



Application for Licence Amendment

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

Licence Number	L8934/2015/1
Licence Holder	Big Bell Gold Operations Pty Ltd
ACN	090 642 809
File Number	DER2015/002680
Premises	Cue Gold Operations Big Bell – Coodardy Road, Mining Tenements M20/17, M20/99, M20/192, L20/21 and L20/40, CUE WA 6640 As defined by the Premises maps attached to the Revised Licence
Date of Report	16 December 2022
Decision	Revised licence granted

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

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1. Decision summary

Licence L8934/2015/1 is held by Big Bell Gold Operations Pty Ltd (Licence Holder) for the Cue Gold Operations – Big Bell Project (the Premises), located at Big Bell – Coodardy Road, Mining Tenements M20/17, M20/99, M20/192, L20/21 and L20/40, CUE WA 6640.

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 construction and operation of the Premises. As a result of this assessment, Revised Licence L8934/2015/1 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

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 Application summary

On 2 September 2022, the Licence Holder submitted an application to the department to amend Licence L8934/2015/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Construction of landfill 3, an additional Category 64 putrescible landfill with internal segregated class I, II, and recyclable waste cells. This landfill will continue to service the premises along with the 150-person accommodation camp. The proposed location of the landfill features lithological properties that mitigate seepage risks and is proximate to the premises waste rock dump providing efficient operational management.
 - The construction of the landfill will provide the premises a more effective waste management practice.
 - The proposed landfill site is situated at the base of the Big Bell North East Waste Rock Dump, this location will enable efficient access to inert rock materials for capping.
 - The high clay content of the waste rock will limit permeability into the surrounding area.
 - The proposed landfill site is located 18 metres (m) above ground level, which is situated above the Big Bell Underground where groundwater is dewatered to 720m below surface

On 13 March 2019, Amendment Notice 2 permitted the construction and operation of a Class II putrescible landfill site, located near the operating Class I inert landfill site on the Premises. Landfill sites 1 and 2 are located on the North West of the premises

The Licence Holder will dispose of Class I (Inert) and Class II (Putrescible) wastes as defined in *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)* to the landfill sites. The Licence Holder conducts recycling of bulk steel, chromes, PVC/HDPE, and aluminium, however, some of these products are mixed with general waste that is disposed in

landfill sites. Recycling operations will continue at the premises where practical and cost permitting.

This amendment is limited only to changes to Category 64 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 6 or 84 have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence

Table 1: Proposed design capacity changes

Category	Current design capacity	Proposed design capacity	Description of proposed amendment
64	600 tonnes per annual period	No changes to capacity proposed	Addition of a new of landfill site location at the premises

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 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
Dust	Moving of earth to construct the new landfill Earthmoving to cover waste, dust lift off from cover stockpiles and vehicle activity on unsealed roads	Air/windborne pathway causing impacts to health and amenity	No new controls required Existing controls: Use of water carts on the roads, open pits, parking bays, equipment areas, and vehicle speeds are restricted on unsealed surfaces to mitigate dust liftoff
Noise	Moving of earth to construct, fill, and cover the landfill Vehicle operation	Air/windborne pathway causing impacts to health and amenity	No new controls required Existing controls: <i>Environmental Protection (Noise) Regulations 1997</i>

Emission	Sources	Potential pathways	Proposed controls
Leachate	Disposal of Class II Waste	Seepage through soil to groundwater or surrounding soils	Situation on high clay content lithology, Located currently >100m above groundwater level (due to underground dewatering) and > 40 metres above pre-mining standing water levels Existing controls: Monitoring of water quality and quantity discharged from dewatering, including recording TRH presence Monitoring of water in ponds, dams, and nearby Lake Austin. <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>
Odour	Putrescible waste	Air/windborne pathway causing impacts to health	No new controls required Existing controls: Covering of waste to occur on a routine basis to mitigate odour. <i>Environmental Protection (Rural Landfill) Regulations 2002</i>

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

Human receptors	Distance from prescribed activity
Austin Downs Station	20 km southeast of the premises. This station is too far from the premises to be considered a receptor
Environmental receptors	Distance from prescribed activity
Specified Ecosystems	Lake Austin Calcrete Priority 1. Immediately west of Cuddingwarra. This is approximately 5km from the premises and not considered a receptor Taincrow Calcrete Priority 1. Intersects Cuddingwarra. This is approximately 12km from the premises and not considered a receptor
Underlying groundwater (non-potable purposes)	Groundwater at proposed landfill site is dewatered to 720m below surface. The nearest monitoring bore

