



Application for Works Approval

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

Works Approval Number	W6541/2021/1
Applicant	Paddington Gold Pty Ltd
ACN	008 585 886
File number	DER2021/000246
Premises	Paddington Gold Ora Banda Operation Landfill Ora Banda Legal description Within the mining lease M24/170 and M24/29 As defined by the premises map attached to the issued works approval
Date of report	23 July 2021
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 a landfill at the Paddington Gold Ora Banda Operation (the) premises. As a result of this assessment, works approval W6541/2021/1 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 19 January 2021, Paddington Gold 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).

The application is to undertake construction works relating to a Category 89 Putrescible landfill site at the premises. The premises is approximately 2.5 km to the south-west of Ora Banda townsite.

The premises relates to the category 89 and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6541/2021/1. 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 W6541/2021/1.

2.3 Proposed Activities

The applicant is seeking approval to construct a Class II putrescible landfill on the Enterprise Waste Rock Dump at Paddington Gold Ora Banda Operation with a production capacity of up to 5,000 tonnes per annum for the disposal of clean fill, putrescible waste, inert waste type 1 and uncontaminated fill, as defined in the *Landfill Waste Classifications and Waste Definitions 1996* (DWER 2019). Also, the applicant is seeking approval for time limited operation to operate the landfill during the licence application duration. The life of the project is expected to be 10 years.

Enterprise Waste Rock Dump is elevated 80m above ground level and is located within 200m of the Enterprise underground mine portal, which is currently operational (Figure 1). The landfill will be located entirely within the footprint of the waste rock dump and the total landfill footprint will not exceed an area of 5 hectares.

The applicant proposes to install two landfill trenches at the Enterprise Waste Rock Dump. Each trench will be approximately 30m wide, 2m deep and 100m long. The tip face bund of the trench to be constructed with a 1.5m height and the outer bund with a 2.5m height (Figure 2). The distance between the landfill trenches to be 10m. The landfill trench will be covered in progressive cells (30m long) from the outer side of the trench towards the center (Figure 1).

The Ora Banda Premises is currently operated under licence L8692/2012/1 and authorises Category 6 mine dewatering and Category 12 crushing and screening.

