



Works Approval

Environmental Protection Act 1986, Part V

Works Approval Holder: Pilbara Iron Company
(Services) Pty Ltd

Works Approval Number: W5708/2014/1

Registered office: 152-158 St Georges Terrace
PERTH WA 6000

ACN: 107 210 248

Premises address: Greater Tom Price Iron Ore Mine - Crushing and Screening Plant
Mining tenement AML70/004 sections 1-7, 10, 13, 232-235, 258,
L47/136, L47/209, L47/210, L47/342, L47/645, AG70/3, and G47/1258
within coordinates:
542,850E 7,491,490N;
548,350E 7,488,660N;
580,100E 7,475,190N; and
584,500E 7,483,800N.
As depicted in Schedule 1

Issue date: Thursday, 17 September 2015

Commencement date: Monday, 21 September 2015

Expiry date: Thursday, 20 September 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
5	Processing or beneficiation of metallic or non-metallic ore: premises on which – (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; (b) tailings from metallic or non-metallic ore are reprocessed; or (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	50,000 tonnes or more per year	6,000,000 tonnes per annual period



Conditions

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

.....
Danielle Eyre
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*;

'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
Locked Bag 33
CLOISTERS 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;

'Works Approval' means this Works Approval numbered W5708/2014/1 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 Form	All	20/06/2014
“Works Approval Application, Greater Tom Price Iron ore Mine, Mobile Crushing and Screening Plant, Application Identification Number (AIN): npx3bo,” authored by Rio Tinto and dated 20 June 2014	All, including Drawings and Appendices	20/06/2014
Email from Sean Savage, Rio Tinto Iron Ore, titled “Greater Tom Price crushing and screening plant works approval application” received 26 June 2014.	All	26/06/2014
Email from Alyse pitman, Rio Tinto Iron Ore, titled “Greater Tom Price Iron Ore Mine - Crushing and Screening Plant” received 11 August 2015.	All	11/08/2015

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 Greater Tom Price Iron Ore Mine - Crushing and Screening Plant 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 one month prior to the completion of 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 5.2.1 are notified to the CEO and are in accordance with the notification requirements of the table.

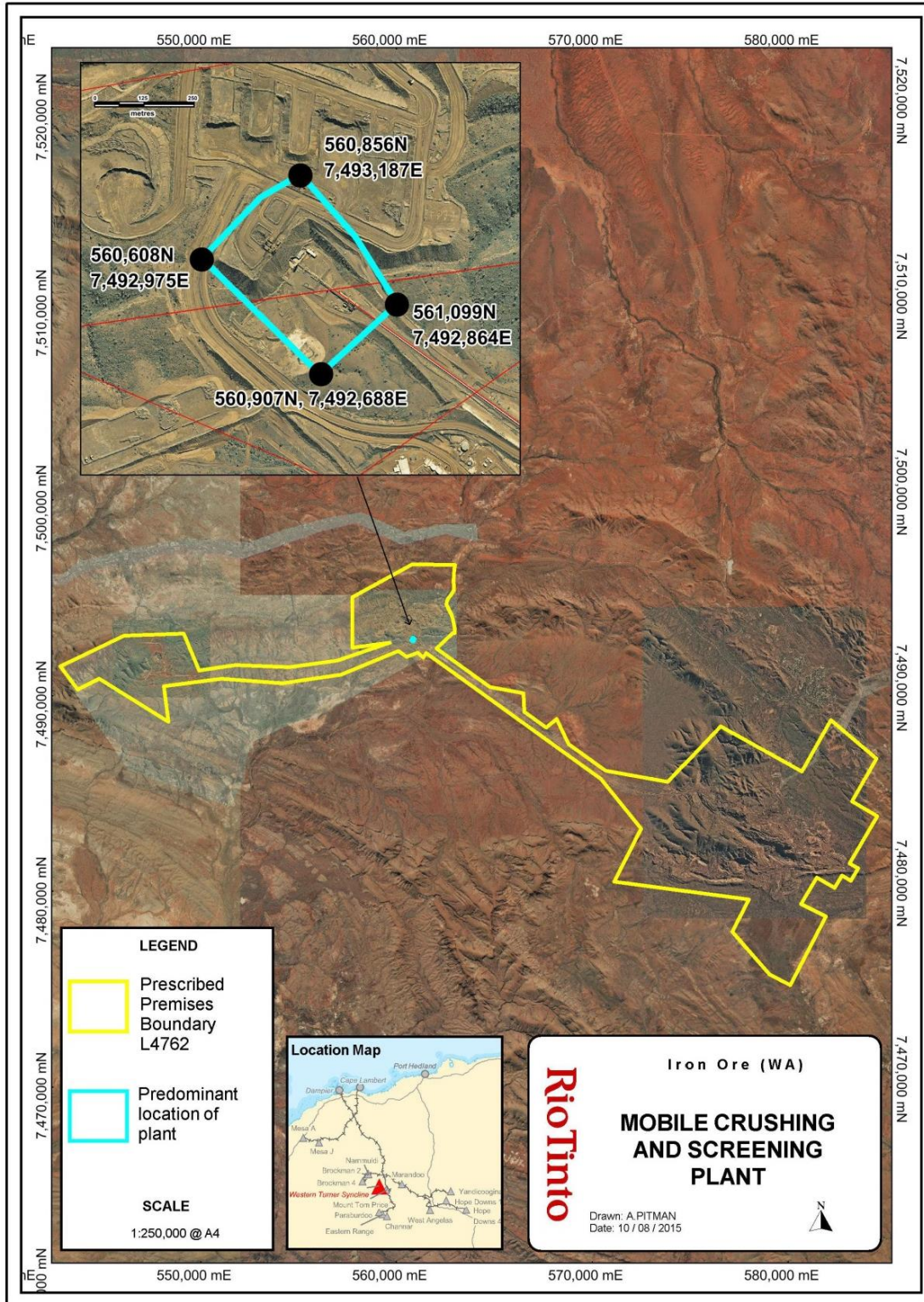
Table 5.2.1: Notification requirements			
Condition or table (if relevant)	Parameter	Notification requirement	Format or form
1.2.2	Commencement of commissioning	On commencement of commissioning	None specified
	Completion of commissioning	7 days after completion	



