Standing Water Level (SWL)*	m	~18.2	~16.1	~17.4	14.3	15.2	12.4
pH*	pH units	6.61	5.83	7.11	7.82	7.17	7.51
Electric Conductivity (EC)*	(µs/cm/ SPC)	25749	39774	6085	1346	26558	31810
Total Dissolved Solids (TDS)	mg/L	15300	24400	3590	793	16300	21000
Mercury		0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Aluminium		0.02	0.05	0.01	0.01	0.02	0.02
Chromium		0.006	0.006	0.012	0.029	0.006	0.002
Cobalt		0.036	0.067	0.002	0.001	0.012	0.002
Copper		0.002	0.005	0.001	0.001	0.002	0.002
Lead		0.002	0.005	0.001	0.001	0.002	0.002
Manganese		0.033	0.275	0.006	0.001	0.003	0.062
Molybdenum		0.002	0.005	0.007	0.007	0.009	0.002
Arsenic		0.002	0.005	0.001	0.002	0.002	0.002

Nickel		0.013	0.052	0.002	0.001	0.002	0.024
Selenium		0.02	0.05	0.36	0.01	0.02	0.03
Thallium		0.002	0.005	0.001	0.001	0.002	0.002
Tin		0.002	0.005	0.001	0.001	0.002	0.002
Vanadium		0.02	0.05	0.02	0.05	0.02	0.09
Zinc		0.13	0.081	0.031	0.009	0.045	0.144
Barium		0.009	0.016	0.005	0.014	0.028	0.007
Boron		4.56	13.9	2.75	1.58	18.1	13.5
Cadmium		0.0003	0.0005	0.0001	0.0001	0.0002	0.0002
Calcium		895	1210	77	13	469	312
Magnesium		877	1510	81	10	850	1120
Sodium		3270	5420	941	260	4290	6500
Potassium		100	126	34	11	143	274
Free Cyanide		0.004	0.004	0.004	0.004	0.004	0.004
WAD Cyanide		0.004	0.004	0.004	0.004	0.004	0.004
Total Cyanide		0.044	0.004	0.024	0.004	0.029	0.004

*Field Measurements

Based on the above results, groundwater levels across the premises are relatively consistent, with standing water levels ranging from approximately 12.4 to 18.2 meters below ground level (mbgl). pH results indicate mostly neutral to slightly alkaline conditions, except for one site showing slightly acidic water. Electrical conductivity and total dissolved solid (TDS) values vary widely, from fresh to highly saline conditions.

Metals and trace elements tend to have low concentrations, generally near or below detection limits. Mercury, cadmium, lead, thallium, tin, and arsenic are negligible, while boron is higher at some sites (up to 18.1 mg/L). Major ions such as calcium, magnesium, sodium, and potassium vary across bores, with some areas showing high concentrations (e.g., sodium up to 6,500 mg/L). Cyanide levels, including free, WAD, and total cyanide are low, indicating little or no contamination from historical gold processing.

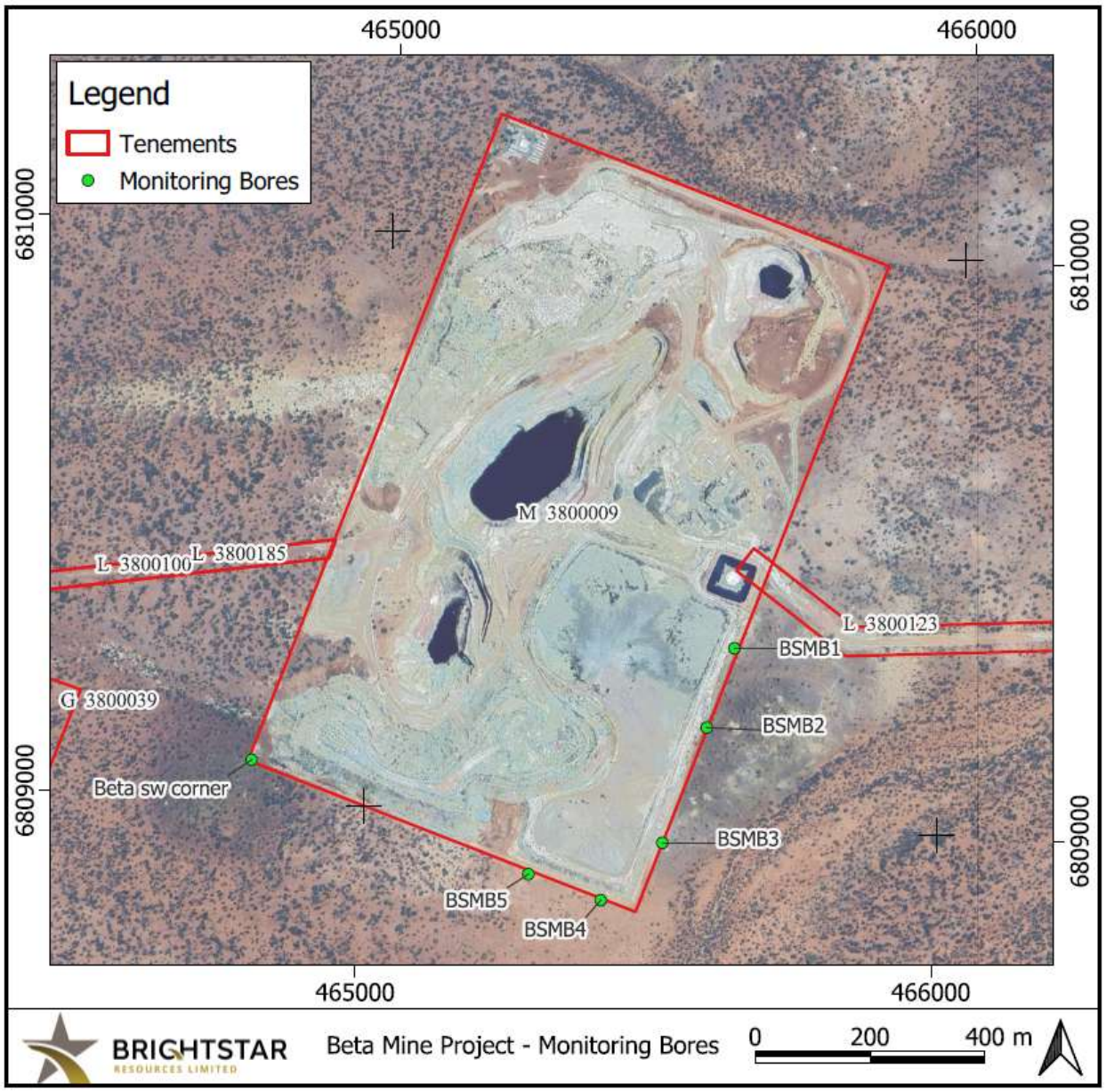

Figure 4: Beta Gold Project Monitoring Bores

The department notes that the six existing monitoring bores do not provide enough coverage to detect seepage from storing tailings in the TSFs. In response, the applicant has proposed to install eight additional bores, six downstream (off-tenement) and two upstream, to improve coverage and identify any seepage (Figure 5).

