



Works Approval

Environmental Protection Act 1986, Part V

Works Approval Holder: **Buckland Minerals
 Transport Pty Ltd**

Works Approval Number: **W5689/2014/1**

Registered office: Level 1
 15 Rheola Street
 WEST PERTH WA 6005

ACN: 152 574 082

Premises address: Buckland Project Crushing and Screening Facility
 M47/1464, L47/679, L47/680, L47/681, L08/100, L08/101, L08/104,
 L08/105, L08/120, L08/139, L08/140, L08/141 and L08/142
 HAMERSLEY RANGES WA 6716
 as depicted in Schedule 1

Issue date: Thursday, 15 October 2015

Commencement date: Monday, 19 October 2015

Expiry date: Thursday, 18 October 2018

The following category/s from the *Environmental Protection Regulations 1987* cause this Premises to be a prescribed premises for the purposes of the *Environmental Protection Act 1986*:

Category number	Category description	Category production or design capacity	Approved premises production or design capacity
12	Screening etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated	50 000 tonnes or more per year	1,500,000 tonnes per annual period

Conditions

This Works Approval is subject to the conditions set out in the attached pages.

Date signed: 15 October 2015

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Alana Kidd
 Manager Licensing – Resource Industries
 Officer delegated under section 20
 of the *Environmental Protection Act 1986*



Works Approval Conditions

1 General

1.1 Interpretation

1.1.1 In the Works Approval, definitions from the *Environmental Protection Act 1986* apply unless the contrary intention appears.

1.1.2 In the Works Approval, unless the contrary intention appears:

'Act' means the *Environmental Protection Act 1986*;

'annual period' means the inclusive period from 1 April until 31 March in the following year;

'CEO' means Chief Executive Officer of the Department of Environment Regulation;

'CEO' for the purpose of correspondence means;

Chief Executive Officer
Department Administering the Environmental Protection Act 1986
Department of Environment Regulation
Locked Bag 33
CLOISTER SQUARE WA 6850
Email: info@der.wa.gov.au;

'Commissioning' means the process of operation and testing that verifies the works and all relevant systems, plant, machinery and equipment have been installed and are performing in accordance with the design specification set out in the works approval application;

'Premises' means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of the Works Approval;

'Schedule 1' means Schedule 1 of this Works Approval unless otherwise stated;

'Stage 1' means construction of 105 km Stage 1 haul road located within tenure M47/1464, L47/679, L47/680, L47/681, L08/100, L08/101, L08/120, L08/139, L08/140, L08/141 and L08/142 as depicted in Schedule 1;

'Stage 2' means construction of 73 km Stage 2 haul road located within tenure L08/104 and L08/105 as depicted in Schedule 1;

'Works Approval' means this Works Approval numbered W5689/2014/1 and issued under the *Act*; and

'Works Approval Holder' means the person or organisation named as the Works Approval Holder on page 1 of the Works Approval.

1.1.3 Any reference to an Australian or other standard in the Works Approval means the relevant parts of the standard in force from time to time during the term of this Works Approval.



1.1.4 Any reference to a guideline or code of practice in the Works Approval means the current version of the guideline or code of practice in force from time to time, and shall include any amendments or replacements to that guidelines or code of practice made during the term of this Works Approval.

1.2 General conditions

1.2.1 The Works Approval Holder shall construct the works in accordance with the documentation detailed in Table 1.2.1:

Table 1.2.1: Construction Requirements¹		
Document	Parts	Date of Document
Works Approval Application – Buckland Project Crushing and Screening for Road Construction, Iron Ore Holdings Limited, Buckland Minerals Transport Pty Ltd, Rev B	All	May 2014
Email correspondence titled “RE: Works Approval Application – Bucklands Project – Haul Road W5689/2014/1, received from Neil Dixon, Iron Ore Holdings Ltd	All	29 August 2014

Note 1: Where the details and commitments of the documents listed in condition 1.2.1 are inconsistent with any other condition of this works approval, the conditions of this works approval shall prevail.

1.2.2 The Works Approval Holder shall commission the Buckland Project Crushing and Screening Facility, for a period not exceeding 3 months.

2 Information

2.1 Reporting

2.1.1 The Works Approval Holder shall submit a compliance document to the CEO, following the construction of the works and prior to commissioning of the same.

2.1.2 The compliance document shall:

- (a) certify that the works were constructed in accordance with the conditions of the Works Approval; and
- (b) be signed by a person authorised to represent the Works Approval Holder and contain the printed name and position of that person within the company.

2.2 Notification

2.2.1 The Works Approval Holder shall ensure that the parameters listed in Table 2.2.1 are notified to the CEO and are in accordance with the notification requirements of the table.

Table 2.2.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement	Format or form
1.2.2	Commencement of commissioning	7 days prior to start	None specified
	Completion of commissioning	7 days after completion	



Schedule 1: Maps

Premises map

The Premises is shown in the map below. The orange line depicts the Premises boundary.

