



## Application for Works Approval

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

**Works Approval Number** W6842/2023/1

**Applicant** Black Cat (Paulsens) Pty Ltd

**ACN** 657 781 194

**File number** DER2023/000480

**Premises** Paulsens Gold Operation  
Shire of Ashburton WA 6751  
  
Legal description  
Part of mining tenements M08/99 and M08/196  
As defined by the premises maps attached to the issued works approval

**Date of report** 19 December 2023

**Decision** Works approval granted

Melissa Chamberlain  
A/MANAGER, RESOURCE INDUSTRIES  
REGULATORY SERVICES  
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

## Table of Contents

<b>1. Decision summary .....</b>	<b>1</b>
<b>2. Scope of assessment .....</b>	<b>1</b>
2.1 Regulatory framework .....	1
2.2 Application summary and overview of premises .....	1
<b>3. Risk assessment.....</b>	<b>2</b>
3.1 Source-pathways and receptors .....	2
3.1.1 Emissions and controls .....	2
3.1.2 Receptors.....	4
3.2 Risk ratings.....	7
<b>4. Consultation .....</b>	<b>10</b>
<b>5. Conclusion .....</b>	<b>10</b>
<b>References.....</b>	<b>10</b>
<b>Appendix 2: Application validation summary.....</b>	<b>11</b>

Table 1: Proposed applicant controls .....	2
Table 2: Sensitive human and environmental receptors and distance from prescribed activity.	4
Table 3: Risk assessment of potential emissions and discharges from the premises during construction and operation .....	8
Table 4: Consultation .....	10
Figure 1: Site layout .....	2
Figure 2: Distance to sensitive receptors.....	6

## 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 W6842/2023/1 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 23/07/2023, Black Cat (Paulsens) Pty Ltd (the applicant) applied for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act). The premises is approximately 160km west of the town of Paraburdoo. The applicant currently operates the premises under L7969/2004/3. This application for the new works approval is to undertake construction works relating to:

Category 5:

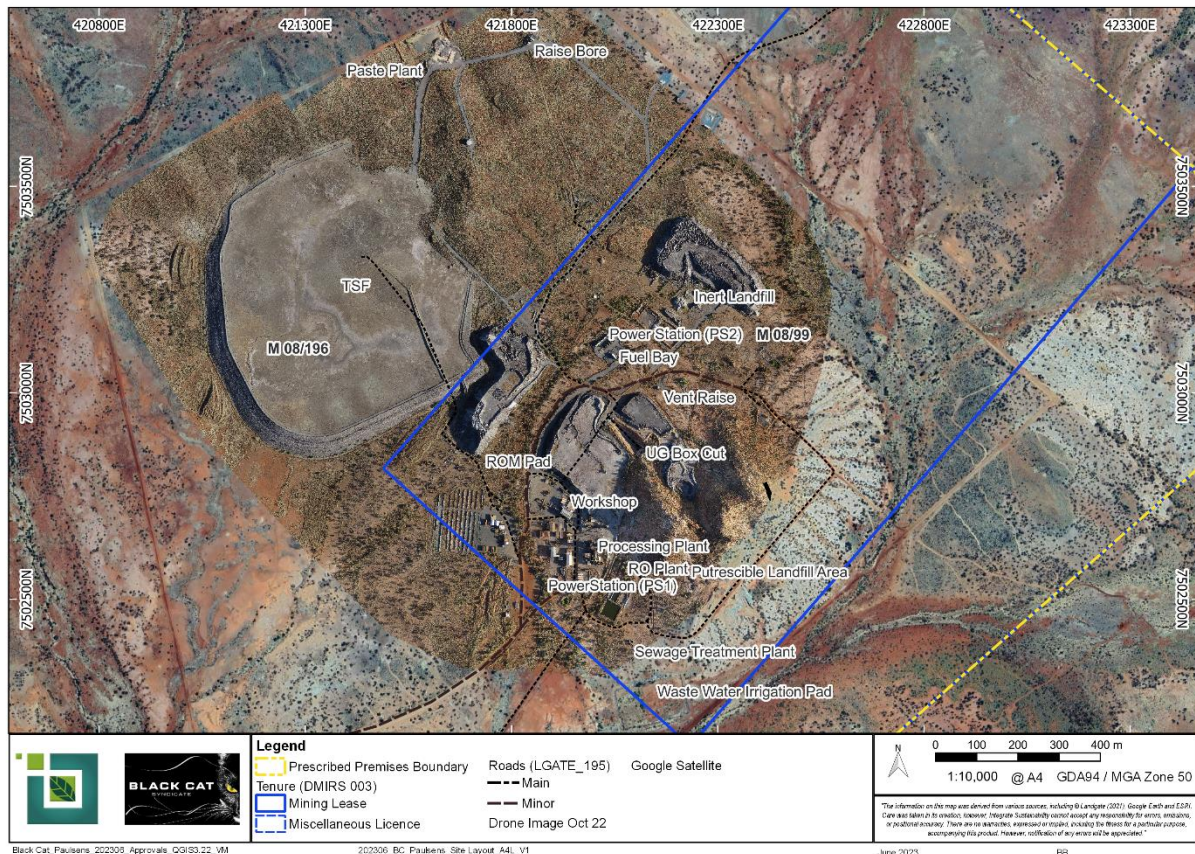
1. The removal and replacement of two gravity concentrators with equivalent units.
2. 150m<sup>3</sup> adsorption tanks (CIL tanks) in the processing plant with corrosion around the top and bottom 500mm sections. If they cannot be successfully repaired, they will be replaced.