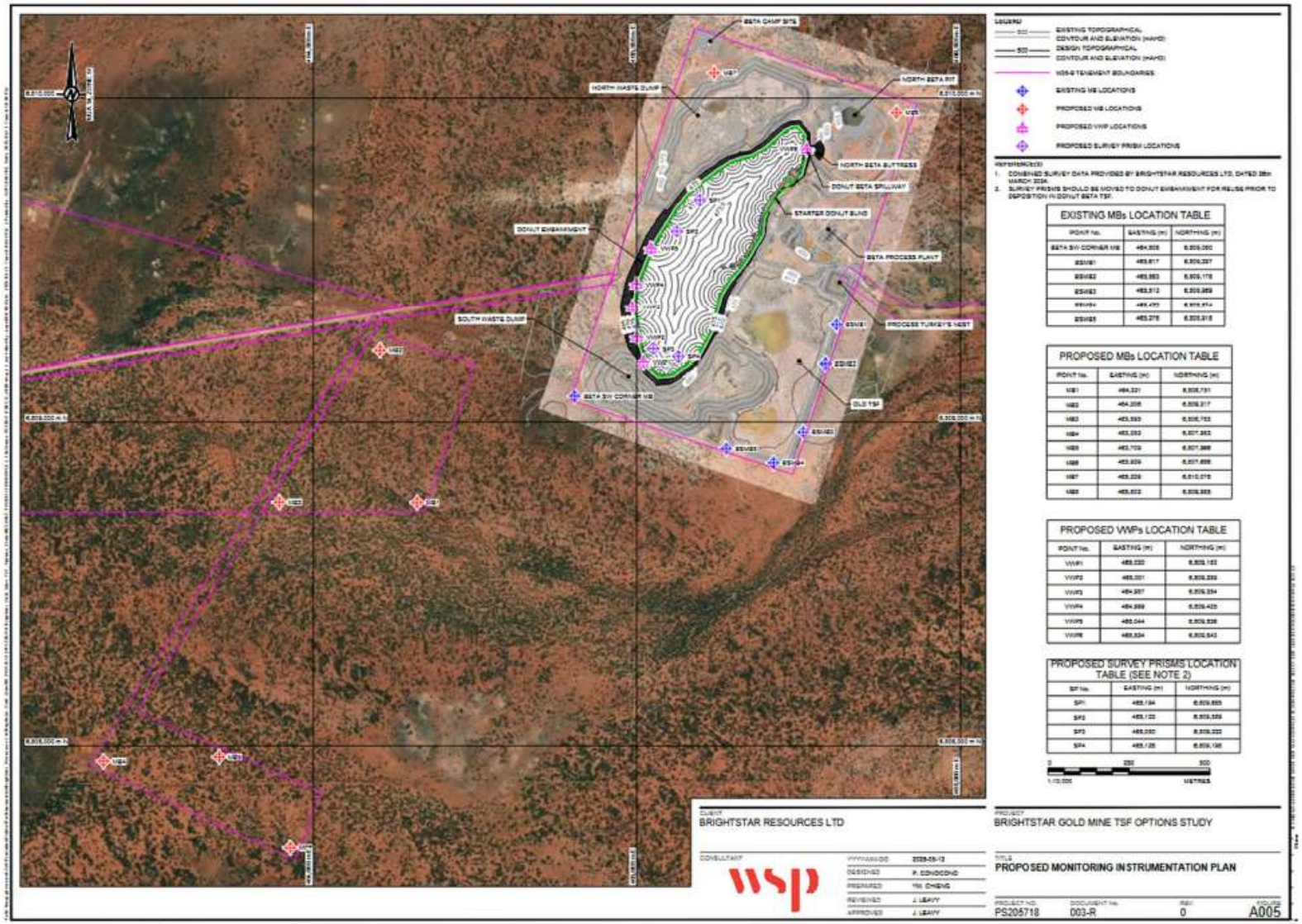

Figure 5: Additional Monitoring bores proposed by the Applicant

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 5 below. Table 5 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 5: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Installation of the processing plant	Air/windborne pathway	• Undertake routine dust suppression using water carts across active work areas during construction including unsealed access roads • Use defined access roads with speed restrictions
	Stage 1: Construction of 0.5m perimeter bunding around two in-pit TSFs and pipelines	Air/windborne pathway	• Undertake routine dust suppression using water carts across active work areas during construction including unsealed access roads • Restrict construction earthmoving activities during high winds (where practical) • Use defined access roads with speed restrictions
	Stage 2: Construction of 10m perimeter bunding around the Donut Beta TSF	Air/windborne pathway	
Time Limited Operation			
Dust	Operation of Beta Gold Processing Plant	Air/windborne pathway	• Operate water sprays on crushing and transfer points of the conveyor • Undertake routine dust suppression using water carts across active work areas during operation including unsealed access roads • Use defined access roads with speed

			restrictions
Contaminated Stormwater		Overland runoff	• Collect potentially contaminated runoff from Processing Plant hardstand area via an internal and perimeter drainage system • Store potentially contaminated runoff from Processing Plant hardstand area directed in a designated stormwater sump for reuse within the Processing Plant • Store hydrocarbons and chemicals within designated and appropriately bunded areas • Reagent storage tanks and processing tanks to be bunded (primary containment) • Install sumps and pumps in the processing plant to remove collected material (including rainwater) • Processing plant routinely inspected to confirm bunding integrity and that containment volumes are not compromised • Immediately clean up any hydrocarbon or chemical spills, with spill kits at key locations with trained employees
Hydrocarbons		Overland runoff	• Store hydrocarbons within designated and appropriately bunded areas • Immediately clean up any hydrocarbon spills, with spill kits at key locations with trained employees
Tailings	Operation of in-pit TSFs and Donut TSF	Seepage / infiltration from the base and walls of the TSFs	• Proof compaction of the surficial soils within the impoundment has been incorporated into the design • Daily inspections of the embankment toe of Donut TSF • Monthly monitoring of groundwater levels and Vibrating Wire Piezometer (VWP) measurements to detect any potential seepage • Installation of 8 new groundwater monitoring bores in addition to the existing 6 bores at the premises and quarterly monitoring of standing water level, groundwater quality including metals and metalloids during operation • When water levels rise above 6 mbgl and water quality monitoring indicates a possible seepage event, Brightstar Resources will initiate a seepage investigation strategy including more frequent monitoring • Recovery of decant water via floating pump