	800m east detects groundwater at 14.58 - 25.74 meters below ground level
Public Drinking Water Source Area	Cue Water Reserve 30 km southeast
RAMSAR wetlands	Lake Austin approximately 11 km south (not considered a receptor due to distance from premises)
Threatened Ecological Communities	<p>Flora - All priority species recorded are widespread and/or common throughout the local area and region, or the preferred habitat is absent from the impact area.</p> <p>Fauna - No threatened or priority species identified within the Cuddingwarra area.</p>

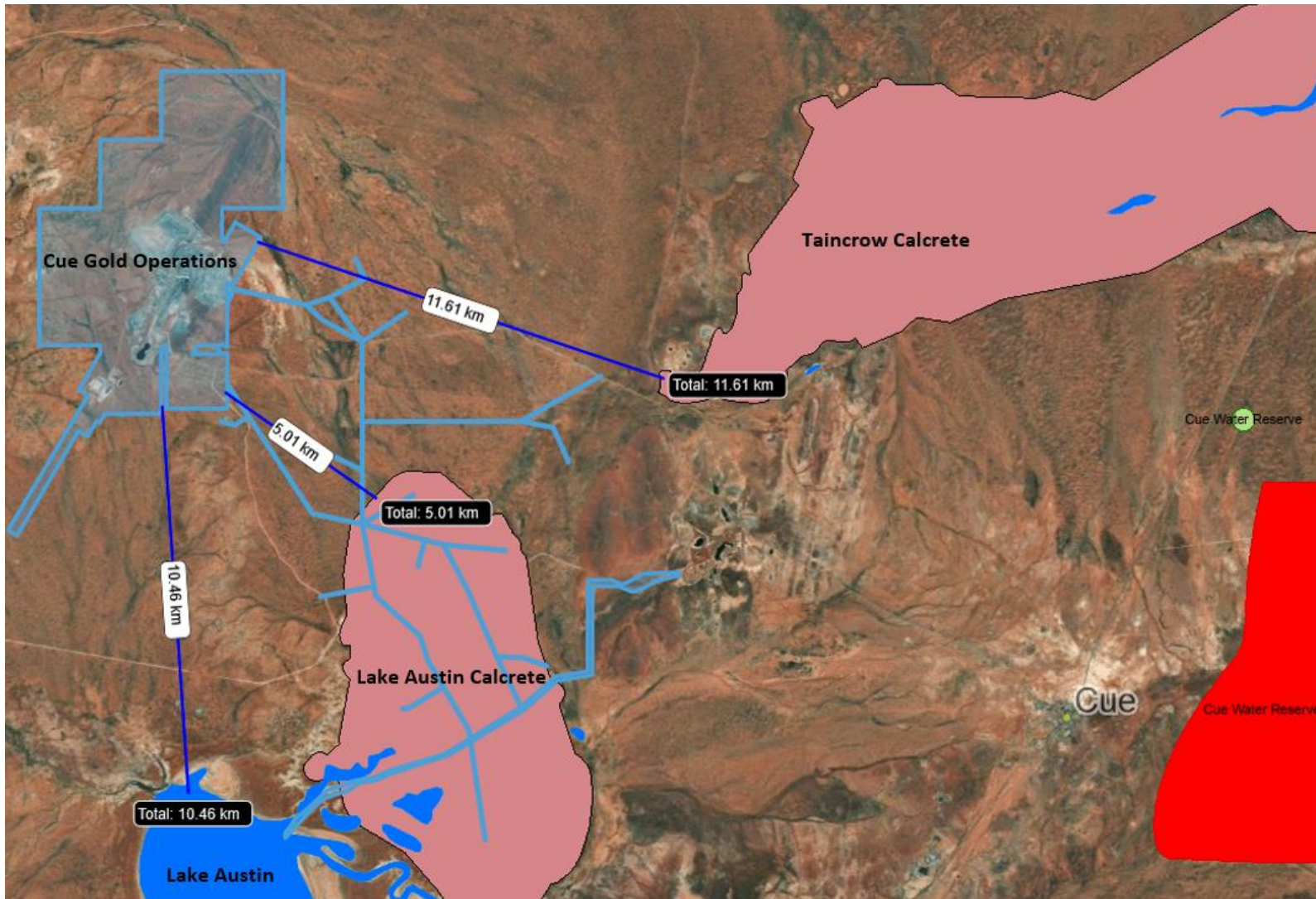


Figure 1 Distance to sensitive receptors

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 in-complete 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 L8934 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. Category 6 – Mine dewatering, 64 – Class II or III putrescible landfill site, 85 Sewage facility.