Category 85:

3. Removal and replacement of existing wastewater treatment plant (WWTP) as it was deemed unsuitable according to WA Health regulations. Replacement consists of a new 50 m<sup>3</sup>/day Activate Sludge Bio-Reactor sewage treatment plant.

The operation of the CIL tanks and gravity concentrators involve wastewater recirculated within the processing system and eventually disposed in tailings. Operation of the WWTP involves treated water to be disposed through a dedicated spray field irrigation system at the Wastewater Irrigation Pad (Figure 1).

The premises relates to categories 5 and 85 and assessed production / design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6842/2023/1. 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 W6842/2023/1.



**Figure 1: Site layout**

### 3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk Assessments* (DWER 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 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
<b>Construction</b>			

Emission	Sources	Potential pathways	Proposed controls
Dust	Removal and replacement of <ul style="list-style-type: none"><li>• WWTP</li><li>• 2 gravity concentrators</li><li>• up to seven 150m3 adsorption tanks (CIL tanks)</li></ul>	Air / windborne pathway	<ul style="list-style-type: none"><li>• The WWTP is a plug and play system, meaning the bulk of the construction occurs at the manufacturers workshop, enabling the unit to be fully tested before mobilisation to site.</li><li>• Replacement of adsorption tanks will only be if repairs are not possible.</li><li>• Visual monitoring of dust generated during removal and installation</li><li>• No dust controls proposed except for OHS requirements</li></ul>
Noise			<ul style="list-style-type: none"><li>• No noise controls proposed except for OHS requirements</li></ul>
Operation			
Process water contaminated with environmental hazardous materials (metalloids, processing plant reagents)	<ul style="list-style-type: none"><li>• Spills and leaks from CIL tanks</li><li>• Replacement of two gravity concentrators</li></ul>	Surface water runoff and seepage	<ul style="list-style-type: none"><li>• Plant area is to be bunded and contoured for drainage to a water catchment dam, fitted with a pump and oil water separator for recirculation through the plant.</li></ul>
Noise	WWTP operations	Air/windborne pathway	<ul style="list-style-type: none"><li>• The WWTP is a plug and play system, meaning the bulk of the construction occurs at the manufacturers workshop, enabling the unit to be fully tested before mobilisation to site.</li></ul>
Odor			<ul style="list-style-type: none"><li>• No odour controls proposed.</li></ul>
Sewage, partially treated sewage, wastewater	Containment loss from WWTP and associated pipelines	Surface water runoff and seepage	<ul style="list-style-type: none"><li>• 50kL/D of wastewater disposed of at wastewater irrigation pad.</li><li>• No controls proposed for containment loss.</li><li>• Existing licence controls</li></ul>