			• Minimise decant pond as much as practicable
		Overtopping or discharge to land due to embankment failure	• Minimum 500mm operational freeboard to be maintained • Decant recovery via decant system • 0.5m bund around in-pit TSFs to prevent stormwater inflow • Foundation preparation work for the Donut Beta Embankment is to incorporate a diversion channel system to redirect surface water flows away from the Beta Donut TSF to ensure no ponding occurs along the Beta Donut embankment • Additional geotechnical investigation to characterise the superficial foundation soils is to be undertaken and if any areas are found to be of high permeability, a seepage cut off trench backfilled with compacted low permeability material is to be incorporated beneath the upstream embankment toe • Use of spillway incorporated into donut TSF design for emergency situations i.e. extreme rainfall event. • Undertake routine (daily) visual inspections of embankment freeboards of containment infrastructure to confirm required freeboard capacity is available
Sediment / contaminated stormwater runoff/leachate from TSF embankment		Direct discharge to land	• Where required erosion protection in the form of non-acid forming rock is to be used as armoring on the surface of the embankment • The embankment is to be constructed of non-acid forming material.
Decant/Return water /tailings		Discharge to land from leaks / spills or rupture of tailings and decant / return water pipelines	• Pipelines to be constructed in accordance with relevant Australian standards • All pipelines containing tailings or decant return water will be equipped with a flowmeter. • Pipelines to be constructed within secondary containment sufficient to contain any spill for a period equal to the time between routine inspections. • Undertake routine (daily) visual integrity inspections of tailings and decant return water pipelines.
Decant water	Storage of decant water at North Beta Pit	Seepage / infiltration from the base of the North Beta Pit	• Daily inspection of freeboard to ensure 0.5m is maintained at all times.

		Overtopping / discharge to land	• Minimum 500mm operational freeboard to be maintained • Undertake routine (daily) visual inspections of embankment freeboards of containment infrastructure to confirm required freeboard capacity is available

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 6 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 6: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	**Distance from activity / prescribed premises**
Residential Premises	The closest residential premises is located approximately 35km to the northwest of the premises
Environmental receptors	**Distance from activity / prescribed premises**
Groundwater	Prescribed premises is located within the Goldfields Groundwater Area. *Rights in Water and Irrigation Act 1914* - Proclaimed Groundwater Area
Surface water creek	Approximately 700 m to the southeast of the South Beta Pit
Native vegetation	Within the premises boundary. Approximately within 250 m of the proposed prescribed activities.
Cultural receptors	**Distance from activity / prescribed premises**
Native Title Determination - National	Prescribed premises is located within the Nyalpa Pirniku land area
Mallock well	Located within 4.5km to south of the prescribed premises

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source 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 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 7.

Works approval W3093/2025/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 7 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 5 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 7: Risk assessment of potential emissions and discharges from the premises during construction and operation

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient ?	Conditions [2] of works approval	Justification for additional regulatory controls / DWER comments
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction								
Category 5: Construction of processing plant and associated infrastructure. Stage 1 Construction of 0.5m perimeter bunds around the 2 IPTSFs (Central and South) Pipeline installation Stage 2 Construction of 10m perimeter embankment at the donut TSF	Dust	Air/windborne pathway causing smothering leading to impacts to vegetation health	Native vegetation	Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 3 – Infrastructure construction requirements Condition 4 – Critical containment infrastructure requirements	Applicant's proposed controls for managing dust during the construction phase have been deemed acceptable and have been conditioned on the works approval.
Commissioning and Time Limited Operations								
Operation of processing plant	Dust	Air/windborne pathway causing smothering leading to impacts to vegetation health	Native vegetation	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Condition 3 – Infrastructure construction requirements Condition 14 – Time limited operation requirements	Applicant's proposed controls for managing dust during the operation of the processing plant have been deemed acceptable and have been conditioned on the works approval.
	Contaminated stormwater	Overland runoff causing impacts to vegetation heath	Native vegetation Drainage lines	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Condition 3 –Infrastructure construction requirements Condition 14 – Time limited operation requirements	Applicant's proposed controls for managing this risk event have been deemed acceptable and have been conditioned on the works approval.

	Hazardous chemicals (cyanide, sodium hydroxide, hydrochloric acid, hydrogen peroxide, flocculant, antiscalent, leach aid)	Spills / direct discharge resulting in overland runoff or seepage impacting vegetation health	Native vegetation Drainage lines	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Condition 3 – Infrastructure requirement	Applicant's proposed controls for managing this risk event have been deemed acceptable and have been conditioned on the works approval.
<u>Stage 1</u> Operation of the Central Beta and South Beta in-pit TSFs <u>Stage 2</u> Operation of the donut TSF	Tailings / supernatant containing acid, dissolved solids, metals and metalloids	Seepage to groundwater through the walls or base of the TSF causing contamination and/or mounding of the groundwater table. Impacts to groundwater quality and to vegetation at the surface may occur if groundwater was to mound to within root zones.	Native vegetation Underlying groundwater	Refer to Section 3.1	Refer to Section 3.3 – Detailed risk assessment of seepage impacts to groundwater and vegetation			
		Overtopping of TSFs causing impacts to vegetation health /surface water	Native vegetation Drainage lines	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	N	Condition 3 – Infrastructure requirement Condition 4 – Critical containment infrastructure requirement Condition 14 – Time limited operation requirements **<u>Condition 16 – Process monitoring</u>** **<u>Condition 22 – Undertake water balance</u>**	The applicant is proposing to maintain a minimum 500mm freeboard at all times within Central Beta and South Beta in-pit TSFs and within the donut TSF. Decant recovery is proposed via a pontoon-mounted decant system or a land-based pump and turret system. These controls have been deemed acceptable and have been conditioned within the works approval. It is noted that a discussion of the upstream catchment area that has the potential to report to the in-pit TFS has not been clearly outlined in the application. However, it has been stated that stormwater will need to be diverted away from the TSFs and is a critical consideration of the project. The Donut TSF design indicates that there is the potential for there to be an upstream catchment area that may report to the Donut TSF. The applicant has proposed to install a 0.5m high bund around the Central Beta and South Beta in-pit TSF to prevent stormwater ingress into the pits. It is also proposed that foundation preparation work for the Donut Beta Embankment is to incorporate a diversion channel system to redirect surface water flows away from the Beta Donut TSF. These are key controls to reduce the amount of stormwater reporting to the in-pit TSF to ensure overtopping doesn't occur and to minimize seeoage These controls have been conditioned within the works approval. A requirement for the applicant to develop a

