



Application for Works Approval

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

Works Approval Number W6888/2024/1

Applicant Focus Operations Pty Ltd

ACN 115 821 255

File number DER2023/000815

Premises Bonnievale Underground Mine Project
Part mining tenements M15/277, M15/595,
M15/877, L15/95 and L15/459.

As defined by the premises map in Schedule 1 and the
coordinates in Schedule 2 of the works approval

Date of report 2 May 2024

Decision Works approval granted

A/Manager Resource Industries
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

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 W6888/2024/1 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 18 December 2023 Focus Operations 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) for Category 12, 6 and 89 activities associated with the Bonnievale Underground Mine Project. The Bonnievale project is a satellite operation to the existing Three Mile Hill project, in which the applicant holds licence L8249/2008/3.

The Three Hills Mine project is located immediately east of the town of Coolgardie. The proposal to develop the Bonnievale Underground Mine Project will see the extraction of gold ore for processing at the nearby Three Mile Hill processing plant. Whilst this application is connected to L8249/2008/3, the proposed operations are located approximately 7km north of the town of Coolgardie and 5 km north of the Three Mile Hill project prescribed premises, connected only by tenement L 15/469. Figure 1 provides further details on the works approval area location.

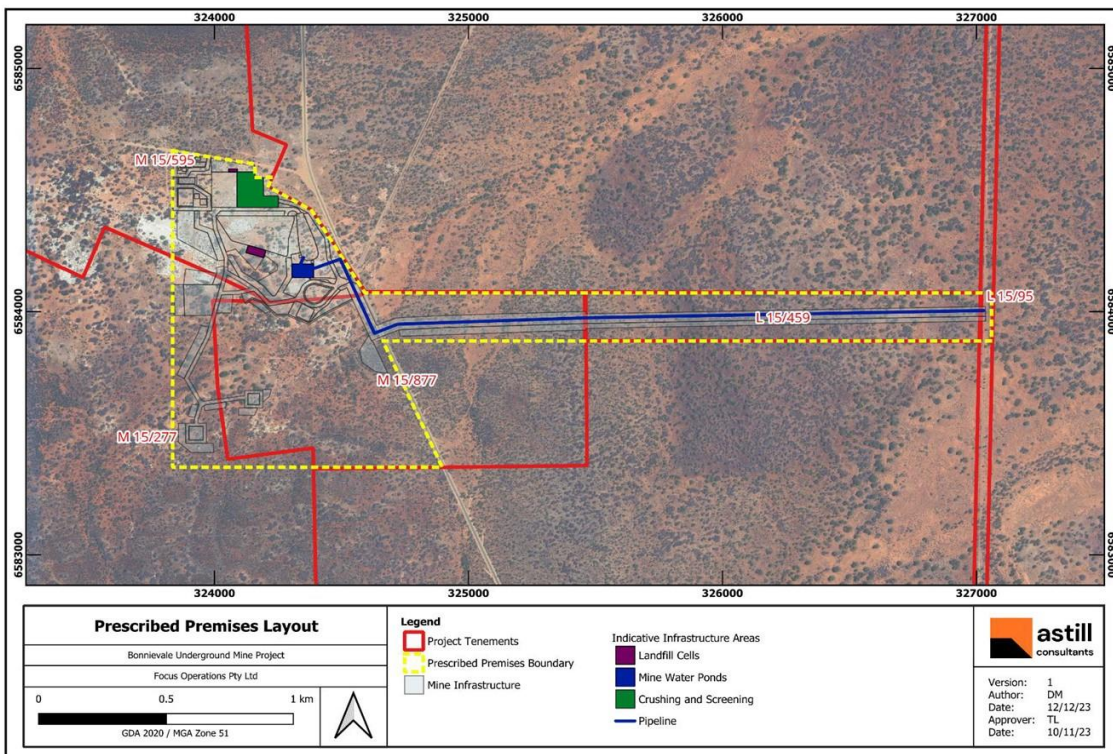


Figure 1: Location of Premise

This application is to undertake construction works relating to installation of a mobile crushing and screening plant (category 12), landfill (category 89) and mine water storage ponds and associated dewatering pipeline (category 6) at the premises. These categories are listed under schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) and are defined in works approval W6888/2024/1.

