



## Application for Licence Amendment

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

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<b>Licence Number</b>	L9013/2016/1
<b>Licence Holder</b>	Spartan Resources Limited
<b>ACN</b>	139 522 900
<b>File Number</b>	DER2016/002214-1
<b>Premises</b>	Dalgaranga Gold Project Legal Description: Mining Lease M59/749 and Miscellaneous Licence L59/151 DAGGAR HILLS WA 6638
<b>Date of Report</b>	07 February 2024
<b>Decision</b>	Revised licence granted

#### **SENIOR ENVIRONMENTAL OFFICER, INDUSTRY REGULATION**

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

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## 1. Decision summary

Licence L9013/2016/1 is held by Spartan Resourced Limited (Licence Holder) for the Dalgara Gold Project (the Premises), located at Mining Lease M59/749 and Miscellaneous Licence L59/151 DAGGAR HILLS WA 6638.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L9013/2016/1 has been granted.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

### 2.2 Amendment summary

On 15 November 2023, the Licence Holder submitted an application to the department to amend Licence L9013/2016/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Inclusion of category 6 to the licence.
- The discharge of mine dewater from Gilbeys pit to the surrounding environment via two discharge points to allow for the operational restart and access to the ore within Gilbeys pit.

This amendment is limited only to the inclusion of Category 6. The Licence Holder has not requested any changes to the existing Licence relating to Category 5, 85 and 89.

Table 1 below outlines the proposed changes to the existing Licence.

**Table 1: Proposed design or throughput capacity changes**

Category	Current design throughput capacity	Proposed design throughput capacity	Description of proposed amendment
6	N/A	2,500,000 tonnes per annual period	Discharge of 2,500,000 tonnes per annual period of mine dewater to the environment via two discharge points

#### 2.2.1 Category 6: Method of operation

Dewatering has previously been undertaken during operations, but there has been no requirement for discharge to the environment as all dewater was used in the processing plant and for dust suppression. The Licence Holder is proposing to discharge water from Gilbeys pit to the surrounding environment (Figure 1) over a 5 to 8 month period prior to the recommencement of mining operations, anticipated in early 2025. *SLR, 2023* states that there is projected to be 2.5 million tonnes of water stored within Gilbeys pit prior to the expected recommencement of mining operations in early 2025, which is required to be removed to allow mining recommencement.