Schedule 1: Maps

Premises map

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





Decision Document

Environmental Protection Act 1986, Part V

Proponent: Pilbara Iron Company (Services) Pty Ltd

Works Approval: W5708/2014/1

Registered office: 152-158 St Georges Terrace
PERTH WA 6000

ACN: 107 210 248

Premises address: Greater Tom Price Iron Ore Mine - Crushing and Screening Plant
Mining tenement AML70/004 sections 1-7, 10, 13, 232 - 235, 258, L47/136,
L47/209, L47/210, L47/342, L47/645, AG70/3, and G47/1258 within
coordinates:
542,850E 7,491,490N;
548,350E 7,488,660N;
580,100E 7,475,190N; and
584,500E 7,483,800N.
MT SHEILA WA 6751

Issue date: Thursday, 17 September 2015

Commencement date: Monday, 21 September 2015

Expiry date: Thursday, 20 September 2018

Decision

Based on the assessment detailed in this document the Department of Environment Regulation (DER), has decided to issue a Works Approval. DER considers that in reaching this decision, it has taken into account all relevant considerations and legal requirements and that the Works Approval and its conditions will ensure that an appropriate level of environmental protection is provided.

Decision Document prepared by:

Ty Hibberd
Licensing Officer

Decision Document authorised by:

Danielle Eyre
Delegated Officer



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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
	5	6,000,000 tonnes per annual period
Application verified	Date: 15/07/2014	
Application fee paid	Date: 23/07/2014	
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"/> Tom Price iron ore mine was not subject to assessment, however, Western Turner Syncline was.	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: 807 EPA Report No: 1325
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

Pilbara Iron Company (Services) Pty Ltd (PICS) operate the Greater Tom Price Iron Ore Mine (Greater Tom Price) in the central Pilbara region of Western Australia. The Western Turner Syncline ore body is located within the Greater Tom Price prescribed premises boundary. These sites are regulated via Licence L4762/1972/14.

Western Turner Syncline requires an additional crushing and screening (C&S) plant onsite to be used in conjunction with the existing plant. This will not increase the overall tonnage of the premises beyond 32,000,000 tonnes per annum (tpa). The crushing and screening plant will be predominately located near the existing fixed plant and infrastructure at Western Turner Syncline, however, it may be required across the premises.