								water balance for both stage 1 and stage 2 have been conditioned within the works approval.
		Direct discharge to land from pit instability	Native vegetation Drainage lines	Refer to Section 3.1	C = Moderate L = Possible **Medium Risk**	N	**Condition 1 – Remediation Work**	Aerial images show that the Central and South pits contain cracks and slope failures that must be repaired and reinforced to ensure stability of the in-pit TSFs and provide a stable foundation for the Donut embankment. The applicant has not included this remediation work in the proposed construction scope. Without addressing these issues, there is an increased risk of foundation instability, embankment failure, and loss of containment during tailings deposition. To mitigate this risk, the Delegated Officer determined that remediation of the pit ramps and benches is required prior to any construction activity occurring. This has been conditioned within the Works Approval as additional regulatory control.
	Spillage of tailings, leachate and return water through leaks, pipeline ruptures or failure	Direct discharge to land / overland run off causing impacts to vegetation health	Native vegetation Drainage lines	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	Condition 3 – infrastructure requirement Condition 14 – Time limited operation requirements	Applicant's proposed controls for managing this risk event have been deemed acceptable and have been conditioned on the works approval.
	Contaminated runoff from TSF embankments (erosion)	Direct discharge to land / overland run off causing impacts to vegetation health	Native vegetation Drainage lines	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 4 – Critical containment infrastructure requirement	Applicant's proposed controls for managing this risk event have been deemed acceptable and have been conditioned on the works approval.
Water storage at North Beta Pond	Decant water	Seepage to groundwater through the walls or base of the North Beta Pit causing contamination and/or mounding causing impacts to native	Native vegetation Underlying groundwater	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	N	Condition 3 – infrastructure requirement **Condition 5 – Groundwater monitoring bores** Condition 14 – Time limited operation requirements **Condition 18 – Point source emissions monitoring**	The North Beta Pit shares the same geological setting as the South and Central Beta pits, with naturally low-permeability pit floors that provide some containment. The applicant proposes to store decant water in the North Beta Pit, which introduces a potential risk of seepage through the pit base and walls, potentially affecting groundwater quality and levels. The delegated officer considers that groundwater monitoring is essential to manage monitor for impacts to groundwater and notes that no monitoring bores have been proposed by the applicant. It has been determined to include a requirement to install a dedicated monitoring bore along the northern boundary of the pit, as shown in Figure 6, to enable early detection of seepage and support timely management of any impacts. It has also been determined that it is necessary to gather water quality monitoring data for the decant water discharged to the pit. A condition (18) has been added to the works approval. This data will inform the risk assessment for the licence.

		Overtopping of North Beta Pit causing impacts to vegetation health	Native vegetation Drainage lines	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	N	Condition 1 – infrastructure requirement Condition 8 – Time limited operation requirements **Condition 23 – Undertake water balance**	The applicant's proposed control to maintain a minimum freeboard within the pit has been conditioned on the licence. A requirement to undertake a water balance for north beta pit has also been conditioned.
Decant water overflow from Donut Beta TSF into the North Beta Pit via Spillway	Supernatant containing acid, dissolved solids, metals and metalloids	Direct discharge of tailings into North Beta Pit causing contamination and/or mounding causing impacts to native vegetation	Native vegetation Groundwater	Refer to Section 3.1	C = Moderate L = Rare **Medium Risk**	Y	Condition 3 – infrastructure requirement Condition 14 – Time limited operation requirements	Supporting documents indicate that the TSF is designed as a non-releasing facility, the applicant considers the spillway is an additional safeguard. The spillway would direct any overflow into the North Beta Pit through the western pit wall. The spillway is to operate only during a 1:1000 AEP, 144-hour rainfall event, with no discharge expected until after 96 hours and a peak flow of about 0.3 m³/s. The spillway is only to be used as an emergency measure during extreme rainfall events. It should not be used for routine decant or operational water management. Water levels within the TSF should be managed through the approved decant and water management systems, with the spillway acting solely as a backup overflow option during very rare storm conditions. These requirements have been conditioned within the Works Approval.
Decant storage at the process water pond	Decant water	Seepage to groundwater through the walls or base of the process water pond causing contamination and/or mounding causing impacts to native	Native vegetation Drainage lines	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	N	**Condition 3 – Construction requirements** **Condition 14 – Time limited operation requirements**	The delegated officer notes that information regarding the process water pond has not been provided in the supporting documentation and no management controls have been proposed to mitigate potential seepage or overtopping risks during its operation. The delegated officer has determined to include freeboard and construction requirement conditions in the works approval.
		Overtopping of process water pond causing impacts to vegetation health	Underlying groundwater		C = Minor L = Possible **Medium Risk**	N		

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.

3.3 Risk assessment of seepage impacts to groundwater and vegetation

Seepage from the TSFs has been identified as a key environmental risk during operations. The Beta Gold Project is expected to receive ore from several external sources within a 200 km radius of the Beta Gold mine, including Cork Tree Well, Second Fortune, Jasper Hills (Fish and Lord Byron), and the Alpha, Beta, Menzies and Yunndaga projects. Each source has the potential to generate tailings with different geochemical properties.