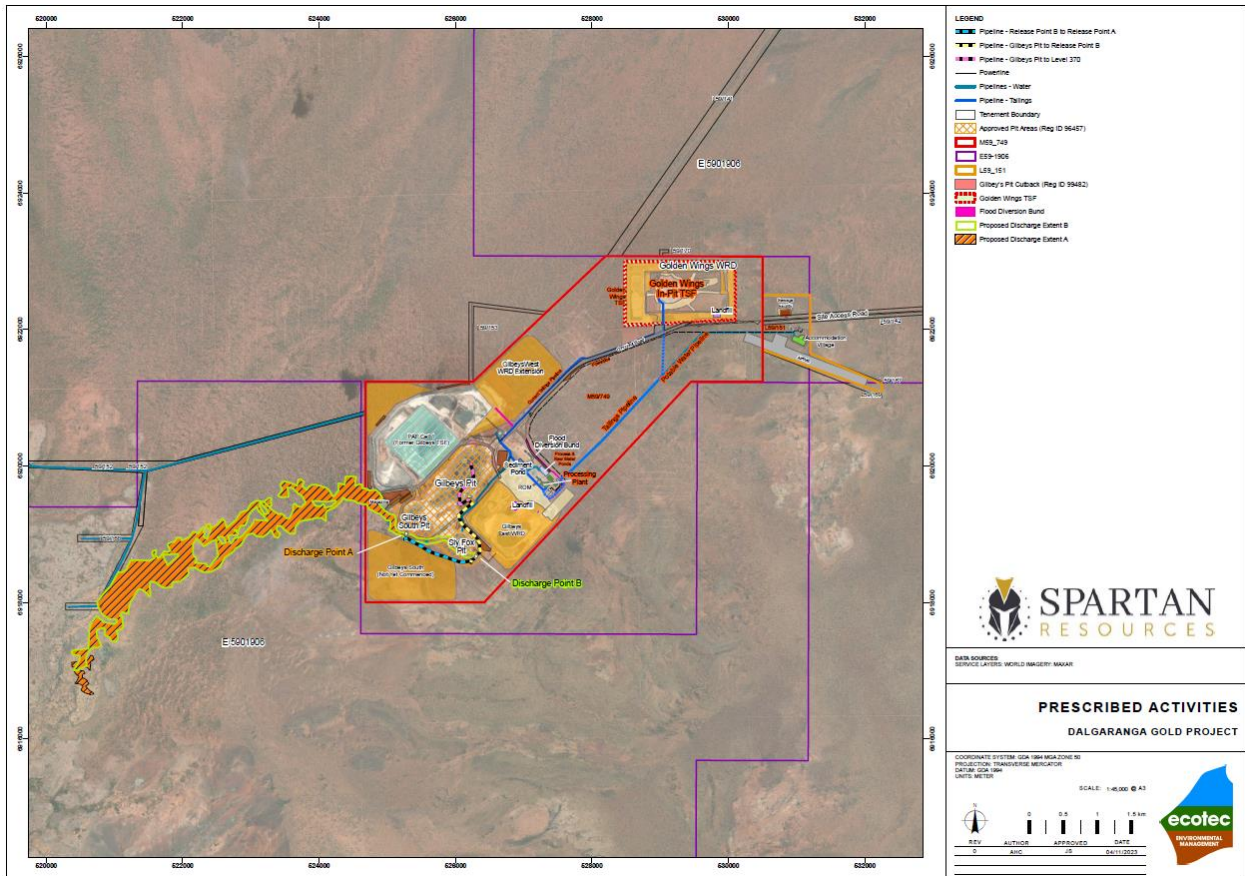


Figure 1: Prescribed activity location

## 2.2.2 Hydrological Modelling

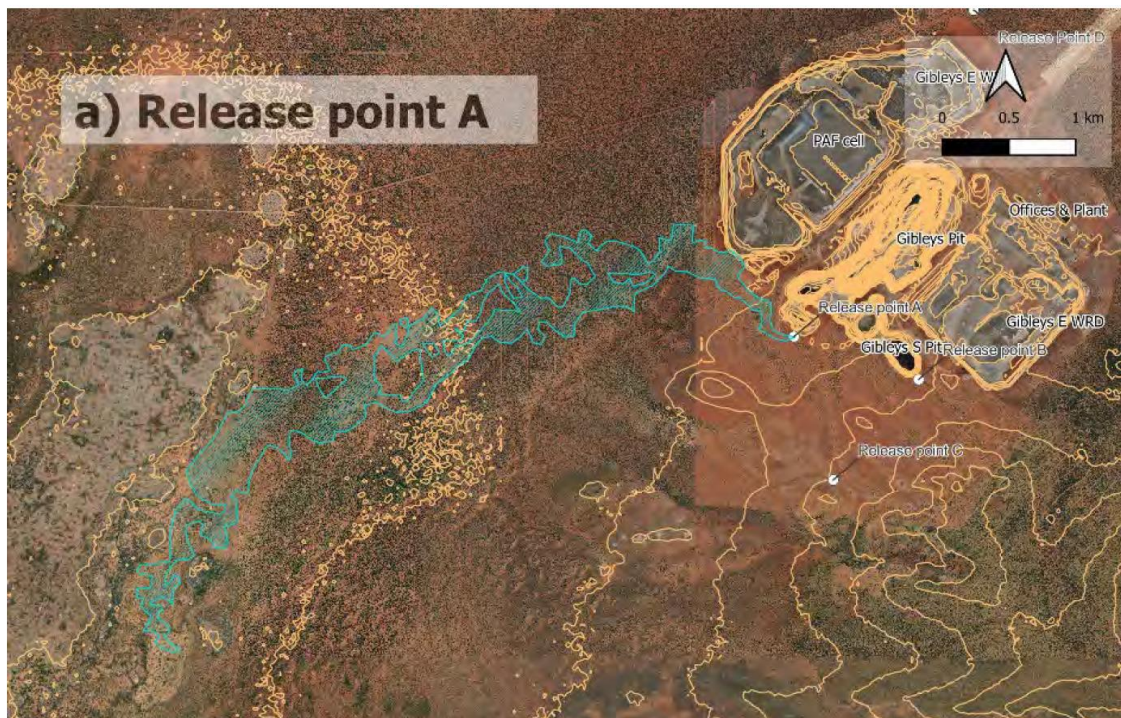
The Licence Holder evaluated three different de-watering methods/discharge points (Figure 2) and concluded that discharge to the existing natural surrounding drainage flow paths (referred to as "Environmental Release") resulted in the lowest environmental impact and provided the lowest operational complexity.