### 3.1.2 Receptors

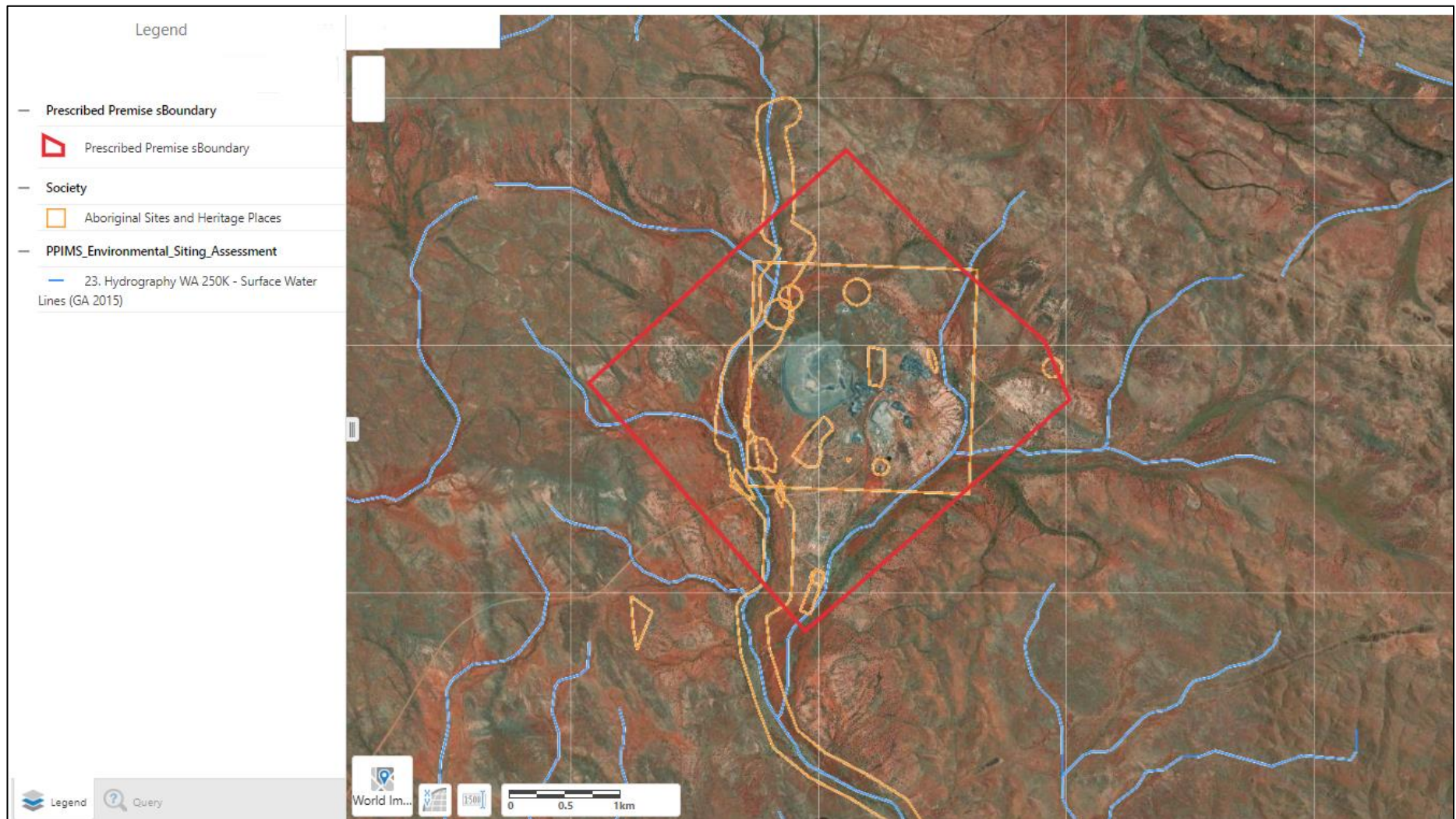
In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant's employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other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