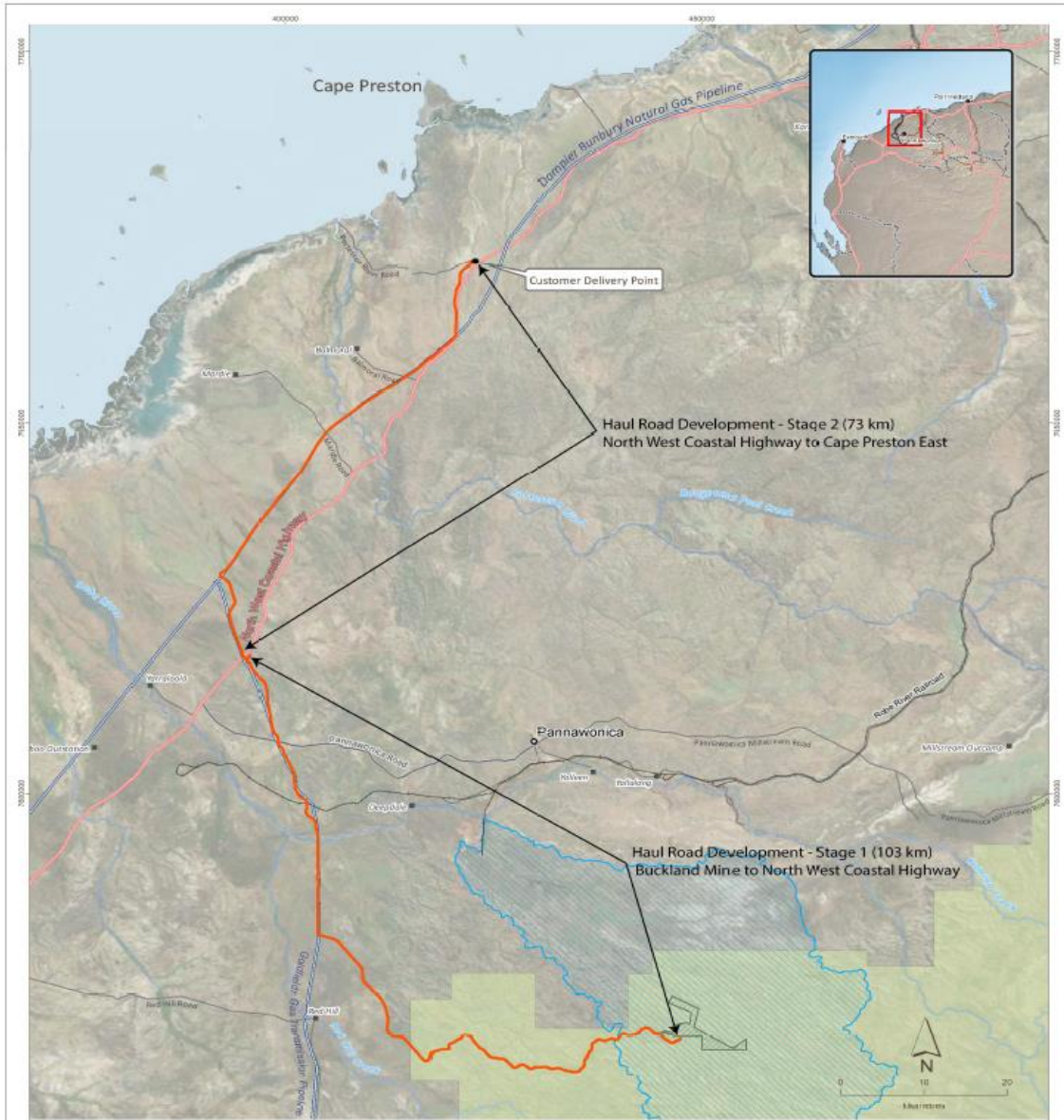


Figure 1
Conceptual project layout of proposed haul road.

Legend

Existing features and infrastructure

- Populated places
- Homesteads
- Existing roads
 - Principal road
 - Secondary road
 - Minor road
- Rivers and creeks
- RTIO railway
- Gas Pipeline
- Bungaroo Creek water reserve
- Proposed West Hamersley Range Conservation Park

Proposal Area

- Proposed Haul Road
- Development Envelope
- Proposed Mine Development Envelope

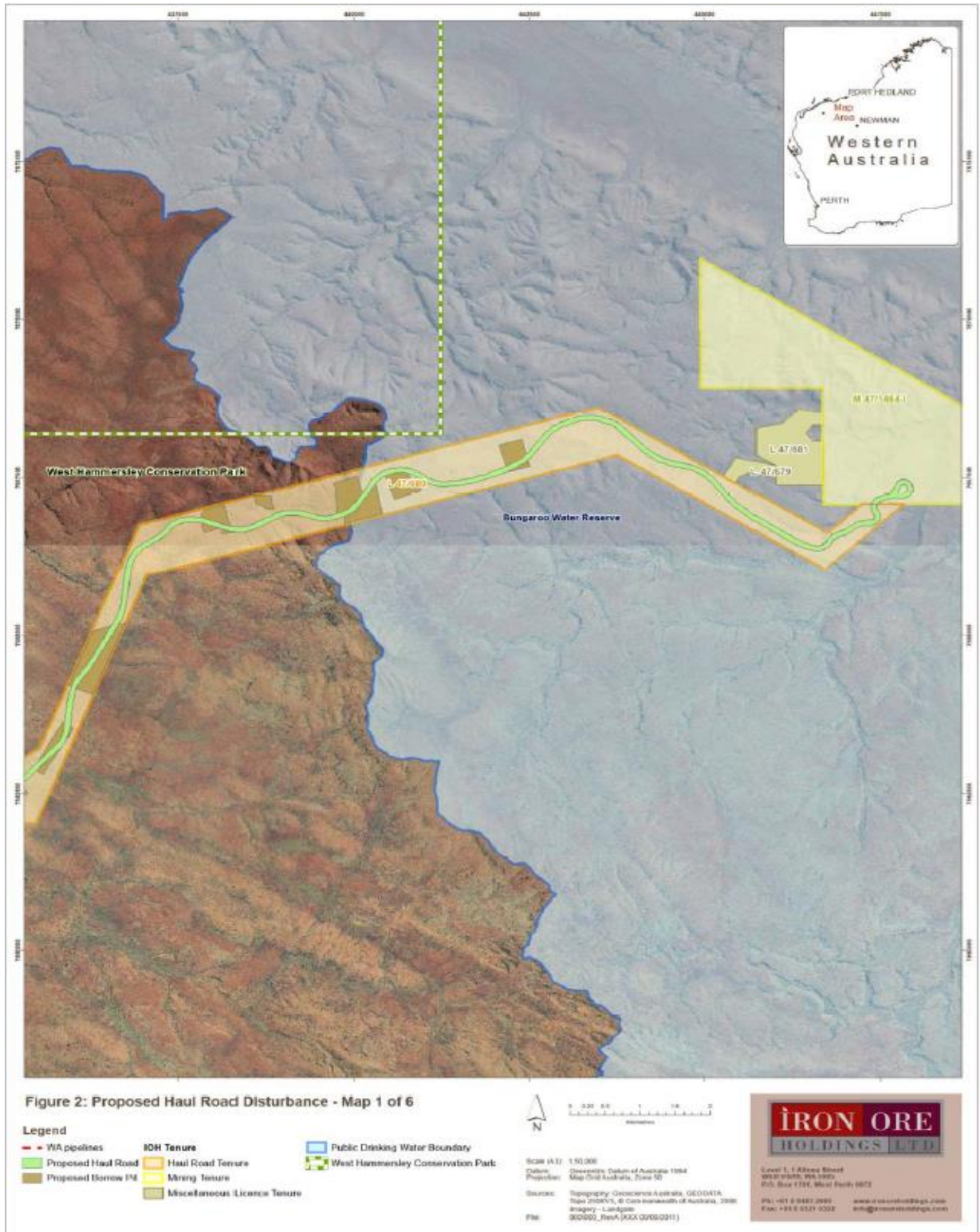
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Datum: Geocentric Datum of Australia 1994
Projection: Map Grid Australia, Zone 50
SOURCE: Topography: Geoscience Australia, GCD/4M/A
Taps 2500V1, © Commonwealth of Australia, 2008
Imagery: Bing Maps, WMS Service
File: 001007_MMS10668_Rev0 (v4) 05/11/2013