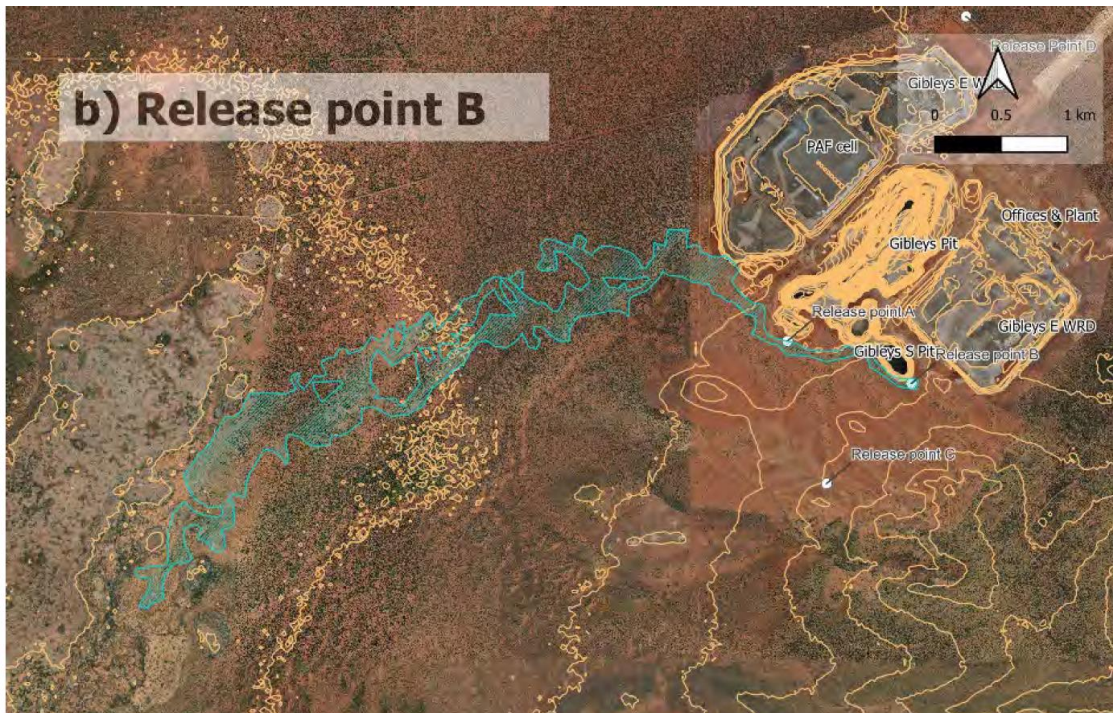
**Figure 2: Three different environmental release locations (Release Points A, B and C)**

Release points A and B were selected based on the hydrological assessment through the hydrological modelling that the environmental impact from these locations was low and the proposed design is the only option that does not require clearing of native vegetation.

Figures 3 and 4 identify the release points (A and B) and modelled flow path of dewater discharge.



**Figure 3: Release Point A and modelled flow path**



**Figure 4: Release Point B and modelled flow path**

### 2.2.3 Flora and Vegetation Survey

Ecotec (WA) Pty Ltd was engaged with the Licence Holder to undertake an assessment of the flora and vegetation of the three different discharge areas.

Seven vegetation communities were mapped for the survey area, with variations of Acacia shrubland being the most dominant. No Priority or Threatened Ecological Communities were recorded or are known to exist in the vicinity.

The Priority 2 species *Teucrium pilbaranum* was recorded at the western-most extremity of the maximum extent of area that could receive discharge waters.

As a result, discharge points A and B were recommended as the least likely to result in impact to vegetation due to the identification of vegetation type 5 among the seven vegetation types in the other point.

### 2.2.4 Water Quality in the Gilbeys Pit

The quality of the water within Gilbeys pit is similar to groundwater throughout the project area, particularly the borefield, located to the west of the proposed discharge area. pH ranged between 7.7 and 8.2, whilst salinity ranged between 1,210 and 2,100 mg/L total dissolved solids (TDS). The water within Gilbeys pit recorded an average TDS of 1,886 mg/L, which is considered slightly saline.