The applicant has only undertaken geochemical testing on tailings material from Cork Tree Well. Results from this single source cannot be assumed to represent the characteristics of tailings from all future ore source locations. This limited testing introduces uncertainty regarding the chemical characteristics of ore from other sources, their Acid and Metalliferous Drainage (AMD) potential, and overall compatibility. Thus, there is a reasonable likelihood that some sources may produce tailings with elevated concentrations of metals, metalloids, or other harmful constituents in seepage water, posing a risk to groundwater quality.

Groundwater monitoring indicates that site conditions are currently stable and of generally good quality, providing a baseline for assessing any potential seepage impacts from the TSF. Groundwater levels remain consistent across the monitoring sites, ranging from approximately 12.4 to 18.2 mbgl. The groundwater chemistry is neutral to slightly alkaline, and TDS levels range from fresh to saline. Concentrations of heavy metals, trace elements, and cyanide (including WAD and total cyanide) are very low or below detection limits, showing minimal influence from the historical gold processing operation, which has been in care and maintenance since 2012.

The key risks associated with the blending of ore sourced from different mine sites include the potential to increase the acid generating capabilities of tailings resulting in AMD, and the increased toxicity of tailings through geochemical variability. Impacts from AMD may last in the longer term and increasing the toxicity of tailings may decrease the likelihood of successful rehabilitation and cause a degradation of groundwater quality.

Seepage containing elevated concentrations of contaminants such as metals, sulfates, and cyanide can lead to groundwater contamination. These constituents may migrate through the TSF embankments and basement into underlying aquifers, causing long-term degradation of groundwater quality.

Continuous seepage may also raise groundwater levels beneath and adjacent to the TSF, resulting in groundwater mounding. This mounding can alter natural groundwater flow patterns and increase the risk of contaminant transport to sensitive receptors. Contaminated groundwater can change soil chemistry, cause plants to absorb toxic substances, reduce plant health, and potentially result in native vegetation mortality.

3.3.1 Applicant's proposed controls

The applicant has proposed controls to manage seepage impacts including;

- Compaction of the surficial soils within the pits
- Recovery of decant water via a floating pump
- Installation of 8 new groundwater monitoring bores in addition to the existing 6 bores at the premises and quarterly monitoring of standing water level and groundwater quality including metals and metalloids during operation.
- Daily inspections of the embankment toe of the Donut TSF
- Monthly monitoring of groundwater levels and Vibrating Wire Piezometer (VWP) measurements to detect any potential seepage

- When water levels rise above 6 mbgl and water quality monitoring indicates a possible seepage event, Brightstar Resources will initiate a seepage investigation strategy including more frequent monitoring

3.3.2 Risk assessment

Based on the information presented, the department has assessed each relevant risk event and determined a risk rating for each, based on the consequence and likelihood of impacts to sensitive receptors, as a result of the proposed activities in accordance with the Guideline: Risk assessments (DWER 2020).

The Delegated Officer has:

- considered the consequence of seepage from Beta TSFs could have moderate impacts on the groundwater quality and native vegetation; and
- considered the likelihood of impacts from seepage to sensitive receptors as possible during operation.

Thus, it is determined that the overall rating for the risk of impacts from seepage, based on a consequence of moderate and likelihood of possible, is **medium**.

3.3.3 Regulatory controls

Water balance

Seepage is a common issue for TSFs and, if not properly managed, can affect both environmental conditions and structural stability. For this project, a 2D SEEP/W seepage model was completed during the TSF feasibility study. This model is considered appropriate as it accounts for both unsaturated and saturated flow conditions within the tailings profile.

Current modelling predicts a maximum seepage rate of about 400 m³/day, which is broadly consistent with seepage rates reported for similar TSFs in the Goldfields region. However, this estimate is considered preliminary because it is based on limited site-specific hydraulic information. A more accurate understanding of seepage behaviour will only develop once operational water balance data is collected. If the site records higher-than-expected water losses or rising groundwater levels, this may indicate increased seepage and must be investigated to protect TSF integrity and prevent environmental impacts. For this reason, the Delegated Officer has determined that a continuous water balance is required to track water movement across the site. This requirement applies to the TSFs and the North Beta pit, which will operate as a water storage facility (Condition 22 and 23).

Groundwater monitoring and SWL target and limit

The most immediate effects of seepage are likely to result from groundwater mounding and the influence of saline water on vegetation near the TSF. Groundwater mounding can occur when seepage from TSFs causes a rise in local groundwater levels. Over time, this may increase soil salinity and reduce vegetation health. The applicant has indicated that any mounding from the Beta TSFs is expected to remain localised around the pits and will not raise groundwater levels to the surface. Predicted changes in groundwater levels outside the tenement boundary are minimal, with variations of less than 1 m.

Currently, six monitoring bores are located along the southern and southwestern boundary of the tenement. As these bores do not provide full spatial coverage, the applicant has proposed installing eight additional bores in upstream, downstream, and lateral positions to improve monitoring and detect potential seepage.

The Delegated Officer considers the proposed monitoring network insufficient to fully capture potential seepage pathways from the TSFs. Based on expected groundwater flow patterns and potential mounding, the department has determined that at least two additional bores must be installed west of the donut TSF, along the western edge of the tenement (Figure 6). These bores

will enhance coverage in an area where seepage could migrate laterally and affect vegetation. Early identification of changes in groundwater levels or quality in this area will support timely management actions and help prevent environmental impacts. Construction of the additional monitoring bores and requirements have been included in the Works Approval.

A standing water level target and limit have also been applied to the monitoring bores surrounding the TSFs. If monitoring results exceed trigger levels for standing water levels, the applicant must implement timely and effective corrective actions to address the issue and reduce the risk to the environment (Condition 17 and 21).