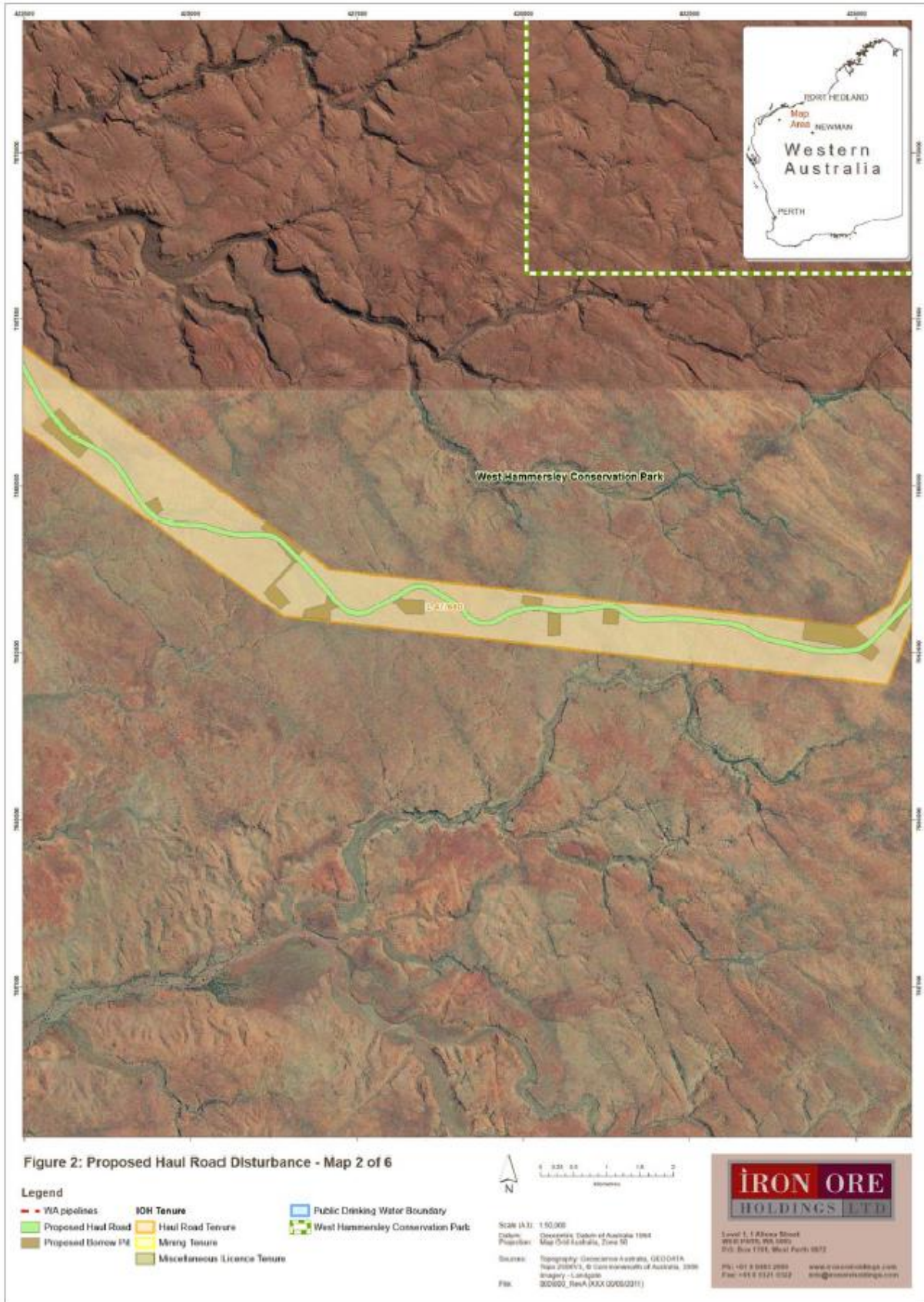


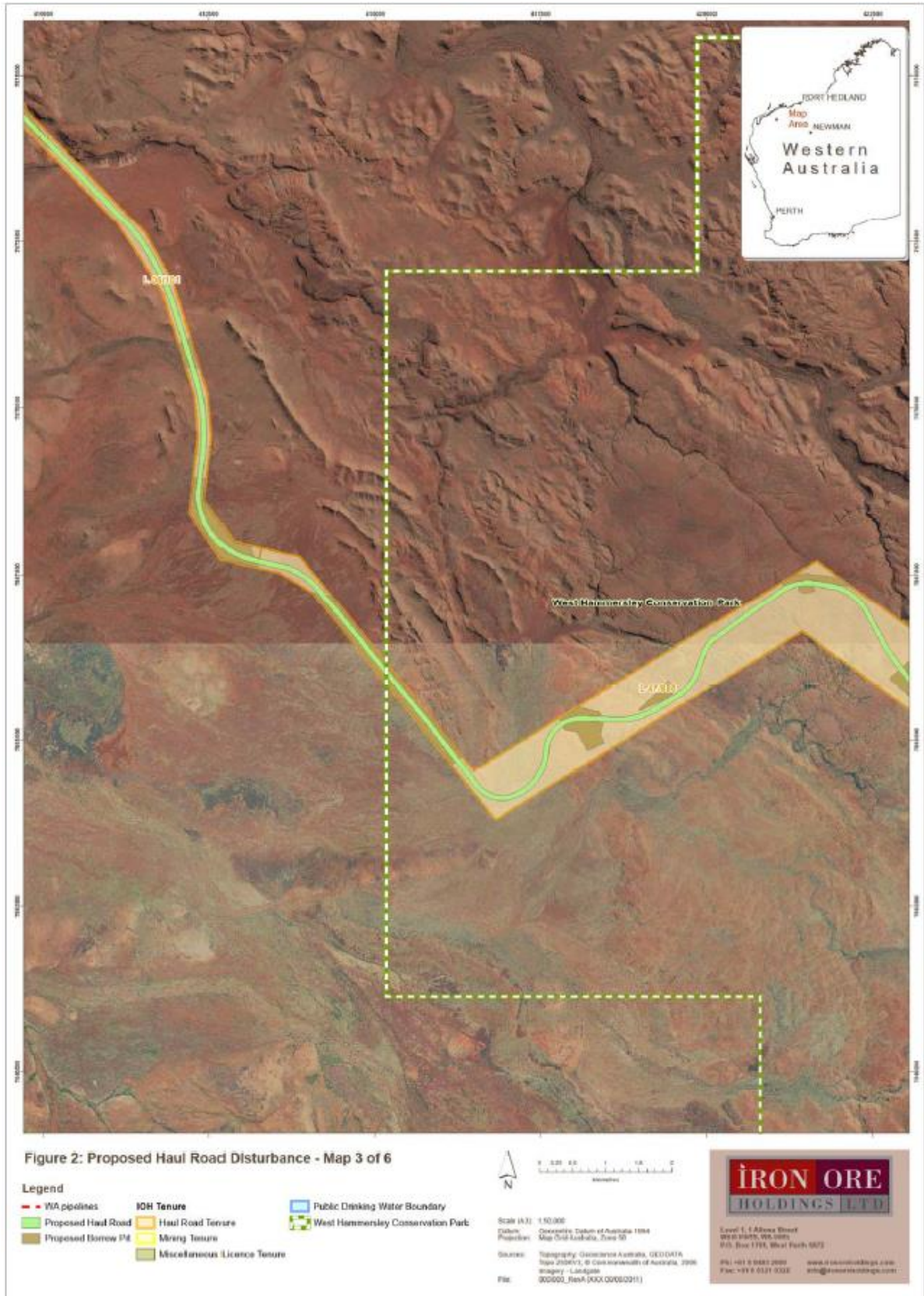
Map of proposed borrow pit locations