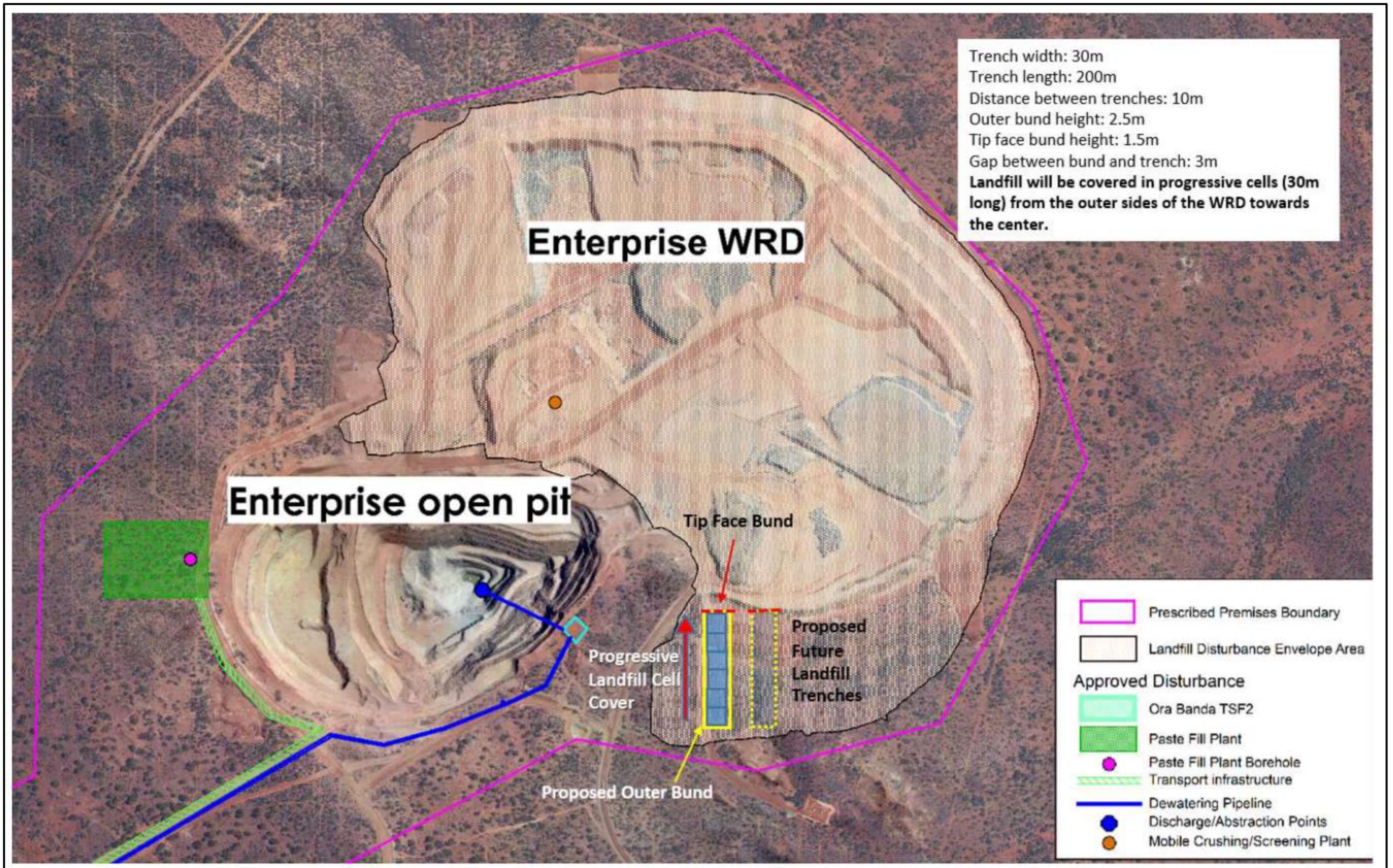


Figure 1: Proposed Ora Banda Landfill design

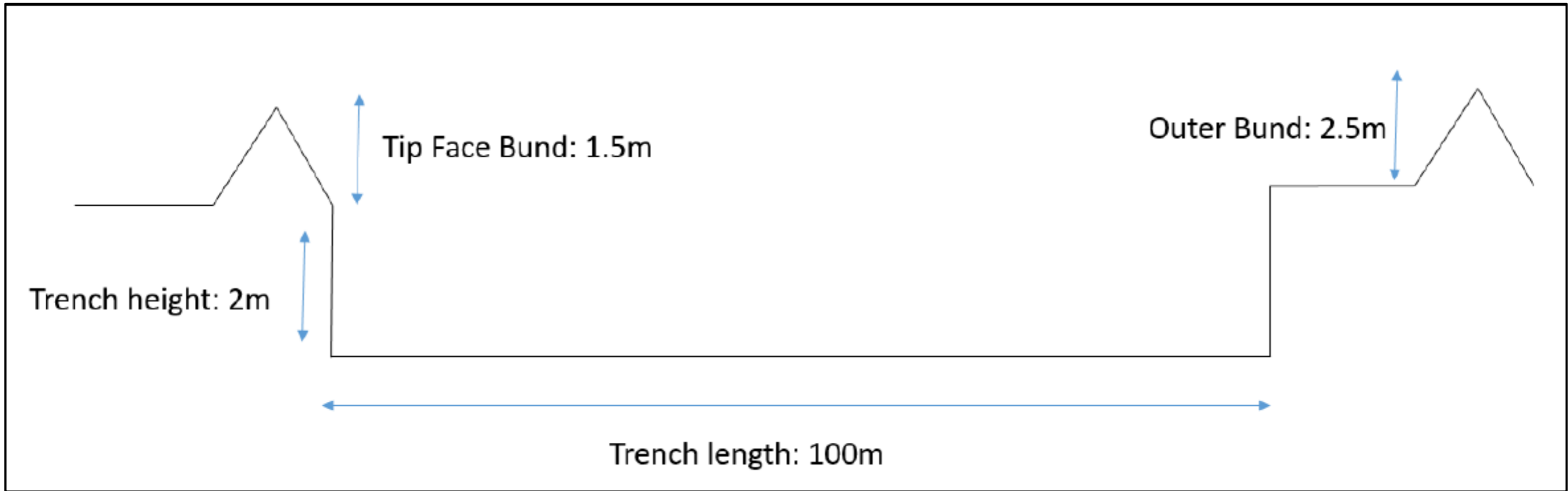


Figure 2: Proposed Landfill Design Cross Section

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 proposed 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 - Category 89: Class II Putrescible Landfill			
Dust	Earthworks in ground preparation Construction of landfill trench Vehicle movements on unsealed access roads	Air / windborne pathway	Water cart to be used to prevent dust generation during the construction
Noise	Earthworks in ground preparation Construction of landfill trench Vehicle movements on unsealed access roads	Air / windborne pathway	No control proposed
Contaminated stormwater from construction areas contaminated with sediment and/or hydrocarbons	Vehicles and machinery	Seepage to soil and groundwater	Bunding around Landfill to ensure contaminated stormwater does not enter landfill area
Operation - Category 86: Class II Putrescible Landfill			
Dust	Operation of landfill facility i.e. unloading and storage of	Air/ wind dispersion	Water cart to be used to prevent dust generation during operation
Noise			No control proposed