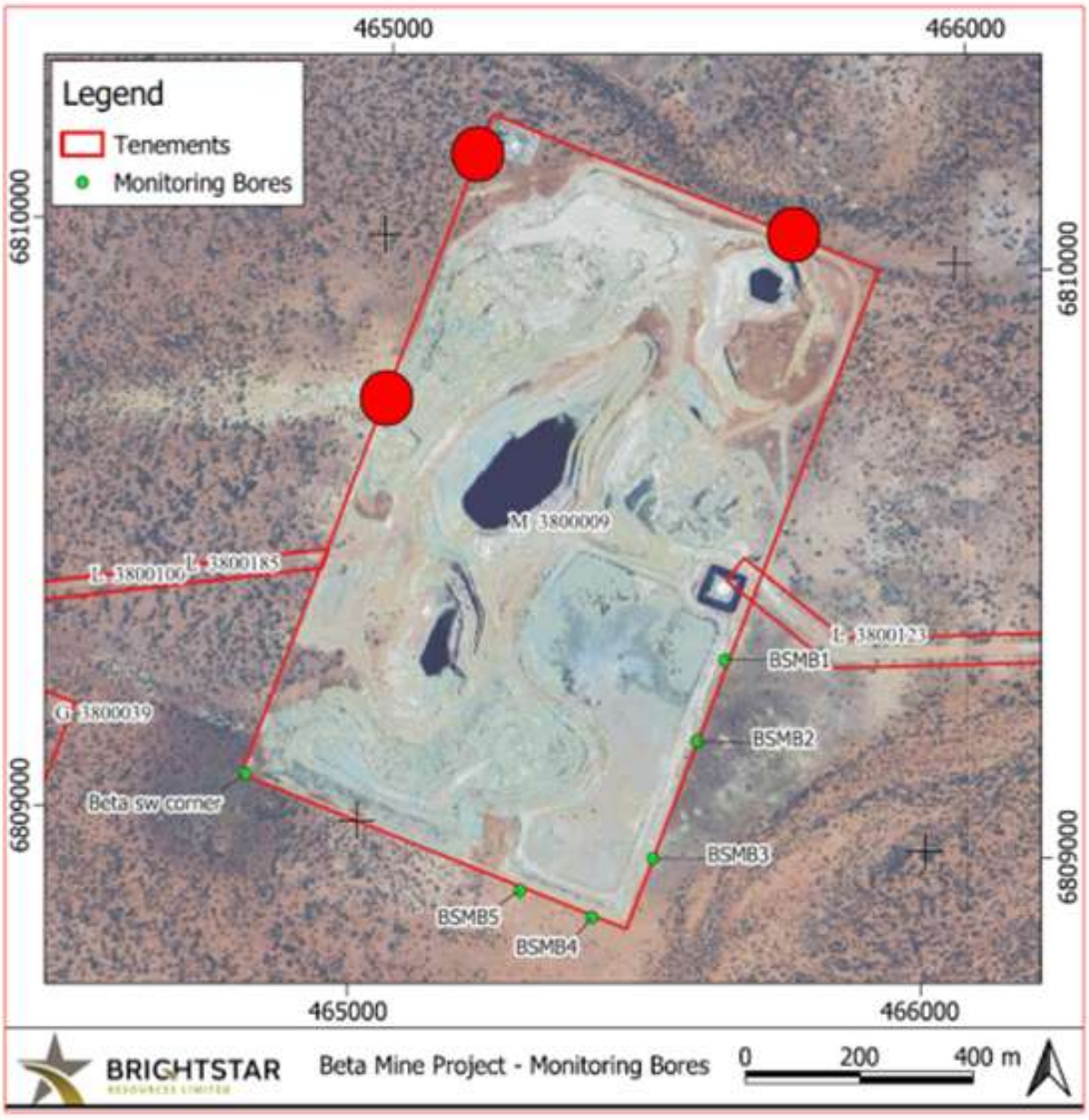

Figure 6: Proposed locations of additional monitoring bores near the TSF

Ore acceptance and tailings characterisation

While modelling provides an initial estimate of seepage rates, uncertainties remain regarding the chemical characteristics of tailings and their long-term behaviour. Seepage characteristics and tailings geochemistry have not been assessed for all proposed ore sources, creating data gaps that increase uncertainty about potential impacts. Condition 27 has been included to

ensure the applicant develops an acceptance procedure for externally sourced ores, which will be assessed as part of a licence application.

The department does not consider the tailings characterisation work comprehensive enough to reliably determine the likely nature of the tailings material that will be produced over the life of the operation. Only one tailings sample, from a single ore source at Cork Tree Well, has been tested, even though ore is expected to be sourced from eight different pits including Cork Tree Well, Second Fortune, Jasper Hills (Fish and Lord Byron), Alpha, Beta, Menzies and Yunndaga projects. Results from one location cannot be assumed to represent all future tailings, and therefore the applicant cannot claim that all tailings will be NAF. A broader range of testing is required to properly understand potential environmental risks. Accordingly, additional conditions have been included in the Works Approval to require further geochemical testing during time limited operations to accurately characterise the tailings material (condition 28).

4. Consultation

Table 8 provides a summary of the consultation undertaken by the department.

Table 8: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 20 October 2025	One public comment received. Refer to Appendix 1	Refer to Appendix 1
Local Government Authority (Shire of Laverton) advised of proposal on 20 October 2025	The Shire of Laverton replied on 22 November 2025 confirming that they have no objections to the application from Brightstar Resources Ltd for a works approval (W3093/2025/1) under Part V Division 3 of the EP Act at Beta Gold Mine within Mining Tenement M38/009, Shire of Laverton.	Noted.
Department of Mines, Petroleum and Exploration (DMPE) advised of proposal 20 October 2025	DMPE advised on 14 November 2025 that Brightstar's Mining Proposal (submitted August 2025) included only a draft Tailings Storage Facility (TSF) feasibility study, which could not be accepted for referral to the LGIRS Geotechnical Engineer. A Request for Information was issued on 21 October 2025 seeking the final TSF study, and a response was received on 11 November 2025. The documents were subsequently forwarded to the LGIRS Geotechnical Engineer for review. Further correspondence confirmed that the LGIRS Geotechnical Engineer had reviewed the In-Pit TSF (IPTSF), Donut Beta TSF, and the repurposing of the North Pit, and advised that the Mining Proposal could not be supported at that stage. As a result, DMPE refused the MDCP (Reg ID 501901) on 17 December 2025 due to insufficient information to determine whether acceptable environmental outcomes could be achieved. Brightstar then submitted a revised MDCP (Reg ID 206686). DWER continued consultation with DMPE and deferred issuing the final Works	Department has considered DMPEs comments in it's risk assessment. d It is noted that it is the applicants responsibility to ensure all relevant approvals are sought prior to construction and operation of the donut TSF.