The predicted flow path of dewater discharge was modelled at a constant rate of 200 L/s (Hydrologia, 2023) over a four-month period from each location.

### 3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

#### 3.1 Source-pathways and receptors

##### 3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

**Table 2: Licence Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Dewatered water	Discharge of mine dewatering to the environment from Gilbeys pit to allow mining of ore	Direct discharges to land Overland run-off	Undertake monitoring of vegetation health within the dewater discharge area.
		Discharges to land via pipeline ruptures	High density polyethylene (HDPE) pipeline. Telemetry established on inflow and outflow points and monitoring routinely for variation. Flowmeters installed at the start of the pipeline and at discharge points A and B.
		Erosion at discharge point	Flowmeters installed at the start point of the pipeline and discharge points A and B. Velocity reducing structure designed to reduce velocity and prevent erosion when dewater is released.

##### 3.1.2 Receptors

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

Table 3 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 3: Sensitive human and environmental receptors and distance from prescribed activity**

<b>Human receptors</b>	<b>Distance from prescribed activity</b>
Murrum Homestead	Approximately 50 km south-east of the Premises Prescribed premises located on Murrum pastoral lease and Noongal ex-pastoral lease (Latter currently managed by the DBCA) <b>Murrum Homestead ruled out as a sensitive receptor due to distance</b>
<b>Environmental receptors</b>	<b>Distance from prescribed activity</b>
Environmentally sensitive areas	None within or in close proximity to premises boundary
Threatened Ecological Communities (TEC's)	None within or in close proximity to premises boundary
Threatened and/or priority flora	<i>Teucrium pilbaranum</i> (P2) – Predominantly, approximately 4 km west of the premises (Ecotec WA, 2023)
Vegetation	The area is predominant with Acacia shrublands
Threatened and/or priority fauna	Peregrine Falcon – At premises
Public Drinking Water Source Areas	Mt Magnet Water Reserve - Approximately 45 km east of premises <b>Ruled out due to distance</b>
Rivers, Lakes, Oceans, and other bodies of surface water, etc.	None within 5 km of the premises boundary Twenty-Seven-Mile creek – more than 12 km northwest Gunnetharra Creek - more than 32 km north Lake Austin - approximately 30 km to the northeast <b>Ruled out due to distance</b>



## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

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

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4: .

The Revised Licence L9013/2016/1 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises.

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

Table 4: Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
<b>Operation</b>								
Discharge to the environment of water from the Gilbey pit to allow mining	Dewatered water	Direct discharges to land Overland run-off	Priority flora: <i>Teucrium pilbaranum</i> (P2) – Predominantly, approximately 4 km west of the premises  Vegetation – <i>Acacia</i> shrublands	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 2: Design and construction requirements  Condition 5: Authorised discharge point  Condition 16: Vegetation health monitoring	DWER requires the risk to be managed through construction requirements and vegetation health monitoring.
	Dewatered water	Discharges to land via pipeline ruptures	Topsoil layer	No additional controls were proposed. The Licence Holder needs to be advised.	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 2: Design and construction requirements for the pipelines  Existing licence has conditions relating to this impact as: <ul style="list-style-type: none"> <li>Condition 4: Operational requirements</li> <li>Condition 8: Inspection of Infrastructure</li> </ul>	N/A.
	Dewatered water	Erosion at discharge point	Groundwater	No additional controls were proposed. The Licence Holder needs to be advised.	C = Moderate L = Possible <b>Medium Risk</b>	Y	Condition 2: Design and construction requirements for the pipelines and discharge points  Condition 5: Authorised discharge point	N/A.

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

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

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IR-T15 Amendment report template v3.0 (May 2021)

## 4. Consultation

Table 5: provides a summary of the consultation undertaken by the department.

**Table 5: Consultation**

Consultation method	Comments received	Department response
Licence Holder was provided with draft amendment on 25 January 2024.	<p>The Licence Holder provided further information required by the department on the draft amendment on 02 February 2024.</p> <p>The Licence Holder did not provide any comments on the draft amendment and waived the remaining comment period on 06 February 2024.</p>	The department updated the licence and amendment report as applicable.