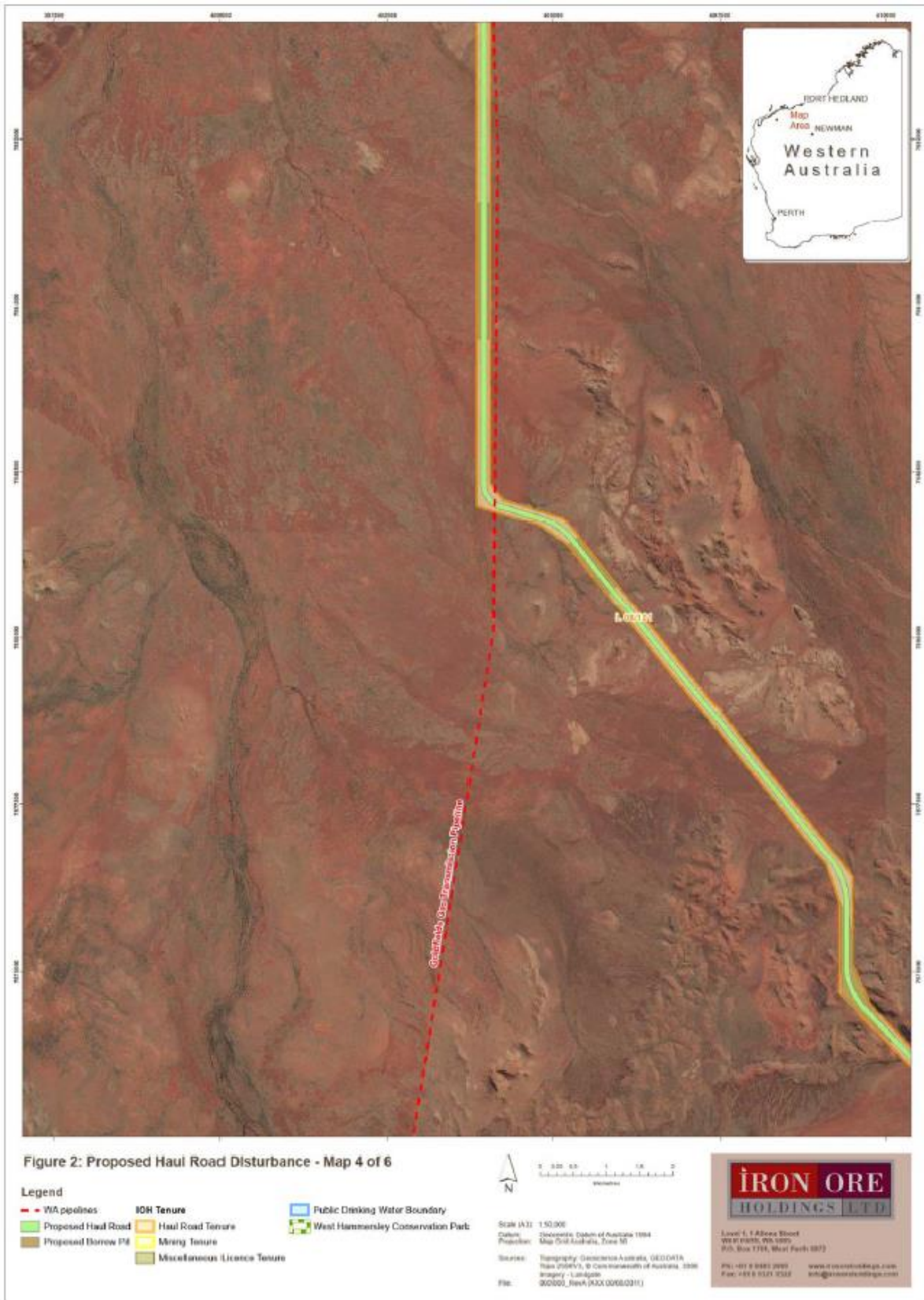


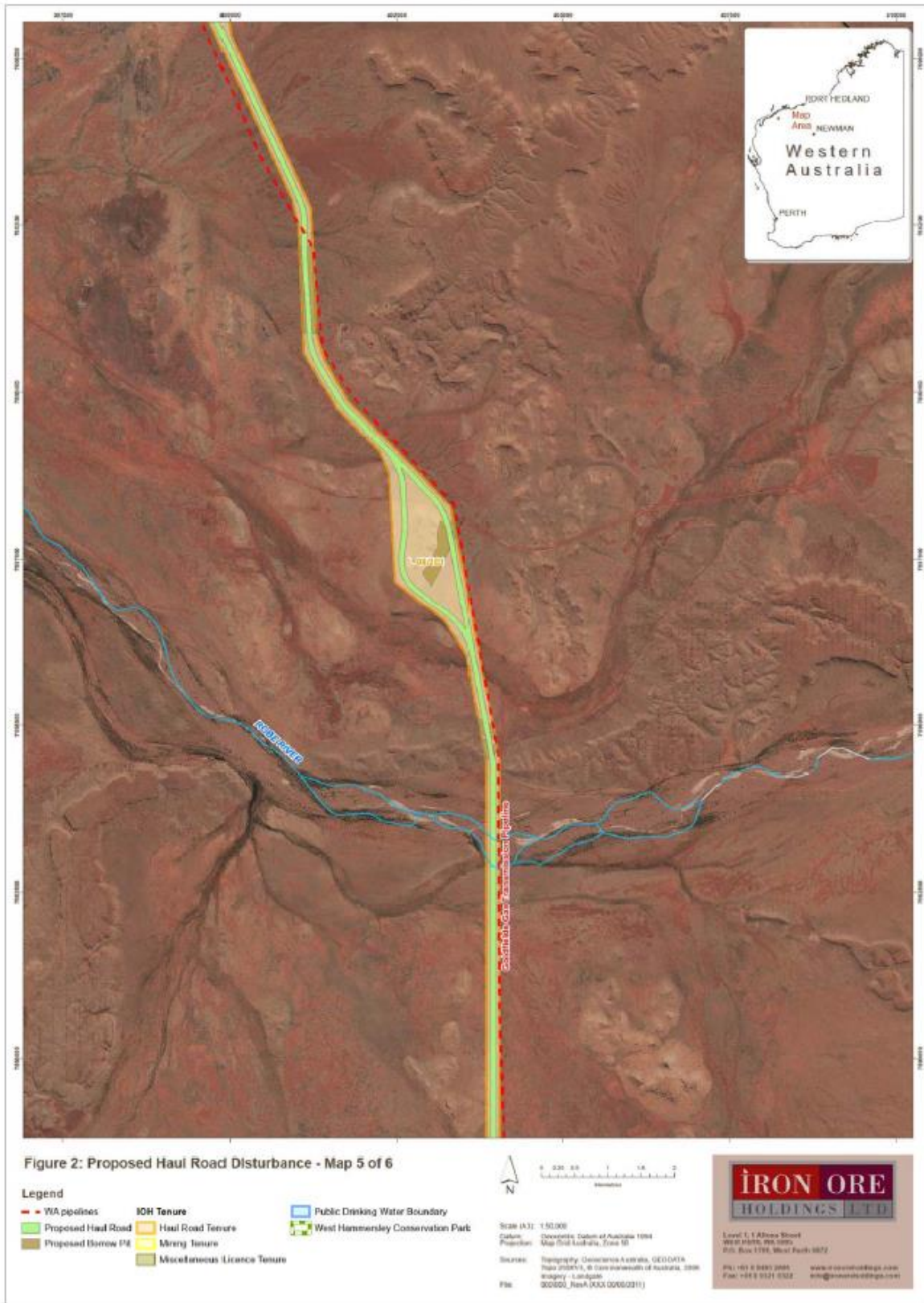
The locations of the proposed borrow pits for Stage 1 are shown below.