	Approval pending further advice. On 12 May, DMPE advised that, based on the LGIRS assessment, only Stage 1 of the proposed IPTSFs could be supported. The MDCP was approved on 21/5/2026. An amendment to the MDCP will be required to approve stage 2, with additional design and stormwater management information required for Stage 2.	
Applicant was provided with draft documents on 06/01/2026	Refer to Appendix 2	Refer to Appendix 2
Applicant was provided with draft documents on 02/04/2026	Refer to Appendix 2	Refer to Appendix 2

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. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Botanica Consulting (2025), Category 5: Processing Plant and TSFs Works Approval Application Supporting Information [Attachment 8A], unpublished report prepared for Brightstar Resources Ltd
5. Botanica Consulting (2025), TSF Category Checklist – Beta Gold Project Works Approval Application [Attachment 8B], unpublished report prepared for Brightstar Resources Ltd
6. Como Engineering (2024), Laverton Process Plant DFS [Attachment 8C], unpublished report prepared for Brightstar Resources Ltd
7. WPS (2025), Brightstar Gold – Beta Tailings Storage Facilities – Detailed Feasibility Study Report [Attachment 8D], unpublished report prepared for Brightstar Resources Ltd
8. National Water Commission, 2012. Australian Groundwater Modelling Guidelines. *Waterlines Report Series, No 82*. The technical guidance document is available from the following website: https://www.researchgate.net/publication/258245391_Australian_Groundwater_Modelling_Guidelines.
9. Waterhouse, J. and Friday, R., 2000. To line or not to line – the effects of geometry on seepage rates from tailings storage facilities. *Proceedings of the 7th International Mine Water Congress*, pp. 482-491. The paper is available from the following website: www.imwa.de.

Appendix 1: Public comments received during advertising period

Summary of the comment	Department's response
Seepage assessment and groundwater impact Concerns relating to the suitability of 2D modelling for seepage predictions where 3D modelling may be more suitable for the geological conditions. Concerns relating to the adequacy of the proposed monitoring bore network, monitoring and contingency actions.	Seepage has been assessed in section 3.2 of this report
Tailings consolidation and density assumptions Concerns relating to the reliability of assumed tailings dry density for storage capacity calculations, given inconsistencies between laboratory test results and design assumptions. Concerns relating to limited consolidation testing across different tailings types and lack of quantitative assessment of consolidation timeframes during operations.	The department assesses emissions and discharges to the environment associated with a premises. Tailings consolidation is an internal material property and does not constitute an emission or discharge; therefore, it was not assessed as a standalone factor. However, tailings consolidation can influence seepage rates, which were assessed as part of this works approval (refer to Section 3.3).
Water balance uncertainty Concerns relating to the use of uncalibrated water balance modelling parameters and assumptions to demonstrate compliance with freeboard requirements. Concerns relating to limited margin for uncertainty in freeboard predictions.	Under the department's regulatory framework, outcome-based conditions are preferred. The department considers that the onus rests with the works approval holder to ensure compliance with freeboard requirements. Condition 22 has been included to ensure the site's water balance is regularly validated and updated to reflect operational conditions and manage any associated risks.
Geochemical characterisation Concerns relating to the limited scope of geochemical testing, including reliance on static ABA tests without kinetic or leachability assessments, and limited representation of spatial variability in tailings and waste rock materials. Concerns relating to uncertainty in classification of some waste rock materials and the assumption of suitability without further geochemical	Condition 28 has been included to require comprehensive geochemical characterisation of tailings to occur during time limited operations.

verification.	
Reagent storage and bunding The application provides insufficient detail relating to storage and management of reagents.	Spills of hazardous materials has been considered as part of the risk assessment. See Section 3.2 for further information.
Dust emissions Concerns relating to the adequacy of dust management for multiple potential emission sources, including TSF surfaces, where the application concludes dust is not applicable without sufficient justification. Concerns relating to the lack of air quality impact assessment or dispersion modelling to demonstrate compliance with relevant ambient air quality standards.	Dust emissions have been considered as part of the risk assessment. See Section 3.2 for further information.
Point source emissions Concerns relating to limited information on emission characteristics, control measures, and predicted emission rates for the carbon regeneration kiln and gold smelting furnace.	The delegated officer has determined that there is no complete source–pathway–receptor linkage for air emissions and human receptors associated with the proposal. On this basis, air emissions have been screened out of the risk assessment.
Catchment and drainage design Concerns relating to the lack of detailed catchment delineation, erosion and sediment control planning for construction activities, the Donut TSF spillway adequacy and extreme rainfall scenarios.	Surface run off has been considered as part of the risk assessment. See Section 3.2 for further information.
Water quality of uncontrolled discharges The application does not include discharge water quality for emergency discharges from the TSF spillway.	Overtopping of the TSF has been considered as part of the risk assessment. See Section 3.2 for further information.
Monitoring network design Concerns relating to the adequacy of the proposed monitoring network, including limited upgradient monitoring to establish background conditions and insufficient detail on bore construction specifications to ensure suitability	The monitoring network and program was assessed in the detailed risk assessment in the context of seepage (see Section 3.3). The delegated officer conditioned the construction of additional bores including specifying bore construction details and monitoring parameters

for detecting seepage impacts. Concerns relating to the limited scope of the monitoring program, including insufficient justification for quarterly sampling, omission of key geochemical analytes, lack of seasonal or commissioning phase considerations, and absence of defined trigger levels and response actions to support adaptive management.	and frequencies. Limits for SWL and WAD cyanide are included in the works approval.
TSF inspection and surveillance The application did not include detailed inspection checklists, qualification requirements, instrument monitoring protocols or incident reporting.	TSF stability is regulated by the Department of Mines, Petroleum and Exploration. Inspections are considered a control for discharges from a TSF (seepage, overtopping etc). This has been factored into the risk assessment. See Section 3.2 for further detail.
Conceptual closure strategy Several closure elements should be considered further.	Mine Closure is out of scope of the Part V of the *Environmental Protection Act 1986.* Mine closure and rehabilitation related activities are assessed under *Mining Act 1978* and Department of Mines, Petroleum and Exploration is the responsible agency for mine closure assessments.
Financial provisioning The application does not include information regarding financial provisioning for closure or contingency scenarios.	Assessing mine closure activities, including closure obligations, completion criteria, closure outcomes, and financial assurances, is outside the scope of Part V of the *Environmental Protection Act 1986*. Mine closure and rehabilitation activities are assessed under the *Mining Act 1978* and Department of Mines, Petroleum and Exploration is the responsible agency for mine closure assessments.
Adequacy of time limited operations provision Clarify and appropriately constrain the scope of Time Limited Operations to ensure that this provision is used for genuine commissioning activities rather than full-scale production pending licence assessment.	Time limited operations allow for operation of a premises under a works approval for a period of 180 to facilitate the assessment of a licence application. When time limited operations are assessed and granted, conditions relating to emissions and discharges that may occur during operations are applied to the works approval.