High and low grade ore will be loaded into the hopper via a front end loader. A jaw crusher will crush the ore and gravity feed it onto a conveyor where it will be fed onto the existing overland conveyor for transport to Tom Price. Operation will occur 24 hours per day, 7 days per week.

The main emissions from the works will be fugitive dust and noise. The nearest potential sensitive receptor is an unnamed ephemeral tributary of the Hardey River, located approximately 2 kilometres (km) to the east, then the town of Tom Price approximately 20 km west. Since the operation will be located far from the nearest sensitive receptor, impacts are likely to be minimal.

Due to PICS management commitments, including a site specific environmental management plan (ISO14001:2004 accredited), the environmental risk of emissions and discharges from the additional C&S plant are low.

PICS will need to submit a compliance document to Department of Environment Regulation (DER) following construction of the C&S plant and one month prior to the completion of commissioning. The operation of the C&S plant will be managed under the existing licence (L4762/1972/14) and any other approvals or relevant legislation.



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, W1.2.2 and W2.2.1	<p>Construction and Commissioning Condition W1.2.1 will require PICS to construct the C&S plant in accordance with the supporting documents and general provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>Condition W1.2.1 has been included to allow PICS to commission the C&S plant for a period not exceeding 3 months. Condition W2.2.1 requires PICS to notify the CEO upon the commencement and completion of commissioning.</p>	<p>General provisions of the <i>Environmental Protection Act 1986</i>.</p> <p>Application supporting documentation.</p>
Premises operation	Licence conditions	<p>Construction, Commissioning and Operation DER's assessment and decision making are detailed in Appendix A.</p>	Application supporting documentation.
Emissions general	N/A	<p>Construction, Commissioning and Operation There are no conditions relating to general emissions during construction, commissioning or operation.</p>	N/A.
Point source emissions to air including monitoring	N/A	<p>Construction, Commissioning and Operation There are no proposed point source emissions to air during construction, commissioning or operation of the C&S plant. Therefore no conditions relating to point source emissions to air or to monitoring of these emissions are required to be added to this Works Approval or Licence.</p>	Application supporting documentation.
Point source emissions to surface water including monitoring	N/A	<p>Construction, Commissioning and Operation There are no proposed point source emissions to surface water during construction or operation of the C&S plant. PICS has committed that no discharges to surface water will occur from the operation of the C&S plant. The C&S plant will be set up in a designated area with diversion bunds/culverts constructed to divert surface water flow around the plant area. Small basins and spoon drains will be constructed as required within the plant footprint to minimise</p>	<p>Application supporting documentation.</p> <p><i>Environmental Protection (Unauthorised</i></p>



		the potential for sediment loading to stormwater and excess dust suppression water from leaving the processing area. Surface water flows into nearby drainage lines from operational areas will be controlled and minimised. Earthen bunds will be set up around the perimeter of the stockpile footprints (aside from the ramp entrances) to contain surface water within the stockpile areas. The nearest surface water body is an unnamed ephemeral tributary of the Hardey River, located approximately 2 kilometres (km) to the east. The risk of water entering this river given the above measures is considered to be low. No conditions relating to point source emissions to surface water or monitoring of surface water are required to be added to the Works Approval or Licence.	<i>Discharges) Regulations 2004.</i>
Point source emissions to groundwater including monitoring	N/A	Construction, Commissioning and Operation There are no proposed point source emissions to groundwater during construction, commissioning or operation of the C&S plant. The distance to groundwater across Greater Tom Price is 50-80 m below ground level. No conditions relating to point source emissions to groundwater or the monitoring of groundwater are required on the Works Approval or Licence.	Application supporting documentation. <i>Environmental Protection (Unauthorised Discharges) Regulations 2004.</i>
Emissions to land including monitoring	N/A	Construction, Commissioning and Operation There are no proposed emissions to land during construction, commissioning or operation of the C&S plant. No conditions relating to point source emissions to land or the monitoring of emissions to land are required to be added to the Works Approval or Licence.	Application supporting documentation.
Fugitive emissions	Licence conditions	Construction, Commissioning and Operation DER's assessment and decision making are detailed in Appendix B.	Application supporting documentation.
Odour	N/A	Construction, Commissioning and Operation There are no specific conditions relating to odour during construction, commissioning or operation.	Application supporting documentation.
Noise	N/A	Construction, Commissioning and Operation DER's assessment and decision making are detailed in Appendix C.	Application supporting documentation. <i>Environmental Protection (Noise) Regulations 1997.</i>