Table 2 and Figure 2 below provides a summary of potential human and environmental receptors that may be impacted because 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
Aboriginal and heritage sites: <ol style="list-style-type: none"> <li>1. Jirtilkanku Hill (19,036)</li> <li>2. Jirtilkanku Camping Ground (19,037)</li> <li>3. PAULSEN'S SITE 2 (18693)</li> <li>4. SBM-01 Artefact Scatter (19,044)</li> <li>5. SBM-02 Artefact Scatter (19,045)</li> <li>6. SBM-03 Artefact Scatter (19,046)</li> <li>7. SBM-04 Artefact Scatter (19,047)</li> <li>8. SBM-05 Artefact Scatter (19,048)</li> <li>9. SBM-06 Artefact Scatter (19,049)</li> <li>10. SBM-07 Artefact Scatter (19,050)</li> <li>11. SBM-08 Artefact Scatter (19,051)</li> <li>12. Kurtljirli Creek (19,042) – stored data/not a site</li> </ol>	All located within the prescribed premises within 1km from the processing plant, WWTP and sprayfield
Pastoral stations: Mt Stuart Station	Overlapping premises boundaries however no evidence of related infrastructure within 5km radius – receptor excluded from risk assessment.
Environmental receptors	Distance from prescribed activity
Priority fauna: <ol style="list-style-type: none"> <li>1. Apus Pacificus (Fork-tailed swift)</li> <li>2. Rhinonictis aurantia (Pilbara leaf-nosed bat)</li> </ol>	Both Sighted within the prescribed premises boundary
Surface water – Creek lines	Paulsens Gold Operation is situated within the Ashburton River catchment, near the divide between Duck Creek to the north and the Hardey River to the south. The operation is flanked by two minor creeks, Paulsens and Melrose, which run on either side of Paulsens Hill. These temporary tributaries feed into Blackhill Creek, which subsequently drains into the Hardey River 18km to the south. The metawandy creek lies 1km south.

<p>Underlying groundwater - Pilbara Groundwater Area</p>	<p>The operation is in the Hamersley-Fractured Rock Aquifer zone. Groundwater flows from high terrains, specifically from local mounds in the Blackhill Creek catchment, towards Metawandy Creek. The aquifers are located within slightly weathered rocks up to 80m deep, and the depth to the water table is typically 15-20m below the surface within metasedimentary rock. The direction of groundwater movement aligns with surface flows.</p>
--	---



**Figure 2: Distance to sensitive receptors**



## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and considers potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the delegated officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Works approval W6842/2023/1 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 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. categories 5 and 85. 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 operation**

Risk events					Risk rating <sup>1</sup>  C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval / existing licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Construction								
Construction of:  • WWTP  • Replacement of 2 gravity concentrators  • Replacement of up to seven 150m3 adsorption tanks (CIL tanks)	Dust	Air / windborne pathway causing impacts to health and amenity	Threatened fauna  Aboriginal sites and heritage	Refer to Section 3.1	C = Moderate  L = Unlikely <b>Medium Risk</b>	Y	Condition 1 – Infrastructure & construction requirements	N/A
	Noise			Refer to Section 3.1	C = Minor  L = Unlikely <b>Low Risk</b>	Y	Condition 1 – Infrastructure & construction requirements	N/A
Operation								
Spills and leaks from CIL tanks  Replacement of two gravity concentrators	Spills/leaks of process water contaminated with environmentally hazardous materials (metalloids, processing plant reagents)	Runoff causing contamination of surface water	Creek lines  RIWI Groundwater Area  Threatened fauna  Aboriginal sites and heritage places	Refer to Section 3.1	C = Moderate  L = Unlikely <b>Medium Risk</b>	Y	Condition 1 – bunding of plant area	N/A
		seepage causing contamination of groundwater						
Containment loss from WWTP and associated pipelines	Sewage, partially treated sewage, wastewater	Runoff causing contamination of surface water	Creek lines  Threatened fauna  Aboriginal sites and heritage places	Refer to Section 3.1	C = Moderate  L = Unlikely <b>Medium Risk</b>	Y – licence conditions still apply	<u>Existing licence conditions:</u> 6, 7, 8, 9, 10	N/A
		seepage causing contamination of groundwater	RIWI Groundwater Area		C = Moderate  L = Unlikely <b>Medium Risk</b>			N/A

Works approval: W6842/2023/1

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval / existing licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
WWTP operations	Noise	Air/windborne pathway	Threatened fauna Aboriginal sites and heritage	Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	Condition 1 – plug and play system , manufacturers requirements	N/A
	Odour						Condition 1 - manufacturers requirements	N/A

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

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

## 4. Consultation

Table 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 6/10/2023	None received	N/A
Local Government Authority – Shire of Ashburton advised of proposal dated 6/10/2023	None received	N/A
Department of Planning, Lands and Heritage (DPLH) advised of proposal dated 06/10/2023	None received	N/A
Department of Mines, Industry regulation and Safety (DMIRS) advised of proposal 06/10/2023	Comments received 26/10/2023 and updated comments received on 22/11/2023, stating that “there are a number of approved mining proposals associated with the project dating back to 2002.” Consultation with the applicant and DMIRS indicated that the proposed works in the works approval are believed to be covered in past mining proposals.	DWER will not make the works approval contingent on waiting on new mining proposals.
Applicant was provided with draft documents on 09/11/2023	Applicant waived comment period on 29/11/2023 and provided an updated figure to replace figure 3.	DWER incorporated updated figure 3 into the works approval.

