



Application for Licence

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

Licence Number	L9336/2022/1
Applicant	Hastings Technology Metals Ltd
ACN	122 911 399
File Number	DER2022/000260
Premises	Yangibana Rare Earths Project Legal description - G09/14, M09/158, M09/157, G09/18, G09/17, G09/20 and M09/161 As defined by the coordinates in Schedule 1
Date of Report	12 October 2022
Decision	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

This Decision Report documents the assessment of potential risks to the environment and public health from emissions and discharges during the operation of the Premises. As a result of this assessment, Licence L9336/2022/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Decision 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 and overview of Premises

On 10 June 2022, Hastings Technology Metals Ltd (the Applicant) submitted an application for a licence to the department under section 57 of the *Environmental Protection Act 1986* (EP Act).

The application is to seek a licence relating to landfill activities at the Bald Hill and Frasers Waste Rock Landforms at the Premises. The Premises is approximately 150 km north-east of Gascoyne Junction.

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 Licence L9336/2022/1. 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 2017) are outlined in Licence L9336/2022/1.

The Applicant has submitted a licence application to operate a Class II putrescible landfill at the Yangibana Rare Earths Project. The licence will initially consist of category 64 only, and as other aspects of the project are constructed and commissioned, be amended to include categories 5, 6 and 85.

The category 64 operation is located within the Bald Hill and Frasers waste rock landforms, which is shown in Figure 1. Waste will be sorted at a waste depot adjacent to the ore processing facility. Waste that is not recycled or reused will be buried in landfill bunkers located at the Bald Hill and Frasers waste rock landforms.

Waste burial rates for both landfill sites are expected to be up to 670 tpa of putrescible waste and 2,500 tpa of inert waste (total of 3,170 tpa). The total design capacity of both landfills is 3,487 tonnes per annual period.

At both landfill sites, 3 bunkers will be active at any one time; one for putrescible waste, one for inert type 1 waste and another for inert type 2 waste. Bunkers are nominally 50 m long, 10 m wide and 2 m deep with side batters sloped at 1:2 to provide stability. Putrescible waste is to be covered regularly by 150 mm, inert type 2 waste to be covered with 100mm and the inert type 1 waste bunker remaining uncovered, unless windblown waste is a risk. New bunkers are constructed once full, with locations moving within the waste rock landforms to suit the current tipping locations of the mining fleet.

A ringlock stock fence to a height of 1.2 metres will be erected around all active cells.

Groundwater within the project area is 20-30 metres below ground level and will be at minimal risk for contamination from landfill activities on site.