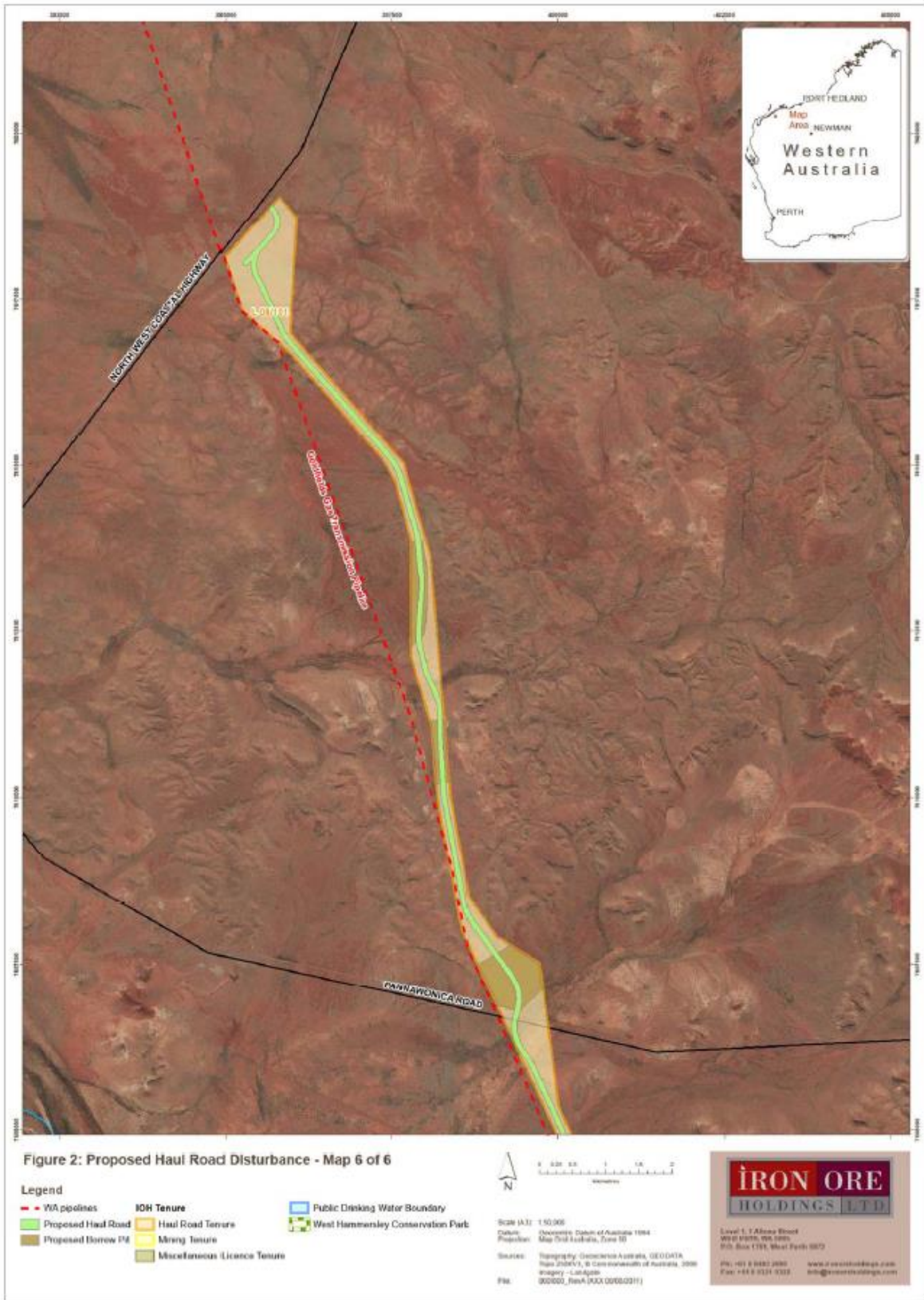






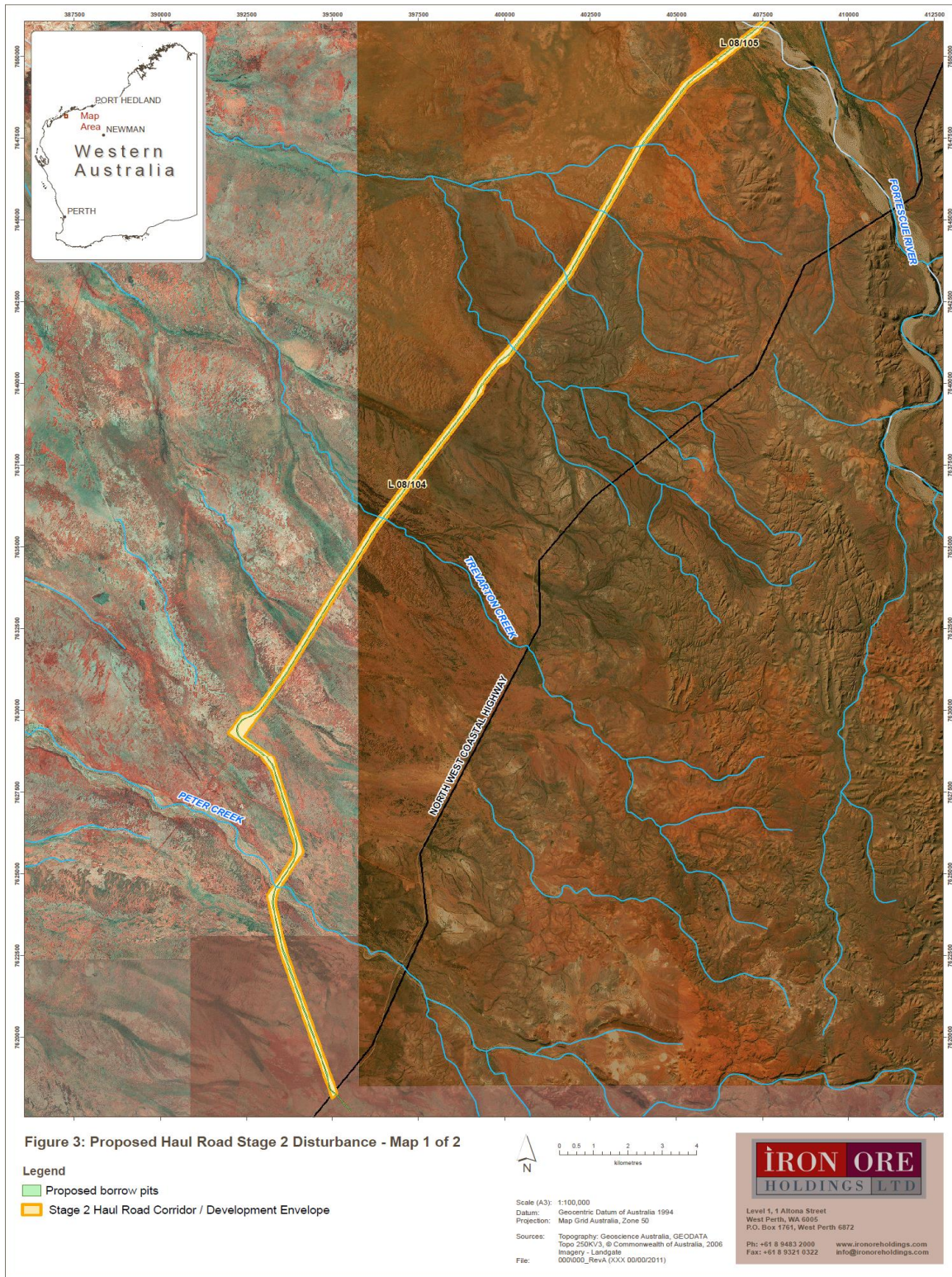


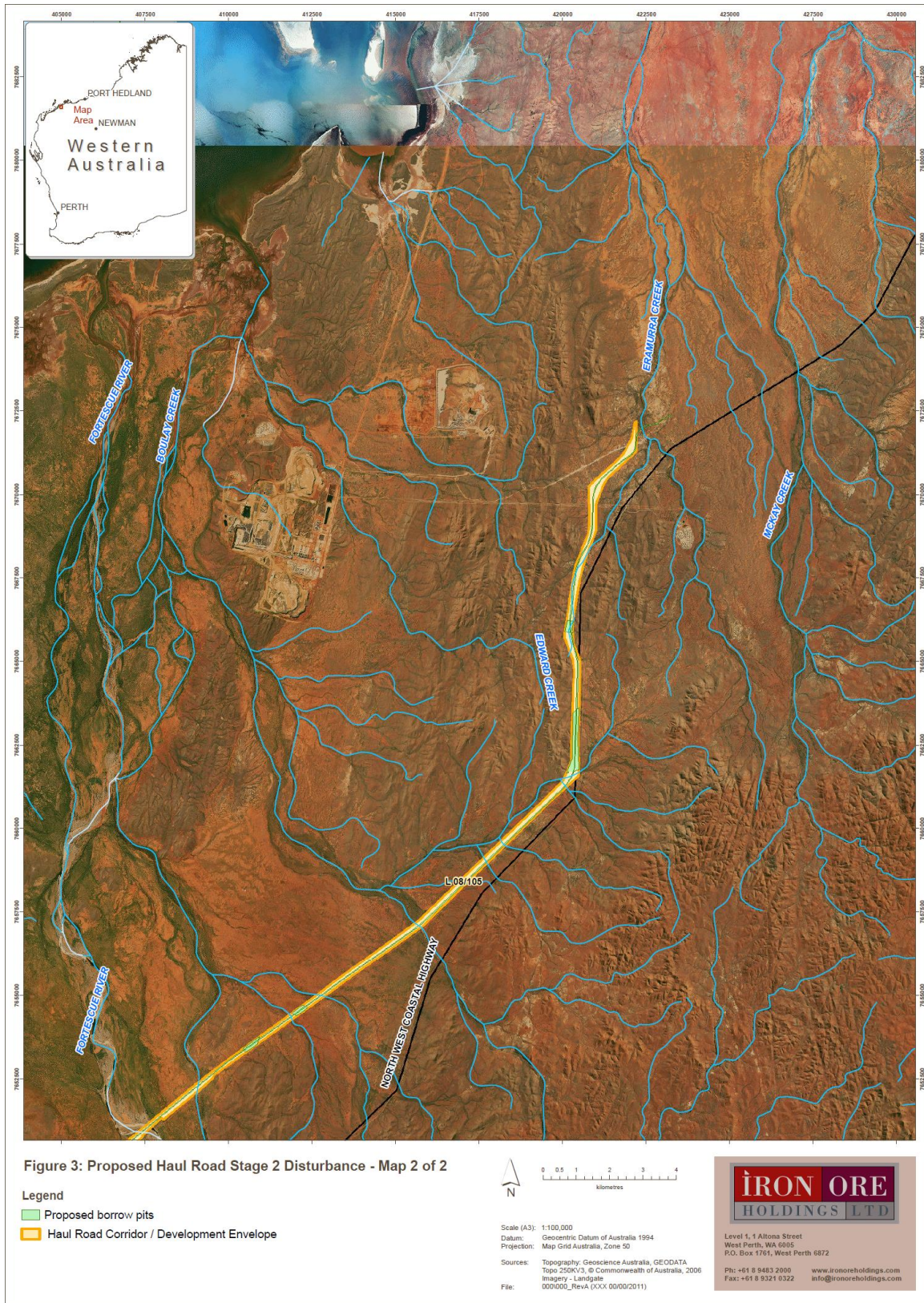






The locations of the proposed borrow pits for Stage 2 are shown below.







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1 Purpose of this Document

This decision document explains how DER has assessed and determined the application and provides a record of DER's decision-making process and how relevant factors have been taken into account. Stakeholders should note that this document is limited to DER's assessment and decision making under Part V of the *Environmental Protection Act 1986*. Other approvals may be required for the proposal, and it is the proponent's responsibility to ensure they have all relevant approvals for their Premises.



2 Administrative summary

Administrative details		
Application type	Works Approval <input checked="" type="checkbox"/>	
	New Licence <input type="checkbox"/>	
	Licence amendment <input type="checkbox"/>	
	Works Approval amendment <input type="checkbox"/>	
Activities that cause the premises to become prescribed premises	Category number(s)	Assessed design capacity
	12	1,500,000 tonnes per annual period
Application verified	Date: 11/06/2014	
Application fee paid	Date: 31/07/2014	
Works Approval has been complied with	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Compliance Certificate received	Yes <input type="checkbox"/>	No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Commercial-in-confidence claim	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Commercial-in-confidence claim outcome	N/A	