## 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.



## Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
<b>Application type</b>					
Works approval	<input checked="" type="checkbox"/>				
Licence	<input type="checkbox"/>	Relevant works approval number:		None	<input type="checkbox"/>
		Has the works approval been complied with?			Yes <input type="checkbox"/> No <input type="checkbox"/>
		Has time limited operations under the works approval demonstrated acceptable operations?			Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?			Yes <input type="checkbox"/> No <input type="checkbox"/>
		Date Report received:			
Renewal	<input type="checkbox"/>	Current licence number:			
Amendment to works approval	<input type="checkbox"/>	Current works approval number:			
Amendment to licence	<input type="checkbox"/>	Current licence number:			
		Relevant works approval number:		N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>
Date application received		23/07/2023			
<b>Applicant and Premises details</b>					
Applicant name/s (full legal name/s)		Black Cat (Paulsens) Pty Ltd			
Premises name		Paulsens Gold Operation			
Premises location		Mining Leases M08/99 and M08/196			
Local Government Authority		Shire of Ashburton			
<b>Application documents</b>					
HPCM file reference number:		DER2023/000480			
Key application documents (additional to application form):		Supporting Information Report (A2190755) Redacted information (A2190757)			
<b>Scope of application/assessment</b>					

<p>Summary of proposed activities or changes to existing operations.</p>	<p>Category 5:</p> <ul style="list-style-type: none"> <li>Removal and replacement of two gravity concentrators with equivalent units</li> <li>Refurbishment and potential replacement of up to seven 150m<sup>3</sup> adsorption tanks (CIL tanks) in the processing plant with corrosion around the top and bottom 500mm sections. If they cannot be successfully repaired, they will be replaced.</li> </ul> <p>Category 85</p> <ul style="list-style-type: none"> <li>Removal and replacement of existing waste water treatment plant (WWTP) (unsuitable according to WA Health regulations) with a new 50 m<sup>3</sup>/day Activate Sludge Bio-Reactor sewage treatment plant</li> </ul>	
<p><b>Category number/s (activities that cause the premises to become prescribed premises)</b></p> <p><b>Table 1: Prescribed premises categories</b></p>		
Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments or
<p>Category 5</p> <p>Processing or beneficiation of metallic or non-metallic ore: premises on which —</p> <p>(a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; or</p> <p>(b) tailings from metallic or non-metallic ore are reprocessed; or</p> <p>(c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.</p>	<p><u>Existing (Licence: L7969/2004/3)</u></p> <p>480,000 tonnes per annual period</p> <p>No change.</p>	
<p>Category 85</p> <p>Sewage facility: premises —</p> <p>(a) on which sewage is treated (excluding septic tanks); or</p> <p>(b) from which treated sewage is discharged onto land or into waters.</p>	<p><u>Existing (Licence: L7969/2004/3)</u></p> <p>70 cubic metres per day</p> <p>No change.</p>	
<p><b>Legislative context and other approvals</b></p>		
<p>Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Referral decision No: N/A</p> <p>Managed under Part V <input checked="" type="checkbox"/></p>

significant proposal?		Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: N/A EPA Report No: N/A
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No: N/A
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input checked="" type="checkbox"/> Sale Agreement between vendor – Northern Star Resources Limited – Dated 13/04/22 Expiry: N/A
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: N/A Expiry date: N/A If N/A explain why? Premises is part of mining tenement – exempt from planning approval under the Mining Act 1978.
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Application reference No: N/A Licence/permit No: GWL156732(9)
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Pilbara Surface Water Area Type: Surface Water Area

		Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office: North West
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: P1 / P2 / P3 / N/A Are the proposed activities/landuse compatible with the PDWSA (refer to <u>WQPN 25</u> )? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i> )	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<ul style="list-style-type: none"> <li>• Environmental Protection Regulations 1987</li> <li>• Environmental Protection (Unauthorised Discharge) Regulations 2004</li> <li>• Mining Act 1978</li> <li>• Rights in Water and Irrigation Act 1914</li> </ul>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CSS site ID: N/A Classification: N/A Date of classification: N/A