Emission	Sources	Potential pathways	Proposed controls
Odour	putrescible waste in the landfill site		Covering or enclosing odour generating wastes within landfill
Windblown wastes			Bunds to be constructed around the landfill Covering may be used to encapsulate the landfill Visual Inspections
Seepage of landfill leachate			Infiltration through soil to groundwater Uptake via roots Bunding of Landfill to ensure contaminated stormwater does not seep into environment enter landfill area
Stormwater contaminated with sediment and/or hydrocarbons	Vehicles and machinery use to unload and store of putrescible waste in the landfill site	Seepage to soil and groundwater Overland runoff potentially causing stress or death to adjacent remnant vegetation	Bunding of Landfill to ensure contaminated stormwater does not enter landfill area

3.1.2 Receptors

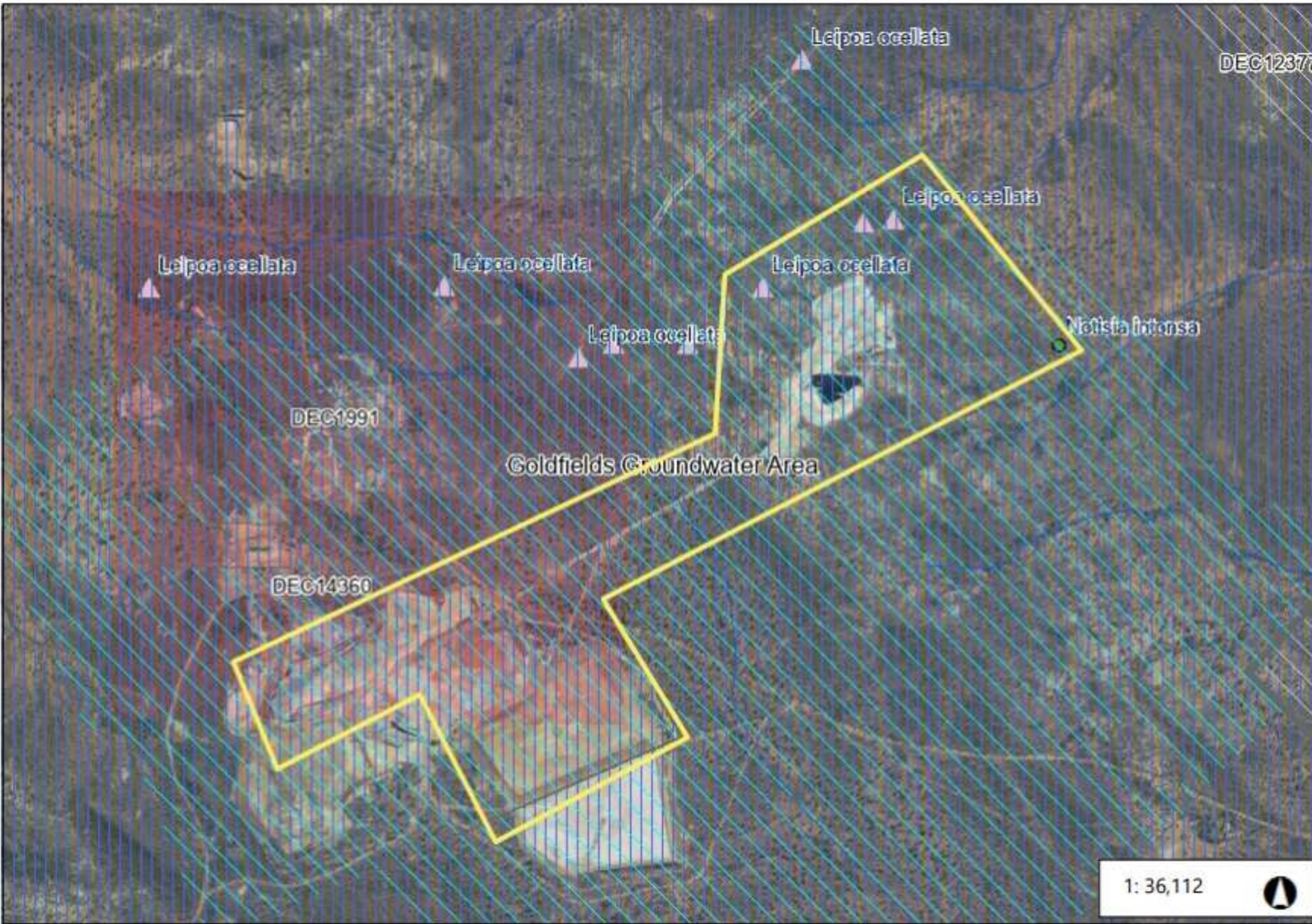
In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant's employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other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