As part of this works approval application, the applicant has requested approval for a 3-month period of environmental commissioning. The delegated officer considers that the risk of environmental impact from potential emissions and discharges during commissioning of the infrastructure will be similar to what is expected during operation of the infrastructure and is adequately managed under construction and time limited operation conditions. The Delegated Officer has approved time limited operations and considers that a requirement for a separate environmental commissioning phase to be unnecessary.

An amendment to licence L8249/2008/3 or a new licence application will be required following the conclusion of time limited operations authorised in W6888/2024/1.

2.2.1 Mobile Crushing and Screening

The applicant intends to operate a mobile crushing and screening plant to generate road base and hardstand material to support development of the Bonnievale Project, and to also be used as stemming in drill and blast holes if required. The crushing and screening unit will be mobilised to site and deployed for campaigns as required to process stockpiled materials. All crushed / screened materials are proposed to be used within the prescribed premises boundary. A nominated 100,000 tonnes per year maximum throughput will be crushed and screened, however the actual throughput is likely to vary due to the campaign nature.

Stockpiled inert waste rock material will be fed via front end loader into a feeding hopper which will be crushed by a jaw crusher and fed via conveyor to an adjacent screening unit. Crushed material will go through a secondary impact crusher before going through a vibrating screen, separating material into various sizes from approximately 5 mm to 300 mm.

The mobile crushing and screening plant will be moved throughout the prescribed premises boundary depending on location of the campaign.

2.2.2 Landfill

Two unlined Class II putrescible landfills are proposed to be constructed on tenement M 15/595 for the disposal of site generated putrescible waste throughout the life of the Bonnievale Project. Each landfill cell will be constructed at the toe of the adjacent waste rock landform (WRL) and operated in accordance with the *Environmental Protection (Rural Landfill) Regulations 2002*.

The landfills will consist of a series of trenches up to approximately 3 meters deep by 3 meters wide and up to 20 meters in length.

Waste materials generated during construction and ongoing operations will be collected, transported, stored and disposed of in the site landfill. Pursuant to the Landfill Waste Classification and Waste Definitions 1996 (as amended 2019) the waste types sought to be disposed of include:

- Clean fill;
- Inert Waste Type 1;
- Inert Waste Type 2 (used tyres);
- Uncontaminated Fill;
- Putrescible Wastes; and
- Contaminated solid waste meeting waste acceptance criteria specified for Class II landfills.

It is expected that approximately 200 tonnes of waste will be disposed of per year.

2.2.3 Mine Dewatering

The applicant is required to dewater underground mine workings throughout the anticipated five year duration of the Bonnievale Project. Based on peak dewatering rates with contingency for varying hydraulic conductivity and potential for inflow from old mine workings, a total allocation of 475,000 m³ per year is expected.

The Applicant is proposing to discharge dewater to two lined mine water ponds (MWP), via sump pumping from the underground or pumping from surface dewatering bores (or a combination thereof). A new pipeline connecting the underground mine and MWPs will need to be constructed.

The MWPs will consist of a settling pond, which will overflow into a secondary holding pond. Both ponds are proposed to be constructed via compacted clay material over in-situ transitional material, and then lined with a minimum 1 mm thickness HDPE liner to prevent seepage. From the holding pond, water will be either recycled back to underground to support mining activities, used for surface dust suppression via watercarts, or when required, pumped to the Three Mile Hill processing plant via a new pipeline which runs north/south from a bore-field used to supply groundwater to the Three Mile Hill processing plant for use in processing activities.