Is the proposal a Major Resource Project?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Was the proposal referred to the Environmental Protection Authority (EPA) under Part IV of the <i>Environmental Protection Act 1986</i> ?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
		Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input checked="" type="checkbox"/>
Is the proposal subject to Ministerial Conditions?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
		Ministerial statement No: 960 EPA Report No: 1496
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the <i>Environmental Protection Act 1986</i>)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	Department of Water consulted Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If Yes include details of which EPP(s) here.		
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
If Yes, include details here, eg Site is subject to SO ₂ requirements of Kwinana EPP.		



3 Executive summary of proposal and assessment

Buckland Minerals Transport Pty Ltd (Buckland Minerals) a subsidiary of BC Iron Limited (BCI) proposes to construct a haul road from the Buckland Project Mine (being assessed under a separate application) for the transportation of iron ore product by road to the customer delivery point at Cape Preston East (Figure 1). The proposed haul road is located in the west Pilbara region of Western Australia.

The haul road is proposed in two stages. The Stage 1 haul road (approximately 105 kilometres (km)) links the mine to the North West Coastal Highway, which would be used for the first few years of operation. Stage 2 of the haul road (approximately 73 km) links Stage 1 to the customer delivery point for the Cape Preston East Export Facility to service the long-term operation of the mine (production rate of eight million tonnes per annum (Mtpa)).