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 construction, commissioning and operation

Risk Event					Risk rating ¹	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls	C = consequence L = likelihood			
Construction								
Moving of earth to construct the new landfill Vehicle/ machinery operation	Dust	Air/windborne pathway causing impacts to health and amenity	Nearest residence is 10km away and not considered a sensitive receptor	The Licence Holder utilises water carts on the roads, open pits, parking bays and equipment areas. Vehicle speeds are restricted on unsealed surfaces.	C = Slight L = Possible Risk rating = Low	Y	Condition 1.2.2 refers to the use of dewater effluent to spray for dust suppression. Existing conditions sufficient to manage risk of dust during construction.	N/A
	Noise		No nearby priority or threatened flora	No controls proposed. Nearest receptor is 10km away.	C = Slight L = Rare Risk rating = Low	Y	N/A	N/A
Commissioning and Operation								
Earthmoving to cover waste, dust lift off from cover stockpiles and vehicle activity on unsealed roads Vehicle/ Machinery operation Maintenance workshops	Dust	Air/windborne pathway causing impacts to health and amenity	Nearest residence is 10km away and not considered a sensitive receptor	The Licence Holder utilises water carts on the roads, open pits, parking bays and equipment areas. Vehicle speeds are restricted on unsealed surfaces.	C = Slight L = Possible Risk rating = Low	Y	Condition 1.2.2 refers to the use of dewater effluent to spray for dust suppression. Existing conditions sufficient to manage risk of dust during construction.	N/A
	Noise	Air/windborne pathway causing impacts to health and amenity	No nearby priority or threatened flora	No controls proposed. Minimal noise emissions will be generated from landfilling operations.	C = Slight L = Rare Risk rating = Low	Y	N/A Provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> apply during operation of the landfill	N/A

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
Disposal of Class II Waste	Odour	Air/windborne pathway causing impacts to health and amenity	Nearest residence is 10km away and not considered a sensitive receptor	No controls proposed. Nearest receptor 10km away.	C = Slight L = Rare Risk rating = Low	N	Condition 1.2.8 has been amended to require putrescible waste to be fully covered at least fortnightly.	Covering of waste should occur fortnightly as per the proposed throughput for the landfill. This control is consistent with section 6 of <i>Environmental Protection (Rural Landfill) Regulations 2002</i> .
	Windblown waste	Air/windborne pathway causing impacts to health and amenity	Nearest residence is 10km away and not considered a sensitive receptor Environment surrounding the premises.	Landfill area will be enclosed within a 1.8 m high ring lock fence which will assist in collecting windblown waste. Wastes are disposed into a below ground trench which reduces the exposure of the wastes to the wind. The earthen bunds around the trench perimeter also assist in diverting the wind.	C = Slight L = Possible Risk rating = Low	N	Condition 1.2.8 has been amended to require the licence holder to erect and maintain suitable fencing and / or bunding around the putrescible landfill sites to control windblown waste. This condition has also been updated to require fortnightly covering of waste to reduce potential for windblown waste / dispersal by scavengers (birds etc.)	Fencing around the boundary of the landfill site to prevent waste liftoff and to act as a barrier to animals. This control is consistent with section 7 of <i>Environmental Protection (Rural Landfill) Regulations 2002</i> .
	Leachate	Seepage through soil to groundwater or surrounding soils	Landfill site is 18m above ground level and ground water is dewatered to 720m below surface. Soils surrounding the site. The landfill site is high clay content, limiting	Stormwater that assists in leachate formation is diverted away from each landfill trench through the use of an earthen bund around the trench perimeter and a roll over bund at the entrance to each trench.	C = Slight L = Rare Risk rating = Low	Y	Condition 1.2.8 remains sufficient to manage risk of seepage / leachate from landfill operations.	N/A

Risk Event					Risk rating ¹ C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
			permeability					
	Contaminated storm water	Seepage and overland flow	Local soils surrounding the site. Clay content and a low groundwater level reduce the risk to this receptor Lake Austin is the nearest potential receptor at 11km south of the premises, too far to be considered	Stormwater is diverted away from each landfill trench using an earthen bund around the trench perimeter and a roll over bund at the entrance to each trench.	C = Slight L = Unlikely Risk rating = Low	Y	Condition 1.2.8 includes requirements for surface water drainage systems around the landfill sites. Condition 2 refers to approved emission point sources, and discharge limits. Whilst conditions 3.1 to 3.4 refer to monitoring requirements for concentration reportable limits and frequencies.	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.