## 5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

### 5.1 Summary of amendments

Table 6 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

**Table 6: Summary of licence amendments**

Condition no.	Proposed amendments
Cover Page Prescribed premises category description	New category 6: Mine dewatering with a production/design capacity 2,500,000 tonnes per annual period included.
Condition 1, Table 1	Inclusion of production or capacity limits for category 5 and category 6.
Condition 2, Table 2	Inclusion of design and construction requirements for the Gilbeys pit dewatering infrastructure.
Condition 3	Inclusion of condition to allow for the operation of Gilbeys pit dewatering infrastructure following submission of the compliance document.
Condition 4, Table 3	Inclusion of operational requirements for flow meters and telemetry for Gilbeys pit.
Condition 5, Table 4	Updated to include authorised discharge points for mine dewatering from Gilbeys pit.
Condition 16,	Inclusion of condition for vegetation health monitoring.

Condition no.	Proposed amendments
Table 12	
Condition 19, Table 13	Updated to include notification requirements for the construction of Gilbeys pit dewatering infrastructure.
Schedule 1: Maps	Inclusion of Figure 8 to depicts the Discharge point A and B and Gilbeys pit pipeline as provided by the Licence Holder.
	Inclusion of Figure 9 to depict erosion prevention infrastructure as provided by the Licence Holder.
	Inclusion of Figure 10 to show the locations of the vegetation monitoring as provided by the Licence Holder.
General	Changed the word “site plan” to the word of “figure” throughout the licence.

## 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. Ecotec (2023). *Dalgaranga Gold Project. Flora and Vegetation Survey of the Proposed Dewater Discharge Area*. Unpublished report prepared for Spartan Resources, Perth, Western Australia.
5. Hydrologia (2023). *Release of water ponded in Gilbey’s Pit. Unpublished memo prepared for Spartan Resources*, Perth, Western Australia.
6. Spartan Resources Limited (SRL) 2023, *Dalgaranga Gold Project L903/2016/1- Licence amendment application, Attachment 3B, Revision A*, Perth, Western Australia.

## Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY			
<b>Application type</b>			
<b>Amendment to licence</b>	<input checked="" type="checkbox"/>	Current licence number:	L9013/2016/1
		Relevant works approval number:	N/A <input type="checkbox"/>
Date application received	15 November 2023		
<b>Applicant and Premises details</b>			
Applicant name/s (full legal name/s)	Spartan Resources Limited (ACN: 139 522 900)		
Premises name	Dalgaranga Gold Project		
Premises location	Dalgaranga Gold Project M59/749 L59/151 DAGGAR HILLS WA 6638		
Local Government Authority	Shire of Mount Magnet		
<b>Application documents</b>			
HPCM file reference number:	DER2016/002214-1~7		
Key application documents (additional to application form):	Attachment 3B: Activity Details Report Attachment 2: Dalgaranga Site Layout Attachment 5: Stakeholder Register Attachment 7: Siting and Location Attachment 8: Appendices		
<b>Scope of application/assessment</b>			
Summary of proposed activities or changes to existing operations:	<b>Licence amendment</b> This Licence amendment application relates to the inclusion of category 6 to the licence. The Licence Holder is proposing to discharge water from Gilbeys Pit to the surrounding environment via 2x discharge points allowing operational restart and access to the ore within Gilbeys Pit.		
<b>Category number/s (activities that cause the premises to become prescribed premises)</b>			
<b>Table 1: Prescribed premises categories</b>			
<b>Prescribed premises category and description</b>	<b>Proposed production or design capacity</b>	<b>Proposed changes to the production or design capacity (amendments only)</b>	
Category 6: Mine Dewatering	2.5 million tonnes per annum (Mtpa)	New Category – 2.5 Mtpa	
<b>Legislative context and other approvals</b>			
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/>	

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: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
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 checked="" type="checkbox"/> Expiry: Mining Lease M59/749 and Miscellaneous Licence L59/151 Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Approval: Expiry date: If N/A explain why? Mining tenure
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: CPS 7240/4
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" 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: 183561 and 208093 Licence/permit No: GWL 183561(1)
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: East Murchison Groundwater Area Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office: Mid-West Gascoyne
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: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to <a href="#">WQPN 25</a> )? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

<p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxx</i>)</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Mining Act 1978</p>
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Description: Diesel spill, GNT resources Dalgaranga Gold Mine, mining tenement L59/151, Daggar Hills. Form 1</p> <p>Classification: Possibly contaminated - investigation required</p> <p>Classification date: Oct 22, 2018, 12:00 am</p>