Appendix 2: Summary of applicant's comments on risk assessment and draft conditions

Description	Summary of applicant's comment	Department's response
Section 2.3 of the Decision Report Proposed Activities The applicant has provided an update to on the North Beta pit.	"The North Beta pit will be used as a water storage facility for water from multiple sources, not just decant water."	Detail has been updated and this change has been assessed
Section 2.3 of the Decision Report Proposed Activities The applicant provided updated information on the radius of the area from which they intend to source ore for processing.	"The premises additionally intends to accept and process ore from several mining projects within 200km from the premises including Cork Tree Well, Second Fortune, Jasper Hills (Fish and Lord Byron), Alpha, Beta, Menzies and Yunndaga projects." "Current market conditions and lower operating costs make it feasible to haul ore from Menzie and Yunndaga to the BGPP"."	Detail has been updated and this change has been assessed
Section 2.3.1 of the Decision Report Beta Gold Processing Plant (BGPP) Department requested an updated process plant layout to reflect the updates requested after the application submission. The requested updates include an increase of the throughput to 1.5 Mtpa from 1 Mtpa, and to remove secondary and tertiary crushing, and replace the ball mill with a SAG mill and pebble crusher.	An updated version of the layout was submitted.	The applicant has submitted an updated processing plant layout, and this information has been incorporated into the revised draft decision report and works approval.
The department assessed potential seepage and overtopping risk of the Turkey's nest. However, there were no	The applicant has stated that the decant water pipeline will connect to the process water pond rather than the	Detail has been updated and this change has been assessed.

information regarding operational details o the Turkey's nest within the supporting documents submitted with the application. Thus, the delegated officer has determined to include freeboard and liner integrity conditions in the works approval to manage potential emissions associated with the turkey's nest.	turkey's nest. An updated site layout has provided.	
Section 3.3.1 of the Decision Report Background and description of the risk event Based on the information submitted with the application, Beta Gold Project was expected to receive ore from several external sources within a 75 km radius of the Beta Gold mine, including Cork Tree Well, Second Fortune, Jasper Hills (Fish and Lord Byron), and the Alpha and Beta projects. However, now the applicant has to expand the area of the sourcing the ore.	"Current market conditions and lower operating costs make it feasible to haul ore from Menzie and Yunndaga to the BGPP".	Detail has been updated and this change has been assessed
Section 4 of the Decision Report Table 7: Consultation	"A number of RFIs from the DMPE have been addressed by Brightstar. Following a meeting with the DMPE on 11 December 2025, it was agreed that the Beta Mining Proposal and Mine Closure Plan should be consolidated into the new Mining Development and Closure Proposal (MDCP) format required by the DMPE. Brightstar is currently undertaking this consolidation and does not anticipate any impediment to the progression of the Works Approval assessment or to the subsequent approval of the Works Approval ahead of the MDCP approval".	Department has consulted DMPE regarding the updated MDCP submission and its adequacy.

Condition / Table	Summary of applicant's comment	Department's response
Condition 1 of the Works Approval Table 1: Design and construction / installation requirements a) Processing plant components	Applicant has provided a full list of components and facilities of the Beta Gold Processing Plant. • Primary crushing; • Grinding and classification; • Pebble crushing; • Gravity circuit; • Concentrate thickener; • Leach tanks; • Carbon adsorption tanks; • Elution circuit; • Carbon regeneration furnace; • Electrowinning cells; • Gold room; • ROM Pad; • Surge bin and emergency feed stockpile; • Process water pond; • Tailings thickening and disposal circuit; • Tailings decant water return; • Non-process infrastructure; • Workshops and stores buildings; • Power station; • Materials handling equipment including conveying, pumping and piping; and • Reagents.	Updates made to plant components in condition 1
d) Plant infrastructure to be installed on a concrete hardstand and constructed in accordance with the design drawing labelled as Figure 2;	Applicant requested to replace "hardstand" with "footings".	Updates made to plant components in condition 1
c) Multiple spigots to be installed around pit rim;	Suggestion is to change wording to "Spigots to be installed around pit rim"	Change has not been accepted. Design report indicates multiple spigots will be installed.
d) Pontoon-mounted decant pump or land based pump and turret to be installed for decant water recovery	Requested to change wording into "Pontoon-mounted decant pump or land based pump and turret to be	Wording has been updated.

	installed for decant water recovery"	
Table 3: Infrastructure and equipment requirements during time limited operations d) Pontoon-mounted decant pump or land-based pump and turret to be installed for decant water recovery	Requested to change wording into "Pontoon-mounted decant pump or land-based pump and turret to be installed for decant water recovery"	Wording has been updated.
Table 3: Infrastructure and equipment requirements during time limited operations - Item 4	Requested to change the term "Turkey's Nest' into Process water and raw water pond. Naming changed as per updated design components and layout.	Detail has been updated and this change has been assessed
Applicant's comments on the draft issued on 02 April 2026		
Section 2.4.4 Water Balance of the Decision Report Department requested the applicant to provide a justification for the use of a turret style decant system and why the flexibility is required	The applicant advised that both options are standard and effective for managing decant water within the TSF. The final selection will be based on site-specific conditions, with the turret intake offering the advantage of adjusting to varying water levels for improved operational control. This flexibility does not affect the overall design intent or performance of the TSF, and the selected system will be implemented in accordance with relevant industry standards.	Department has considered the justification and allowed the pump selection flexibility as requested.
Works Approval Table 1: Design and construction / installation requirements Department requested to confirm the size (in MW) of the 'power station' component and what fuel type as this may trigger Category 52 or 84	The applicant has advised that the power station will operate to meet site demand, with an average load of about 5.6 MW and a peak of 6.2 MW, supplied by LNG-fuelled generators. It will use three 2.6 MW gas engines (total 7.6 MW) as duty units, with one additional unit kept as standby for maintenance or outages. Diesel generators (three 1.1 MW units) are included only for black start during full power outages and will not be used during normal operations.	Based on the information provided, the Department has determined that the power station does not trigger Category 52 or Category 89.