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

Human receptors	Distance from prescribed activity
Closest residential receptor	Located in Ora Banda townsite which 2.5 km to the south-west of the premises
Environmental receptors	Distance from prescribed activity
Threatened and Priority Flora	approximately 1,000m to the from the proposed project area (within the prescribed premises)
Threatened Fauna	<i>Leipoa ocellate</i> (malleefowl) have recorded in 3 locations, 300m – 1300m from the proposed project area within the prescribed premises
Surface water lines	an ephemeral water line is visible at the edge of the Enterprise Waste Rock Dump
Contaminated Sites	project area has been identified as possibly contaminated

	land and classified as investigation required
Groundwater area	proposed project area is within the Goldfields Groundwater area proclaimed under RIWI Act 1914



1.8 0 0.92 1.8 Kilometers

WGS_1984_Web_Mercator_Auxiliary_Sphere
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This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION



Legend

23. Hydrography WA 250K - Surface Water Lines (GA 2015)

- Watercourse
- Water Pipeline
- Canal Line
- Connector
- DEMConnector

32. Contaminated Sites - Reported Sites

- Awaiting Classification
- Contaminated - Remediation Required
- Contaminated - Restricted Use
- Decontaminated
- Not Contaminated - Unrestricted use
- Possibly Contaminated - Investigation Required
- Remediated for Restricted Use
- Report Not Substantiated

RIWI Act 1914 - Groundwater Areas

20. Flora - WAHerb

20. Flora - TPFL

- 1
- 2
- 3
- 4
- T
- X

21. Threatened Fauna

- ▲ Conservation dependent fauna
- ▲ Critically endangered species
- ▲ Critically endangered species, Migratory birds protected under an international

Notes

Works approval for Category 89 Class II Putrescible landfill on Enterprise Waste Rock Dump at Ora Banda Operation - Paddington Gold

Author:

Recipient:

Figure 3: 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 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 W6541/2021/1 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. landfill operation activities. 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								
Earthworks in ground preparation Construction of landfill trench Vehicle movements on unsealed access roads	Dust	Air / windborne pathway	Native Vegetation	Refer to Section 3.1	C = Slight L = Possible Low Risk	Y	Condition 1: Construction and infrastructure requirements	N/A
	Noise		No human receptors – nearest residence is 2.5km southwest		No pathway to receptors	Y	No additional regulatory controls are required. The <i>Environmental Protection (Noise) Regulations 1997</i> apply.	N/A
Vehicles and machinery	Contaminated stormwater from construction areas contaminated with sediment and/or hydrocarbons	Overland runoff Seepage to soil and groundwater	Seasonal minor creek at the base of the waste rock dump	Refer to Section 3.1	C = Minor L = Rare Low Risk	Y	Condition 1: Construction and infrastructure requirements	N/A
Operation (including time-limited-operations)								
Operation of landfill facility i.e. unloading and disposal of putrescible waste in the landfill	Dust	Air / windborne pathway	Native Vegetation	Refer to Section 3.1	C = Slight L = Possible Low Risk	Y	Condition 1: Construction and infrastructure requirements Condition 6: Time limited operation requirements Condition 7 and Table 3 outline the waste types authorised to be accepted at the Premises. Condition 9 and Table 4 outlines the cover requirements for waste stored at the Premises.	N/A