Monitoring general	N/A	<p>Construction, Commissioning and Operation The Licence has conditions relating to the monitoring of the waste water treatment plants and irrigation areas, Total Recoverable Hydrocarbons in surface waters, surface water discharge locations (Reclaim Dam, TSF Embankment and Section 6 Pit), dewatering water and groundwater.</p> <p>There are no specific conditions relating to general monitoring required during construction, commissioning or operation of the C&S plant.</p>	N/A.
Monitoring of inputs and outputs	N/A	<p>Construction, Commissioning and Operation There are no conditions relating to monitoring of inputs and outputs required during construction, commissioning or operation of the C&S plant.</p>	N/A.
Process monitoring	N/A	<p>Construction, Commissioning and Operation There are no conditions relating to process monitoring required during construction, commissioning or operation of the C&S plant.</p>	N/A.
Ambient quality monitoring	N/A	<p>Construction, Commissioning and Operation There are no conditions relating to ambient quality monitoring required during construction, commissioning or operation of the C&S plant.</p>	N/A.
Meteorological monitoring	N/A	<p>Construction, Commissioning and Operation There are no conditions relating to meteorological monitoring required during construction, commissioning or operation of the C&S plant.</p>	N/A.
Improvements	N/A	<p>Construction, Commissioning and Operation There are no conditions relating to improvements.</p>	N/A.
Information	W2.1.1 Licence conditions.	<p>Construction, Commissioning and Operation Condition W2.1.1 will require PICS to submit a compliance document to DER once construction of C&S plant has been completed and one month prior to the completion of commissioning. W2.1.2 sets out the requirements of this compliance document.</p> <p>PICS are required to notify DER upon the commencement of commissioning and within 7 days of the completion of commissioning. Notification upon commencement of commissioning was at the request of PICS to assist with mine planning requirements. No additional conditions are required.</p>	N/A.
Licence Duration	N/A	This works approval will be issued to PICS for a period of 3 years.	N/A.



5 Advertisement and consultation table

Date	Event	Comments received/Notes	How comments were taken into consideration
04/08/2014	Application advertised in West Australian (or other relevant newspaper)	None.	N/A.
25/08/2014	Proponent sent a copy of draft instrument (version 2.6)	Comments received from Alyse Pitman, Rio Tinto Iron Ore, on 11 August 2015.	Comments/edits pertained to the design capacity and dust controls measures. All changes were accepted.
25/08/2015	Proponent sent a copy of draft instrument (version 2.7)	Comments received from Alyse Pitman, Rio Tinto Iron Ore, on 1 September 2015.	PICS requested that they submit the required compliance document following construction of the C&S plant but within the commissioning period. Condition W2.1.1 was amended to allow the compliance document to be submitted within commissioning period, but one month prior to completion of the same, to allow time to amend the licence if required.



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



Appendix A

Premises operation

Emission Description

Emission: Stormwater contaminated with hydrocarbons from process areas.

Impact: Contamination of surrounding land and surface water drainage systems. Potential impacts on ecology of surface water from the addition of nutrients and heavy metals.

Controls: PICS will implement the following controls to minimise the risk of stormwaters becoming contaminated by activities on the Premises:

- The C&S plant will be set up in a designated area with diversion bunds/culverts constructed to divert surface water flow around the plant area. Small basins and spoon drains will be constructed as required within the plant footprint to minimise the potential for sediment loading to stormwater and excess dust suppression water from leaving the processing area. Surface water flows into nearby drainage lines from operational areas will be controlled and minimised. Earthen bunds will be set up around the perimeter of the stockpile footprints (aside from the ramp entrances) to contain surface water within the stockpile areas;
- All hydrocarbon and chemical storage will be secondarily contained;
- All storage containers and areas shall be appropriately labelled, as required by legislation;
- Where applicable, storage will comply with the Dangerous Goods licenses issued by the Department of Mines and Petroleum;
- The material Safety Data Sheet for all chemicals onsite will be made available and accessible for reference; and
- All refuelling and servicing will require the use of drip trays or absorbent matting (when servicing) to contain potential spills/drips.

