



Application for Works Approval

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

Works Approval Number W6638/2022/1

Applicant Northern Star Resources Ltd

ACN ACN 092 832 892

File number DER2022/000005

Premises Julius Mine
Barwidgee Road, Lake Violet Station
Mining Lease M53/1099
As defined by the coordinates in Schedule 1 of the works approval

Date of report 13/04/2022

Proposed Decision Works approval granted

Alana Kidd

Manager, Resource Industries

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

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1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the premises. As a result of this assessment, works approval W6638/2022/1 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 July 2021, the applicant contacted DWER for advice regarding their proposed Putrescible Landfill to be located within the waste rock landform at the Julius mine site. DWER was recommended the applicant apply for a registration given the tenement M53/1099 is not under an existing Operating Licence or Prescribed Premises. The proponent submitted their application for a registration on the 27 September 2021 and included their Mining Proposal and approval letter from DMIRS as supporting documents. On the 4 of November DWER clarified that the anticipated tonnage of less than 20 tonnes per year does not meet the requirements of a Category 64, 89 or a registration, therefore the proponent requested DWER process the registration as up to 50 tonnes per year under category 89.

On 30 November 2021, DWER notified the proponent that the registration was required to be withdrawn and a works approval application submitted to account for landfill construction. The applicant submitted the works approval to the department on 31 December 2021, under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to undertake construction works relating to construction of a category 89 Putrescible Landfill Site at the premises. The premises is approximately 63 km east of Wiluna.

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 W6638/2022/1. 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 W6638/2022/1.

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
Construction			
Dust	Direct contact and movement of the waste rock by machine digger disturbing loose particles during excavation of the landfill.	Air / windborne pathway	<ul style="list-style-type: none"> Undertake regular watering using water carts across active work areas during operation;
Operation			
Dust	Disturbed soil during impact of waste landing and burying waste.	Air / windborne pathway	<ul style="list-style-type: none"> Undertake regular watering using water carts across active work areas during operation
Odour	From waste disposed into the landfill.		<ul style="list-style-type: none"> Cover waste on routine basis to minimise windblown rubbish – e.g., every other day.
Waste	Tipping of waste, waste sitting exposed until burial, and burying of waste.		<ul style="list-style-type: none"> Cover waste on routine basis to minimise windblown rubbish – e.g. every other day Routine inspection of landfill and picking up of windblown rubbish Undertake survey of trench to estimate quantity of waste disposed into landfill on six monthly basis.
Leachate	Storage of food waste, municipal waste (e.g. paper waste from ablutions, office and packaging) and non-chemical waste generated from manufacturing and services at the workshop in the landfill.	Seepage to groundwater	<ul style="list-style-type: none"> The base of the landfill is more than 3 m above the highest level of water table aquifer at the site (18 to 52 m). Appropriate signage detailing approved waste streams to minimise incorrect waste disposal. Allocation of suitable waste receptacles to manage other waste streams such as hydrocarbon contaminated, oil filters and recyclables (such as steel, aluminium, cardboard & paper) (i.e. inert facility). Induction and training to educate personnel regarding waste management, landfill operation and maintenance, compliance requirements and impacts as a result of incorrect waste disposal. Personnel receive and utilise reusable food and drink containers to reduce waste reporting to landfill. Placement of oversize waste items to be transported and disposed in Jundee Landfill.

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 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
Barwidgee Station homestead	29.2km due south of Julius mine.
Environmental receptors	Distance from prescribed activity
Red Lakes (note listed on DPLH website, known internally within Norther Star Resources).	7.7km due northwest.
Surface water polygons	0.8 km due west.
East Murchison Groundwater Area	18 m below ground level.
Pre-European Vegetation	Intersects site: Low woodland; mulga (<i>Acacia aneura</i>).