A mobile crushing and screening plant (the plant) will be required for the processing of raw materials required for the construction of the haul road. Crushed raw material for the road base will be required along the entire length of the 178 km haul road. The material will be sourced from road cuttings and also from a number of borrow pits located within the development envelope. The plant and associated equipment will generally be located within the borrow pit sites.

The plant and equipment will likely include:

- Jaw and cone crushers;
- A screener;
- Two x 50 tonne floats for transport; and
- Various other material handling equipment.

The plant will have a throughput capacity of approximately 200 tonnes per hour and an estimated annual throughput of 584,000 tonnes. The plant will also be supported by mobile power generating equipment, accommodation and ablution facilities for personnel.

Fugitive dust emissions have been identified as potential emissions of concern from the construction and operation of the plant. Due to the nature of the activity, the remote location and the management commitments outlined by the proponent the environmental risk from this proposal is considered low.

The works approval will be issued for a period of 3 years. A licence to operate the plant will need to be applied for and issued prior to the operation of the plant.

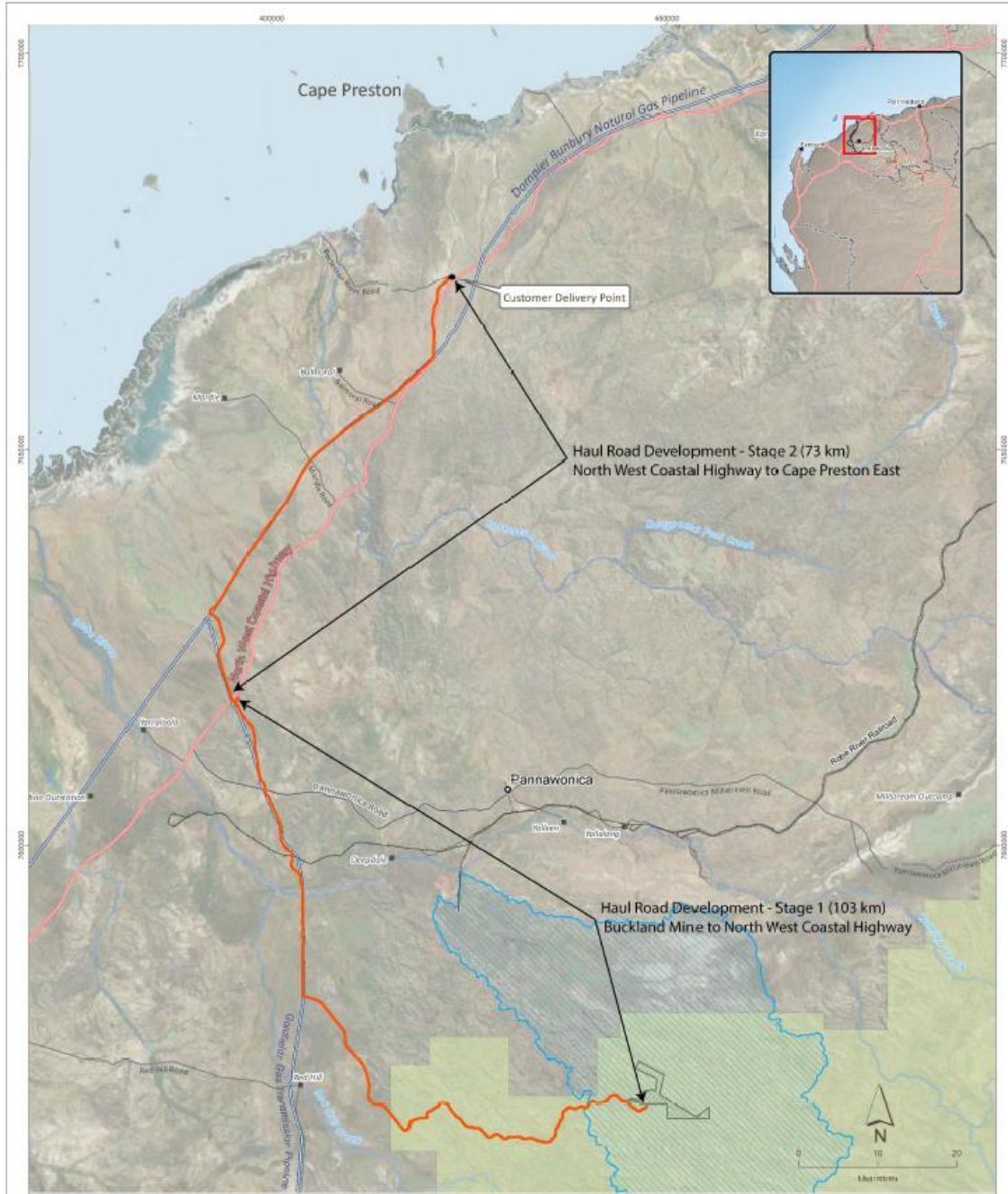


Figure 1
Conceptual project layout of proposed haul road.

Legend

Existing features and infrastructure

- Populated places
- Homesteads
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 - Principal road
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- Rivers and creeks
- RTIO railway
- Gas Pipeline
- Bungaroo Creek water reserve
- Proposed West Hamersley Range Conservation Park

Proposal Area

- Proposed Haul Road
- Development envelope
- Proposed Mine Development Envelope

Grid (MGA): 4-496,000
 Datum: Geocentric Datum of Australia 1994
 Projection: Map Grid of Australia, Zone 50
 SOURCE: Topographic Coordinates: Australia, GDA2000
 Topo 250KV3, © Commonwealth of Australia, 2006
 Imagery: Bing Maps, WMS Service
 File: 001C067_MW06465_RevD (v14 05/11/2013)



Figure 1: Conceptual project layout of proposed haul road



4 Decision table

All applications are assessed in line with the *Environmental Protection Act 1986*, the *Environmental Protection Regulations 1987* and DER's Operational Procedure on Assessing Emissions and Discharges from Prescribed Premises. Where other references have been used in making the decision they are detailed in the decision document.

DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L = Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
General conditions	W1.2.1 and W1.2.2. Licence conditions.	<p>Construction Conditions relating to construction requirements in accordance with the supporting documents have been included in the works approval. Commissioning of the plant will be undertaken under this works approval for a period not exceeding 3 months.</p> <p>Operation <u>Emission Description</u> <i>Emission:</i> Stormwater contaminated from crushing, screening and associated activities following rainfall events and hydrocarbon spills to the surrounding environment.</p> <p><i>Impact:</i> Contamination of surrounding land and surface water drainage systems. It is proposed that crushing and screening will be undertaken both within and outside of the Buckland Creek River Reserve (recently gazetted Public Drinking Water Supply Area (PDWSA)).</p> <p><i>Controls:</i></p> <ul style="list-style-type: none"> The plant and equipment will be in suitably graded areas so that all potentially contaminated runoff within the plant area is directed and captured within an adequately sized sediment retention sump; The sediment is proposed to remain in-situ and all sumps are to be rehabilitated. Should contamination of a sump occur, the proponent has outlined that contaminated material will be removed and disposed of at an appropriate facility or returned to the mining operations for treatment or 	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> <p>Code of Practice for the Storage and Handling of Dangerous Goods.</p> <p>Works Approval application supporting documentation.</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p>disposal;</p> <ul style="list-style-type: none"> Hydrocarbons and chemicals stored onsite will be appropriately banded in accordance with Australian Standard 1940-2004 Storage and Handling of Flammable and Combustible Liquids and <i>Dangerous Goods Safety (Storage and Handling of Non-explosives) Regulations 2007</i>; Designated refuelling areas will be established and procedures implemented; and Spill kits will be located and maintained at the storage sites and on-board storage trucks. <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> No additional conditions are required to be added to the works approval. The storage of environmentally hazardous materials can be adequately regulated by the Code of Practice for the Storage and Handling of Dangerous Goods. Conditions may be added to the licence for stormwater management.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p>	
Premises operation	N/A.	There are no specified conditions relating to premises operation.	N/A.
Emissions general	N/A.	There are no specified conditions relating to general emissions.	N/A.