Risk Assessment

Consequence: Minor

Likelihood: Unlikely

Risk Rating: Moderate

Regulatory Controls

W1.2.1 requires that PICS construct the works in accordance with the supporting documentation and general provision of the *Environmental Protection Act 1986*. The existing Licence has conditions relating to effective stormwater management at the Greater Tom Price. No further conditions are required for the Works Approval or Licence.

Residual Risk

Consequence: Minor

Likelihood: Rare

Risk Rating: Low



Appendix B

Fugitive emissions

(1) Dust

Emission Description

Emission: Dust emissions may result from construction and operation of the C&S plant.

Impact: Dust emissions can be harmful to human health and the environment. Elevated total suspended particulates (TSP) can impact ambient environmental quality resulting in amenity impacts and can smother vegetation. Particulate matter (PM) that is less than 10 (PM₁₀) or 2.5 (PM_{2.5}) micrometres (µm) in diameter can be drawn deep into the lungs causing human health impacts. The chemical and physical properties of the particles, the size of the particles and the duration of exposure are all factors which may affect human health impacts.

Controls: Given PICS management commitments and the significant buffer distance between the C&S plant and the nearest human sensitive receptor, being the town of Tom Price approximately 20 km west, the works are unlikely to cause nuisance dust. To manage and control fugitive dust emissions from the C&S plant, PICS has committed to the following infrastructure and management practices:

- The plant will be located on previously disturbed ground, therefore, there will be no clearing and earthworks;
- Water carts will be used on roads;
- Sprinklers will be used to suppress dust on stockpiles; and
- The plant contains water sprays on the crusher feed, and the transfer point on to the existing conveyor. The existing conveyor also has water sprays at the transfer station.

Risk Assessment

Consequence: Insignificant

Likelihood: Possible

Risk Rating: Low

Regulatory Controls:

PICS management commitments and general provision of the *Environmental Protection Act 1986* are considered sufficient to manage the risk of fugitive dust. No specific conditions are required for the Works Approval or Licence.

Residual Risk:

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low

(2) Light

Emission Description

Emission: Light emissions resulting from night-time operations (24 hour operation).

Impact: Nuisance lighting impacting on potentially sensitive fauna communities. Limited impacts to human receptors are expected as the separation distance to the nearest noise-sensitive premises (Tom Price townsite) is approximately 20 km.

Controls: Given PICS management commitments and the significant buffer distance between the C&S plant and the nearest sensitive receptor (Tom Price townsite), the works are unlikely to cause nuisance light. The lighting towers will be positioned so that they focus downwards on operational areas only to minimise light spill into native vegetation and any potential impact on local fauna.



Risk Assessment

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low

Regulatory Controls:

PICS management commitments and general provision of the *Environmental Protection Act 1986* are considered sufficient to manage the risk of fugitive light. No specific conditions are required for the Works Approval or Licence.

Residual Risk:

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low



Appendix C

Noise

Emission Description

Emission: Noise emissions may be generated during operation of the crushing and screening plant (24 hours per day, 7 days per week). The C&S plant will be delivered onsite pre-constructed; hence noise emissions are unlikely during construction.

Impact: Noise impacting on fauna and sensitive receptors. Limited impacts to human receptors are expected as the separation distance to the nearest noise-sensitive premises (Tom Price townsite) is approximately 20 km.

Controls: PICS will implement the following controls to minimise the risk of nuisance noise from the C&S plant:

- The plant will be located on previously disturbed ground, therefore, there will be no clearing and earthworks;
- Noise emissions will be managed in line with the *Environmental Protection (Noise) Regulations 1997*; and
- Noise modelling has been conducted for the existing fixed plant for worst case conditions and was in line with the *Environmental Protection (Noise) Regulations 1997*.

Risk Assessment

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low

Regulatory Controls:

Operation of the C&S plant is subject to, and expected to comply with, the *Environmental Protection (Noise) Regulations 1997* and general provisions of the *Environmental Protection Act 1986*. No specific conditions have been included on the Licence for noise.

Residual Risk:

Consequence: Insignificant

Likelihood: Unlikely

Risk Rating: Low