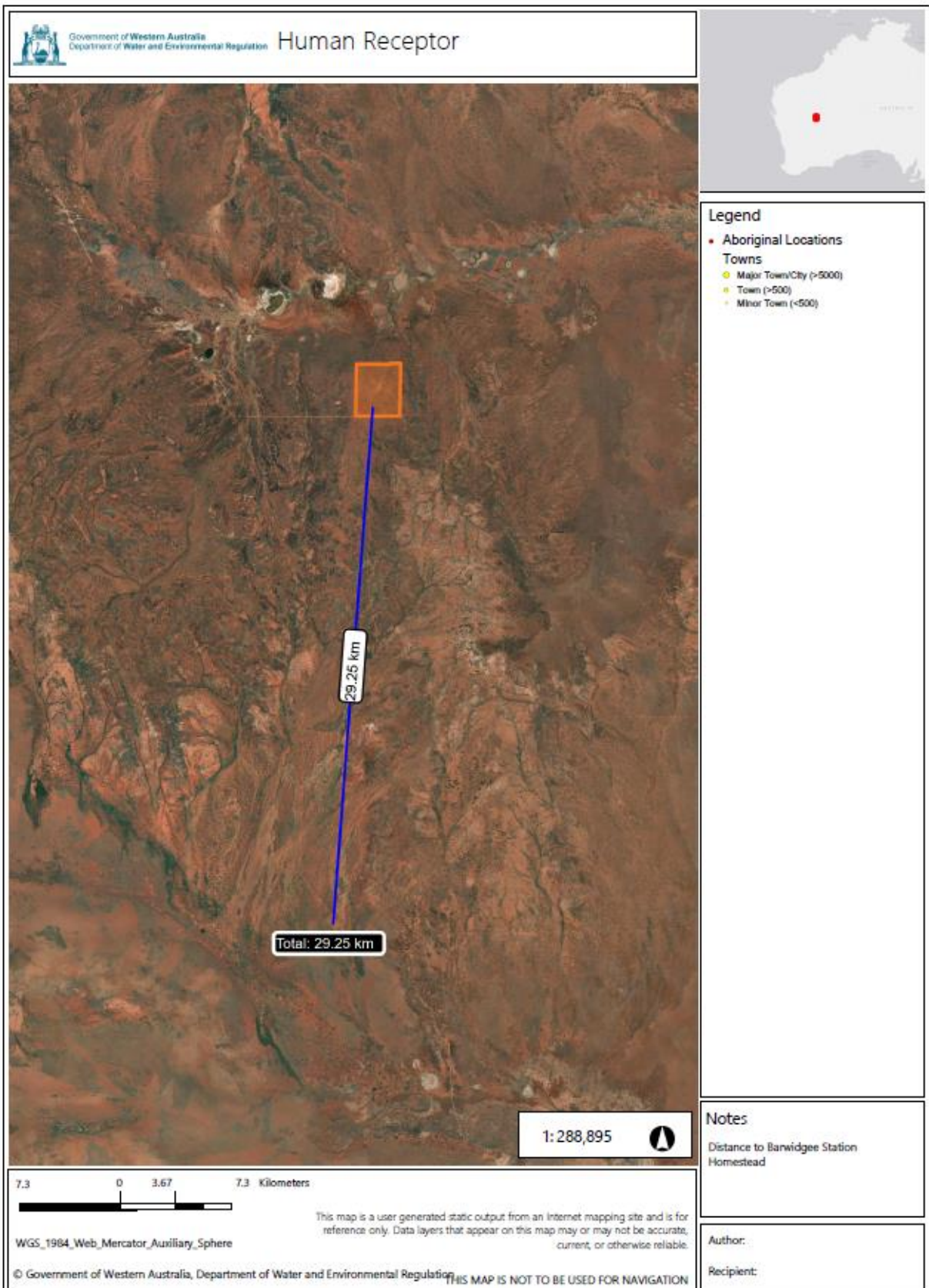


Figure 1: Distance to sensitive human receptors

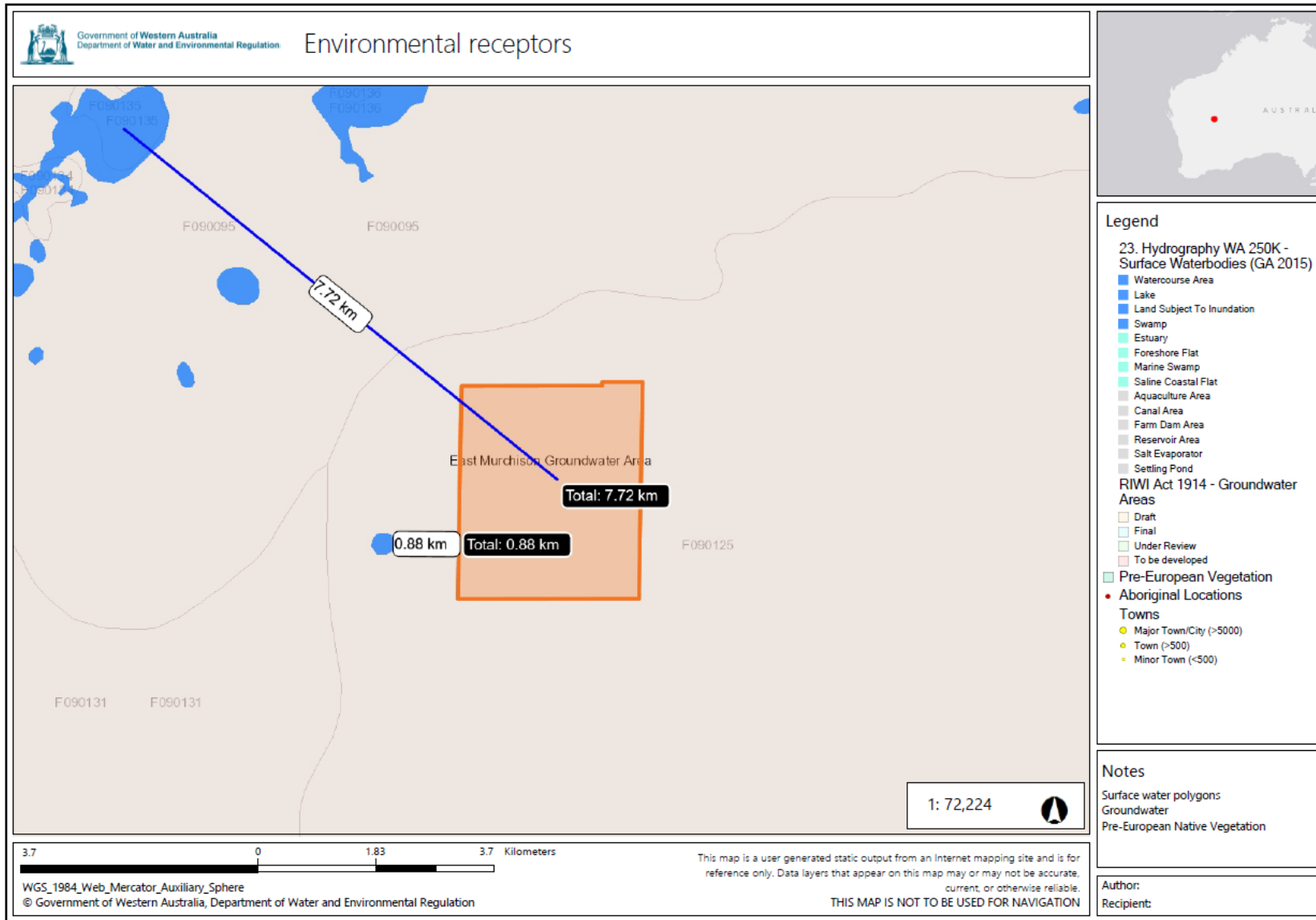


Figure 2: Distance to sensitive environmental receptors

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IR-T13 Decision report template (short) v3.0 (May 2021)

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 W6638/2022/1 that accompanies this decision report authorises construction only. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3: 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
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Construction								
Direct contact and movement of the waste rock by machine digger disturbing loose particles during excavation of the landfill.	Dust	Air / windborne pathway causing photosynthetic impacts to native vegetation	Pre-European Native Vegetation	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 5	N/A
Operation (Registration) Environmental Protection (Rural landfill) Regulations 2002								
Disturbed soil during impact of waste landing and burying waste.	Dust	Air / windborne pathway causing photosynthetic impacts to native vegetation	Pre-European Native Vegetation	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	N/A
Tipping of waste, waste sitting exposed until burial, and burying of waste.	Waste		Pre-European Native Vegetation	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	N/A
Storage of decomposable waste	Leachate	Seepage to groundwater	Groundwater	Refer to Section 3.1	C = Slight L = Rare Low Risk	N	Condition 1, Table 1, item 4.	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 2/03/2022.	None received	N/A
Applicant was provided with draft documents on 1 April 2022.	E-mail requesting clarification for the definition of 'suitably qualified'.	Definition of 'suitably qualified' provided.

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. The applicant is required to apply for a Registration to then operate in accordance with the *Environmental Protection (Rural landfill) Regulations 2002*. Noting the applicant has already submitted a Registration application, this will be processed once compliance with W6638/2022/1 is met.

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 1: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)				
Application type				