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 time limited operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Construction/installation of landfill, crushing and screening plant and dewatering infrastructure	Air / windborne pathway	<ul style="list-style-type: none"> Dust suppression via water carts; Visual dust monitoring to determine if construction activities need to be ceased due to high wind or extremely dry conditions.
Noise	Construction/installation of landfill, crushing and screening plant and dewatering infrastructure	Air / windborne pathway	No controls proposed.
Time Limited Operation			

Emission	Sources	Potential pathways	Proposed controls
Hypersaline water	<p>Mine dewatering and operation of associated pipelines and MWP's</p> <p>Seepage through base of MWP's</p>	<p>Pipeline leaks, overtopping of storage ponds, seepage from ponds.</p>	<ul style="list-style-type: none"> • Daily inspections for visual integrity and leaks (during operation); • 500 mm deep v-drain will surround all dewatering pipelines to contain leaks; • Telemetry will be installed with leak detect alarms; • Scour pits placed where required at low points over the pipeline route, with sufficient capacity to contain a spill event between routine inspections (daily); • Mine water ponds to be constructed of compacted clay material and lined with HDPE; • A minimum operational freeboard of 200mm on MWP's.
	<p>Use of hypersaline water for dust suppression</p>	<p>Direct discharge / overspray</p>	<ul style="list-style-type: none"> • Verification of competency will be utilised as a management tool to ensure operators are sufficiently qualified to operate watercarts prior to usage to reduce risk of overspray into the environment; • Visual inspections will be used to identify any areas of saline overspray and ensure other methods such as dribble bars are put into place to prevent further incidents.
<p>Hydrocarbon spills / leaks</p>	<p>Diesel generated pump (dewatering)</p> <p>Operation of crushing and screening plant</p>	<p>Direct discharge</p>	<ul style="list-style-type: none"> • Spill kits will be available or nearby to areas where there is a risk of hydrocarbon spills; • Equipment will be used in line with manufacturer's specifications; • Daily inspections of infrastructure.
<p>Dust</p>	<p>Operation of crushing and screening plant, stockpiling of materials</p>	<p>Air / windborne pathway</p>	<ul style="list-style-type: none"> • Pre-emptively wetting down stockpiles of material with watercart (as required); • Visual monitoring of dust levels and stopping activities under extreme dust conditions (i.e., high winds towards public road).
<p>Noise</p>		<p>Air / windborne pathway</p>	<ul style="list-style-type: none"> • Siting within a low-risk location to reduce environmental impacts; • Maintaining a stakeholder engagement strategy, including complaints management system .

Emission	Sources	Potential pathways	Proposed controls
Contaminated stormwater (sediment)		Stormwater runoff	<ul style="list-style-type: none"> No controls proposed.
Contaminated stormwater	Operation of new landfill	Stormwater runoff	<ul style="list-style-type: none"> Bunding will be constructed to divert surface run-off away from trenches.
Windblown waste		Air / windborne pathway	<ul style="list-style-type: none"> Landfill site will be fenced; Active tipping area will be maintained to less than 20 meters in length and covered at least twice monthly to prevent windblown waste; Landfill will be inspected weekly with windblown waste to be collected and returned to the trench.
Leachate from base of landfill		Seepage	<ul style="list-style-type: none"> landfill trenches will be covered at least twice monthly with low permeability materials restricting drainage of water into the waste material, preventing generation of leachate; Stormwater is to be diverted away from the trench.

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 2 and Figure 2 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 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Mt Burges Homestead	Approximately 2.5 km west of prescribed premises boundary.
Environmental receptors	Distance from prescribed activity
Native vegetation (including Threatened and priority flora)	<p>No Threatened (Declared Rare) or Priority Flora or Ecological Communities (TECs or PECs) were recorded during field surveys of the Bonnievale Project area.</p> <p>The Project area has been subjected to historical mining disturbances and more recent establishment of exploration activities (tracks and drill pads), and as such</p>

	<p>the vegetation condition ranges from Excellent to Completely Degraded.</p> <p>The northern portion of the site is most heavily impacted, with the southern portion of the site mostly undisturbed and ranging from Good to Excellent condition.</p> <p>Native vegetation is located less than 100 metres from dewatering pipeline alignment and premises boundary.</p>
Threatened and/or priority fauna	<p>One species of significance (Malleefowl) may occur with the project area, based on previous records and suitable habitat.</p> <p>Four species of conservation significance (Chuditch, Peregrine Falcon, Inland Hairstreak and Arid Bronze Asure Butterfly) can be regarded as possible utilizing the project area for some purpose at times.</p>
Aboriginal and other heritage sites	<p>The nearest Aboriginal heritage site is Mingarwee (Porcupine) Hill (Place ID 34417), 1.5 km southwest of premises boundary.</p> <p>The prescribed premises interacts with a local listing (municipal inventory) known as “Bonnievale Townsite” (Place 7389). This is not a statutory heritage listing but requires a clearing permit before clearing.</p>



Figure 2: location of human receptors in relation to 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 3.