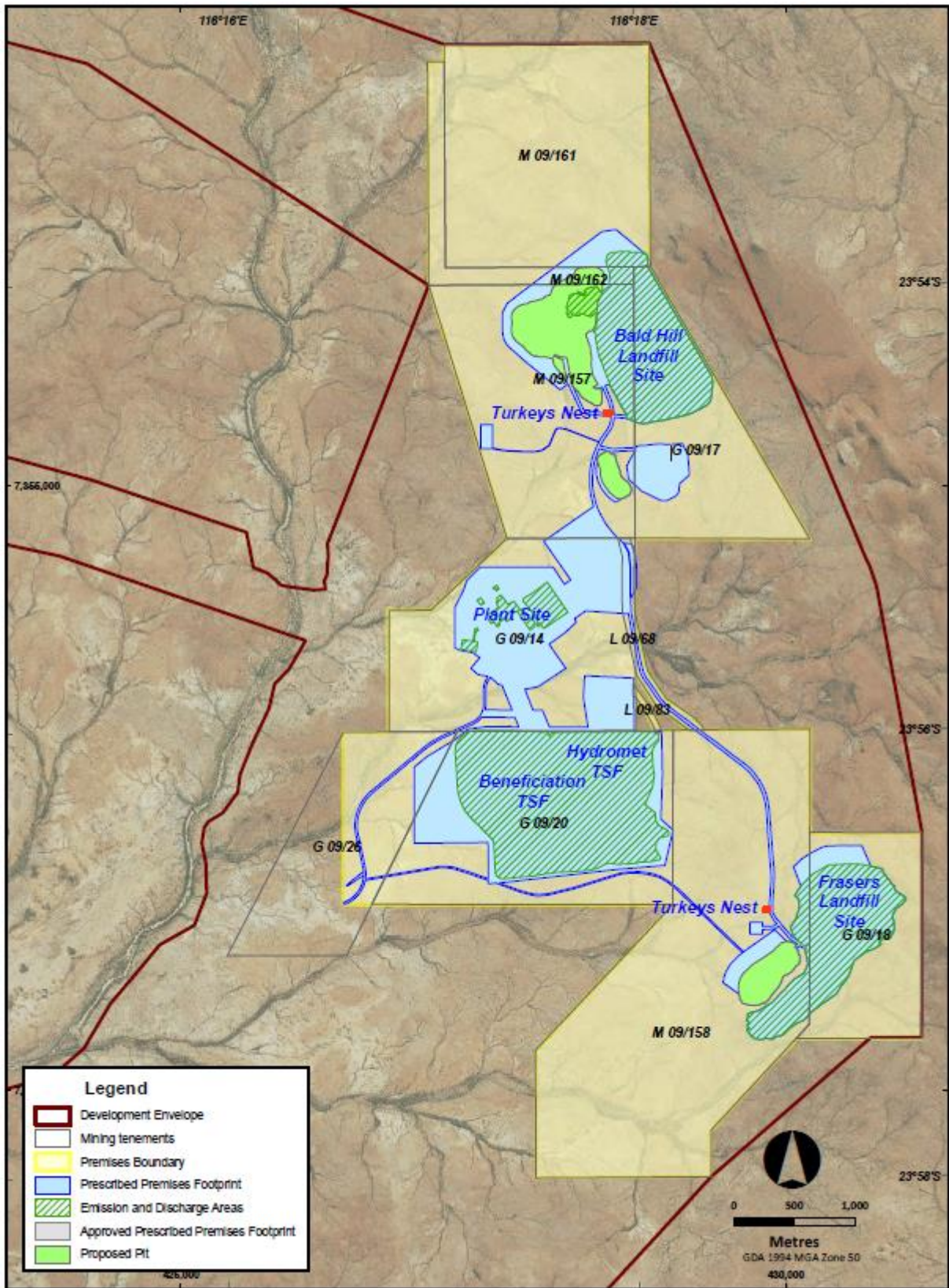


Figure 1: Premises Map

2.3 Part IV of the EP Act

The Minister for Environment granted Ministerial Statement (MS) 1110 for the Yangibana Rare Earths Project under Part IV of the EP Act on 19 August 2019. The conditions imposed relate to protection of flora and vegetation, and subterranean fauna.

Flora and vegetation conditions are related to:

- Avoiding where possible, and minimising direct and indirect impacts to specified vegetation units, listed priority flora and vegetation communities associated with claypans/depressions, drainage lines, creeks and riparian vegetation;
- Targeted vegetation surveys within and outside the development envelope prior to ground disturbing activities;
- Modelling to determine indirect impacts from altered surface water regimes on vegetation communities (as above) prior to ground disturbing activities;
- Prepare and submit a condition environmental management plan for the avoidance and minimisation of direct and indirect flora and vegetation impacts, including monitoring management actions targets and reporting;

Subterranean fauna conditions are related to:

- Protection of stygofauna from mine groundwater drawdown during construction and operational phases; and
- Prepare and submit a condition environmental management plan for the protection of stygofauna from mining groundwater drawdown, including specification of environmental outcomes, trigger criteria, thresholds, monitoring, actions, contingencies and reporting.

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 2017).

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 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
Operation			
Bald Hill and Frasers waste rock landfill	Gaseous emissions and odour	Air / wind dispersion	<ul style="list-style-type: none"> • Small size, nominally 50 m long x 10 m wide and 2 m deep • Bunkers slightly sloped (approx. 2%) to the rear to retain stormwater collected in bunkers • Daily inspections of tipping face • Waste compacted as soon as practicable to reduce potential for windblown litter • Fortnightly cover on putrescible waste bunker • Daily cover on Inert Type 2 waste • Leachate contained in the bunker until evaporated • All uncontaminated stormwater diverted away from the cells • Pre-sorting of waste near the ore processing facility • Exclusion of wastes such as hazardous, dangerous goods, radioactive, medical wastes and also contaminated soils and sludges
	Fugitive dust		
	Leachate seepage	Direct discharge	
	Contaminated stormwater runoff		

3.1.2 Receptors

In accordance with the *Guideline: Risk assessment* (DWER 2017), the Delegated Officer has excluded employees, visitors and contractors of the applicant'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 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 2016)).