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 checked="" 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	31/12/2021			
Applicant and premises details				
Applicant name/s (full legal name/s)	Northern Star Resources Ltd			
Premises name	Julius Mine			
Premises location	Mining Lease M53/1099, Julius Mine, Barwidgee Road, Lake Violet Station			
Local Government Authority	Shire of Wiluna			
Application documents				
HPCM file reference number:	DER2018/001042-6-94/ DER2022/000005			
Key application documents (additional to application form):	Tenement Report Relational Extract Letter of Authority Premises Map Mining Proposal Application Mining Proposal Approval Cross Section of proposed landfill activities			

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)

Scope of application/assessment

Summary of proposed activities or changes to existing operations.	Works approval. Construction of a Putrescible Landfill Site (<20 tonnes per year).
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Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 89: Putrescible Landfill Site (<20 tonnes per year).	50 tonnes per year. Updated.	

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> 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 checked="" type="checkbox"/> Expiry: 12/12/2037 Other evidence <input checked="" type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why? Approved under Mining Act (Mining Proposal) REG ID 86243. No Shire of Wiluna approval required.
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 checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A – Licence not required. No clearing is proposed.

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)

<p>Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Application reference No: Licence/permit No: GWL183545 Licence is not relevant to the landfill activities.</p>
<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>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</p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/></p>
<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 xxxx</i>)</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></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 type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Classification: N/A Date of classification: N/A</p>