4. Consultation

The Licence Holder was provided with the draft Amendment Report on 28 November 2022. On 2 December 2022 the Licence Holder waived the consultation period and provided no comments.

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 5 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 8 provides a summary of amendments the CEO has updated to contemporise formatting and correct clerical mistakes and unintentional errors.

The obligations of the Licence Holder have not changed in consolidating the licence. The department has not undertaken any additional risk assessment of the Premises related to previous Amendment Notices.

Table 5: Summary of licence amendments

Condition no.	Proposed amendments
1.2.8	Updated Landfill map to include Landfill 3, Updated table 5
N/A	Updated format and appearance of the Licence
N/A	Update Licence condition's numbers, and realigned condition numbers for numerical consistency
N/A	Corrected clerical mistakes and unintentional errors
N/A	Updated all references from "Licensee" to "Licence Holder".

References

1. Big Bell Gold Operations Pty Ltd 2022, *Email titled: Licence Amendment Application - BBGO Landfill Extension – L8934/2015/1*, Received: 02 September 2022
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.
5. Environmental Protection Act 1986, *Environmental Protection (Rural Landfill) Regulations 2002*, Perth, Western Australia
6. Environmental Protection Authority (EPA) 1996, *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)*, Perth, WA.
7. Licence L8934/2015/1 Available at [Search - Department of Water and Environmental Regulation \(der.wa.gov.au\)](https://www.der.wa.gov.au/search)

Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)				
Application type				
Works approval	<input 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 checked="" type="checkbox"/>	Current licence number:	L8934/2015/1	
		Relevant works approval number:	N/A	<input checked="" type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:	None	<input type="checkbox"/>
Date application received	02 September 2022			
Applicant and Premises details				
Applicant name/s (full legal name/s)	Big Bell Gold Operations Pty Ltd			
Premises name	Cue Gold Operations – Big Bell Project			
Premises location	Big Bell – Coodardy road, Mining Tenements M20/17, M20/99, M20/192, L20/21 and L20/40, CUE WA 6640			
Local Government Authority	Shire of Cue			
Application documents				
HPCM file reference number:	DER2015/002680-1~2			
Key application documents (additional to application form):	L8934 Amendment Premises Maps Big Bell Landfill Category Checklist Big Bell Landfill Extension Application Big Bell Landfill Extension Cover Letter Big Bell Landfill Extension Site Layout Boundary Big Bell Landfill Extension Supporting Information M20/17 Tenement Report Rockwater Day Dawn Impact of Mining on Groundwater			
Scope of application/assessment				

Summary of proposed activities or changes to existing operations.	<p>Licence amendment</p> <p>Construction of a Category 64 Putrescible Landfill with internal segregated class I, II, and recyclable waste cells. The construction of this landfill will provide the premises a more effective waste management practice.</p>	
Category number/s (activities that cause the premises to become prescribed premises)		
Table 1: Prescribed premises categories		
Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 6: Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining or ore	5,324,556 tonnes per annual period	No changes proposed
Category 64: Putrescible Landfill Site	600 tonnes per annual period	No changes proposed
Category 85: Sewage facility	50 cubic meters per day	No changes proposed
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: N/A 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: 04 November 2026 Other evidence <input 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: N/A Expiry date: N/A Landfilling is an authorised activity on M 20/17
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 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 type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office: Swan Avon / Mid-West Gascoyne / Kwinana Peel / North West / South West / Goldfields / South Coast
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 WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Nearest PDWSA is 30 km east at Cue Water Reserve
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>)	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	<i>Environmental Protection (Controlled Waste) Regulations 2004</i> <i>Environmental Protection (Noise) Regulations</i> <i>Environmental Protection (Rural Landfill) Regulations 2002 1997</i> <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> <i>Dangerous Goods Safety Act 2004</i> <i>Dangerous Goods Safety (Storage and Handling of Non-Explosives) Regulations 2007</i>
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

<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>
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