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Point source emissions to air including monitoring	N/A.	<p>Construction and Operation No point source emissions to air are expected during construction and operation of the plant.</p> <p>No conditions relating to point source emissions to air or the monitoring of these emissions are required to be added to the works approval or licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> <p>Works Approval application supporting documentation.</p>
Point source emissions to surface water including monitoring	N/A.	<p>Construction and Operation There will be no point source emissions to surface water during construction and operation of the plant. The road alignment does cross ephemeral creek systems and the Robe River. It is also located within the Buckland Creek Water Reserve (PDWSA), however, given the nature of the plant and equipment used no point source emissions to surface water should occur.</p> <p>No conditions relating to point source emissions to surface water or the monitoring of such emissions are required to be added to the works approval or licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p> <p>Works Approval application supporting documentation.</p>
Point source emissions to groundwater including	N/A.	<p>Construction and Operation There will be no point source emissions to groundwater during construction and operation of the plant. The depth to groundwater is unknown, however, given the nature of the proposal and equipment used no emissions to groundwater should</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
monitoring		<p>occur.</p> <p>No conditions relating to point source emissions to groundwater or the monitoring of such emissions are required to be added to the works approval or licence.</p>	<p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004.</i></p> <p>Works Approval application supporting documentation.</p>
Emissions to land including monitoring	N/A.	<p>Construction and Operation</p> <p>There will be no emissions to land during construction and operation of the plant.</p> <p>No specified conditions relating to emissions to land are required to be added to the works approval or licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986.</i></p> <p><i>Environmental Protection (Unauthorised Discharges) Regulations 2004.</i></p> <p>Works Approval application supporting documentation.</p>
Fugitive emissions	N/A.	<p>Construction and Operation – Dust emissions</p> <p><u>Emission Description</u></p> <p><i>Emission:</i> Dust will be generated during the construction and operation of the plant from site clearing and levelling, the movement of rock and product and the crushing and screening process.</p>	<p>General provisions of the <i>Environmental Protection Act 1986.</i></p> <p>Works Approval application supporting</p>



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
		<p><i>Impact:</i> Dust emissions can be harmful to human health and the environment and can impact ambient environmental quality resulting in amenity impacts and can smother vegetation. There are no sensitive receptors within the vicinity of plant.</p> <p><i>Controls:</i></p> <ul style="list-style-type: none"> • Water mist sprays on feed transfer points; • Regular watering of operational areas and stockpiles; • Restricted speed limit and access; and • Routine maintenance and appropriately locating crushing and screening equipment. <p><u>Risk Assessment</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Possible <i>Risk Rating:</i> Low</p> <p><u>Regulatory Controls</u> Fugitive emissions of dust can be sufficiently regulated under section 49 of the <i>Environmental Protection Act 1986</i>. No conditions are required to be added to the works approval or licence.</p> <p><u>Residual Risk</u> <i>Consequence:</i> Insignificant <i>Likelihood:</i> Unlikely <i>Risk Rating:</i> Low</p> <p>Construction and Operation – Light emissions No significant light emissions are expected from the construction and operation of the plant as operation will occur during daylight hours only. No conditions relating to light emission are required for the works approval and licence.</p>	documentation.



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
Odour	N/A.	<p>Construction and Operation No odour emissions are expected from the construction and operation of the plant.</p> <p>No conditions relating to odour emissions are required to be added to the works approval or licence.</p>	N/A.
Noise	N/A.	<p>Construction and Operation Construction and operation of the plant will comply with the <i>Environmental Protection (Noise) Regulations 1997</i>. There are no noise sensitive premises in the vicinity of the equipment when operational. Equipment will be operational during daylight hours only and routine maintenance and screening of equipment (as practicable) will occur.</p> <p>No conditions relating to noise are required for the works approval and licence.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p><i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>Works Approval application supporting documentation.</p>
Monitoring general	N/A.	As no monitoring of emissions will be required, no specified conditions relating to monitoring will be included on the works approval or licence.	N/A.
Monitoring of inputs and outputs	N/A.	Monitoring of inputs or outputs is not required to ensure efficient operation of the plant and therefore no conditions relating to monitoring of inputs and outputs are required to be added to the works approval or licence.	N/A.
Process monitoring	N/A.	No specified conditions relating to process monitoring are required to be added to the works approval or licence.	N/A.
Ambient quality	N/A.	No ambient quality monitoring is required as the potential emissions from the plant include dust, however this has been assessed within this document as being low	N/A.



DECISION TABLE			
Works Approval / Licence section	Condition number W = Works Approval L= Licence	Justification (including risk description & decision methodology where relevant)	Reference documents
monitoring		risk. No conditions relating to ambient quality monitoring are required to be added to the works approval or licence.	
Meteorological monitoring	N/A.	Monitoring of meteorological conditions is not required to adequately manage emissions from the plant and have therefore not been added to the works approval or licence.	N/A.
Improvements	N/A.	No conditions relating to improvements are required to be added to the works approval or licence.	N/A.
Information	W2.1.1, W2.1.2 and W2.2.1. Licence conditions.	Conditions relating to the submission of compliance documentation and notification requirements at the commencement and completion of commissioning of the plant. have been included in the works approval. Licence conditions may be included on the licence for the submission of an Annual Environmental Report and Annual Audit Compliance Report each year.	N/A.
Licence Duration	N/A.	The works approval has been set for a three year period.	N/A.



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
07/08/2014	Application advertised in West Australian (or other relevant newspaper)	No comments received	N/A
07/08/2014	Application referred to interested parties listed – Local Government Authority	No comments received	N/A
05/09/2014 and 8/10/2015	Proponent sent a copy of draft instrument	Minor changes suggested for decision document and changes to Stage 2 maps	Minor amendments made to decision document and Stage 2 Maps updated.



6 Risk Assessment

Note: This matrix is taken from the DER Corporate Policy Statement No. 07 - Operational Risk Management

Table 1: Emissions Risk Matrix

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Severe
Almost Certain	Moderate	High	High	Extreme	Extreme
Likely	Moderate	Moderate	High	High	Extreme
Possible	Low	Moderate	Moderate	High	Extreme
Unlikely	Low	Moderate	Moderate	Moderate	High
Rare	Low	Low	Moderate	Moderate	High