Works approval W6888/2024/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence will be required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises. 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 3: Risk assessment of potential emissions and discharges from the premises during construction and time limited operation

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Construction								
Construction of dewatering pipelines, water storage dams, mobile plant and landfill	Noise	Air / windborne pathway causing impacts to health and amenity	Residences of Mt Burgess approximately 2.5 km west of premises boundary	N/A	C = Slight L = Unlikely Low Risk	Y	N/A	N/A
Operation (including time-limited-operations operations)								
Transport (via pipelines) and storage (MWP) of mine water (from dewatering)	Saline mine water	Pipeline leaks	Native vegetation	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1: Construction Requirements Condition 6: Operation requirements	The applicant's proposed controls have been conditioned within the works approval.
		Overtopping of MWP causing direct discharge to land with overland runoff of saline water impacting ecosystem health			C= Minor L=Unlikely Medium Risk	Y	Condition 1: Construction Requirements Condition 6: Operation requirements	The applicant's proposed controls have been conditioned within the works approval.
		Seepage from MWP impacting groundwater table resulting in mounding	Native vegetation Groundwater		C= Slight L-Unlikely Low Risk	Y	Condition 1: Construction Requirements	Mine water ponds will be lined with HDPE liner to prevent seepage. The applicant's proposed controls have been conditioned within the

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
								works approval
Operation of the mobile crushing and screening plant	Dust	Air / windborne pathway causing impacts ecosystem health (smothering of vegetation)	Native vegetation	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	Y	Condition 1: Construction Requirements Condition 6: Operation requirements	The applicant's proposed controls have been conditioned within the works approval.
	Contaminated (sediments) stormwater	Overland run-off resulting in contamination of soils and impacts to ecosystem health	Native vegetation	Refer to Section 3.1	C = Minor L = Unlikely Medium Risk	N	Condition 1: Construction Requirements Condition 6: Operation requirements	Requirement for construction of stormwater drains and bunds conditioned to divert stormwater around crushing and screening plant
	Hydrocarbon spills and leaks	Direct discharge to land causing contamination of soils / overland runoff	Local soils Native vegetation	Refer to Section 3.1	C= Slight L- Possible Low Risk	Y	N/A	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> apply
Discharge of waste to Landfill cells	Windblown waste	Air/windblown causing impacts to ecosystem health	Native vegetation Local fauna	Refer to Section 3.1	C = Slight L = Possible Low Risk	Y	Condition 6: Operation requirements	The applicant's proposed controls have been conditioned within the works approval.
	Leachate from base of landfill	Groundwater infiltration causing contamination of groundwater	Groundwater	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 6: Operation requirements	
	Stormwater runoff from	Overland run-off causing	Native vegetation	Refer to Section	C = Slight	Y	Condition 1: Construction	

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
	trenches/Contaminated stormwater	contamination / ecosystem impacts		3.1	L = Unlikely Low Risk		Requirements Condition 6: Operation requirements	

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 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 9 February 2024.	None received.	N/A
The Shire of Coolgardie was advised of proposal on 12 February 2024.	None received.	N/A
A letter was sent to Marlinyu Goorlie Aboriginal Corporation on 8 February 2024 providing details of the proposal.	None received.	N/A
Applicant was provided with draft documents on 22 April 2024.	Refer to Appendix 1	Refer to Appendix 1

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. Astrill Consultants, 2023, Boonievale Underground Mine Project, Works Approval Supporting Document.
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.

Appendix 1: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response
Cover page	Administrative error, works approval area incorrectly defined	Tenement details updated
Condition 1 Table 1	Request for flexibility on requirement for landfill to be fenced, with preference for landfill to be either bunded or fenced.	The Department has reviewed the risk profile for the site and has removed the requirement for the landfill to be fenced.