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

Human receptors	Distance from prescribed activity
Gifford Creek Station Homestead	Approx. 15 km SSW of the ore processing plant and approx. 13 km SSW of the TSFs
Edmund Station Homestead	Approx. 24 km NW of the ore processing facility and approx. 25 km NW of the TSFs
Environmental receptors	Distance from prescribed activity
<p>Priority Ecological Community (PEC): <i>Priority 1 (P1) Gifford Creek, Mangaroon, Wanna calcrete groundwater assemblage type on Lyons palaeodrainage on Gifford Creek, Lyons and Wanna Stations</i></p> <p>This area is a PEC because it has a diverse stygofauna community located within the Lyons palaeodrainage channel.</p>	The PEC is located within the premises.
<p>Priority Flora: Eleven Priority Flora species (including six significant range extensions) according to EPA Report 1642.</p>	Located within and surrounding the premises.
Lyons River, Frasers Creek and associated tributaries/drainage lines	<p>Lyons River – approx. 9 km SW of the TSFs Frasers Creek – passes approx. 1.5 to 2 km along the western side of the TSF and ore processing facility</p> <p>A creek or tributary of Frasers Creek transects between the northern perimeter of the TSF and south of the ore processing facility.</p>

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk assessments* (DWER 2017) 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 licence 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.

Licence L9336/2022/1 that accompanies this Decision Report authorises emissions associated with the operation of the Premises i.e. Class II landfill activities.

The conditions in the issued Licence, 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 operation

Risk Event					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Operation								
Bald Hill and Frasers waste rock landfill	Gaseous emissions and odour	Air/windborne pathway causing impacts to health and amenity	Nearest dwelling is Gifford Creek Homestead approx. 15 km SSW of the plant.	Refer to Section 3.1	C = Minor L = Rare Low Risk	Y	Condition 4	N/A
	Fugitive dust						N/A	
	Leachate seepage	Overland runoff and seepage, potentially causing ecosystem disturbance or impacting surface water and groundwater quality	Groundwater aquifers Surface water systems through superficial aquifer recharge	Refer to Section 3.1	C = Slight L = Rare Low Risk	Y	N/A	N/A
	Contaminated stormwater runoff						Condition 7	

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2017).

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 (4/07/2022)	No comments received	N/A
Shire of Upper Gascoyne advised of proposal 11/07/2022	No comments received	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 11/07/2022	No comments received	N/A
Department of Jobs, Tourism, Science and Innovation (JTSI) advised of proposal 11/07/2022	No comments received	N/A
Applicant was provided with draft documents on 13/09/2022	21/09/2022	Appendix 1

5. Conclusion

Based on the assessment in this Decision Report, the Delegated Officer has determined that a licence 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) 2016, *Guideline: Environmental siting*, Joondalup, Western Australia.
3. DWER 2017, *Guideline: Risk assessments*, Joondalup, Western Australia.
4. DWER (2019), *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)*, Department of Water and Environmental Regulation, Perth.
5. Ministerial Statement MS 1110, dated 9 August 2019, State Government of Western Australia, Perth.

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

Condition	Summary of applicant's comment	Department's response
Table 1 Table 4	Clarification of "contaminated solid wastes"	Discussion by phone to Lisa McGrath on 6/10/2022
Table 2	Remove "or landfilling" from tyre and green waste disposal	Changes made
4	Clarification of "as soon as practicable"	Discussion by phone to Lisa McGrath on 6/10/2022. Water is levelled and compacted with a week after it is discharged as set in <i>Environmental Protection (Rural Landfill) Regulations 2002</i> .
	Clarification of "restoration"	
Table 3	Query of daily covering	Change made to "weekly" as set in <i>Environmental Protection (Rural Landfill) Regulations 2002</i>
Schedule 1	Updated map provided	Changes made

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Licence	☒	Relevant works approval number:	W6209/2019/1	None	<input type="checkbox"/>
		Has the works approval been complied with?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report submitted?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Date Report received: 8 March 2022			
Date application received		10 June 2022			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Hastings Technology Metals Ltd			
Premises name		Yangibana Rare Earths Project			
Premises location		Mining Tenements G09/14, M09/158, M09/157, G09/18, G09/17, G09/20 and M09/161			
Local Government Authority		Shire of Upper Gascoyne			
Application documents					
HPCM file reference number:		DER2022/000260			
Key application documents (additional to application form):		DWERDT616203 – documents including attachments.			
Scope of application/assessment					
Summary of proposed activities or changes to existing operations.		Licence Operation of Category 64 Class II 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			
Category 64: Class II or II putrescible landfill site		Maximum design capacity – 3,487 tonnes per annual period			
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		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 checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: MS1110 EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Reference No: 2016/7845
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Mining lease / tenement <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?
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"/>	MS 1110
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"/>	MS 1110
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"/>	Licence/permit No: GWL 183285
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"/>	
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <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 checked="" type="checkbox"/> No <input type="checkbox"/>	EPBC Act Mining Act
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
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"/>	
Direct interest stakeholders		
Shire of Upper Gascoyne	Letter to be sent	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
DMIRS	Letter to be sent	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
JTSI,	Letter to be sent	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>