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				
	Noise		No human receptors – nearest residence is 2.5km southwest	Refer to Section 3.1	No pathway to receptors	Y	No additional regulatory controls are required. <i>The Environmental Protection (Noise) Regulations 1997</i> apply.	N/A
	Odour		No human receptors – nearest residence is 2.5km southwest	Refer to Section 3.1	No pathway to receptors	Y	Condition 9 and Table 4 outlines the cover requirements for waste stored at the Premises	The applicant has proposed covering of waste to manage odour generating activities within landfill. The Delegated Officer has determined that the proposed applicant controls are adequate to prevent the potential odor generation.
	Windblown wastes		Native fauna - Foraging animals	Refer to Section 3.1	C = Minor L = Possible Medium Risk	N	Condition 1: Construction and infrastructure requirements – fencing around the landfill area Condition 9 and Table 4 outlines the cover requirements for waste stored at the Premises	The Delegated Officer has determined that additional controls are required to prevent the generation of windblown wastes from the landfill. Fencing will be required to be installed around the landfill area (i.e at each active trench).
	Seepage of landfill leachate	Infiltration through soil to groundwater Uptake via roots of native vegetation	Native vegetation Seasonal minor creek at the base of the waste rock dump Groundwater	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1: Construction and infrastructure requirements Condition 6: Time limited operation requirements	The groundwater level around the landfill has been encountered around 78 m below the ground level. Also, the Enterprise WRD is elevated 80m above ground level. Therefore, the separation distance between the base of the landfill trench and the groundwater table can be considered as approximately 150 m. The Delegated Officer has therefore determined that additional regulatory controls are not required to manage potential seepage of leachate from the landfill.
Vehicles and machinery use to unload and store of putrescible waste in the landfill site	Stormwater contaminated with sediment and/or hydrocarbons	Seepage to soil and groundwater Overland runoff potentially causing stress or death to adjacent remnant vegetation	Native vegetation Seasonal minor creek at the base of the waste rock dump Groundwater	Refer to Section 3.1	C = Minor L = Rare Low Risk	Y	Condition 1: Construction and infrastructure requirements Condition 6: Time limited operation 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 27 May 2021	None	N/A
Local Government Authority advised of proposal on 27 May 2021 (City of Kalgoorlie/Boulder)	29 June 2021 City of Kalgoorlie did not have any objections to works approval application W6541/2021/1.	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 27 May 2021	02 June 2021 Application is consistent with a Mining Proposal DMIRS approved in December 2020 ("Mining Proposal for Small Mining Operations: Ora Banda Landfill", Reg. ID: 92496)	N/A
Applicant was provided with draft documents on 09 July 2021	Response received on 19 July 2021. 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. Email titled "Application - New Works Approval - Paddington Gold Pty Ltd - Category 89 Putrescible Landfill within the Ora Banda Group Site" dated 19/01/2021 authored by Bianca Meagher, available at DWER records (DWERDT392547).
2. Email titled "APPLICANT RESPONSE - Further Information Provided - Norton Gold Fields Limited" dated 29/04/2021 authored by Jessica Radosevich, available at DWER records (A2002088).
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2019, *Guideline: Decision Making*, Joondalup, Western Australia.
5. DWER 2016, *Guideline: Environmental siting*, Joondalup, Western Australia.
6. DWER 2017, *Guideline: Risk assessments*, Joondalup, Western Australia.
7. DWER 2019, *Landfill Waste Classification and Waste Definitions 1996* (as amended 2019), Joondalup, Western Australia.
8. The *Environmental Protection (Rural Landfill) Regulations 2002*

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

Condition/Section	Summary of applicant's comment	Department's response
Section 2.3 of the Decision Report	Applicant has responded that the number of intended landfill trenches at the operation will be 2.	DWER requested clarification of the number of landfill trenches that the applicant proposes to build.
Condition 1 Table 1 of the Works Approval	Applicant has responded that the number of intended landfill trenches at the operation will be 2.	DWER requested clarification of the number of landfill trenches that the applicant proposes to build.
Figure 2 of the Decision Report and the Figure 2 in the Schedule 1 on the Works Approval	Applicant has provided a new diagram for landfill design cross-section and the proposed landfill trench length has changed into 100m from 200m.	DWER noted the change and included in the final instrument.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY				
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 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	16 December 2020			
Applicant and Premises details				
Applicant name/s (full legal name/s)	Paddington Gold Pty Ltd			
Premises name	Ora Banda			
Premises location	Mining Lease: M24/170			
Local Government Authority	Kalgoorlie/Boulder			
Application documents				
HPCM file reference number:	DER2021/000003			
Key application documents (additional to application form):	<i>Attachment 1 – Tenement Summary Report, ASIC Company Extract</i> <i>Attachment 2 – Figure 1,2, and 3</i> <i>Attachment 7 – Landfill Location map</i> <i>Attachment 9 – Cost of Works</i>			
Scope of application/assessment				
Summary of proposed activities or changes to existing operations.	<i>Works approval</i> Construction of Putrescible Landfill			

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 - Premises on which waste (as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer, as amended from time to time) is accepted for burial.	5,000 tonnes per annum	N/A

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:
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: 11/02/2028 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: If N/A explain why? Not a significant proposal. Applicant holds a valid mining lease
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 checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Goldfield Groundwater area Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Regional office: N/A
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 WQPN 25)? 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, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
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 checked="" type="checkbox"/> No <input type="checkbox"/>	Classification: Possibly contaminated – investigation required (PC–IR) Date of classification: 20 February 2020