



Application for Works Approval

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

Works Approval Number W6550/2021/1

Applicant Maiden Iron Pty Ltd

ACN 126 497 434

File number DER2021/000165

Premises Extension Bulk Sample Project
Shire of Ashburton
Mining Tenement M47/1355

Date of report 10 September 2021

Decision Works approval granted

Melanie Bruckberger

A/MANAGER, RESOURCE INDUSTRIES

REGULATORY SERVICES

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

Table of Contents

1. Decision summary	3
2. Scope of assessment	3
2.1 Regulatory framework	3
2.2 Application summary and overview of premises	3
2.2.1 Construction activities	3
2.2.2 Time limited operations	4
3. Risk assessment	8
3.1 Source-pathways and receptors	8
3.1.1 Emissions and controls	8
3.1.2 Receptors	10
3.2 Risk ratings	10
4. Consultation	12
5. Conclusion	12
References	13
Appendix 1: Indicative design plans for the proposed plant	14
Appendix 2: Application validation summary	18
Table 1: Proposed applicant controls	8
Table 2: Sensitive environmental receptors and distance from prescribed activity	10
Table 3: Risk assessment of potential emissions and discharges from the premises during construction and operation	11
Table 4: Consultation	12

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 the premises. As a result of this assessment, the Delegated Officer has granted works approval W6550/2021/1.

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 30 March 2021, Maiden Iron Pty Ltd (Applicant) submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act) for a crushing and screening plant (the Plant) proposed for the Extension Bulk Sample Project (the premises). The premises is located approximately 70 km north-west of Newman in the Hamersley Ranges of the Central Pilbara region of Western Australia (see Figure 2).

The proposed plant will be located on the Run of Mine (ROM) pad and has a design capacity of 1.3 million tonnes per annum. The applicant intends to will operate the Plant for approximately 12 months after a period of time-limited operations, processing up to 200,000 tonnes per annum. An overview of the proposed premises' layout is shown in Figure 3 and Figure 4. Indicative design diagrams of the Plant are provided in Appendix 1.

The works approval application received by the department incorrectly provided Category 12 as the prescribed premises category relevant to the proposal. This was subsequently amended in the submission of a revised Application Form on 20 July 2021, to Category 5. The premises relates to the category and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6550/2021/1.

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 W6550/2021/1.

2.2.1 Construction activities

The stages of construction required for the installation of the mobile crushing and screening plant are:

- 1) Site preparation – clearing, earthworks, grading and access track installation.
- 2) Relocation of excess material to the laydown areas.
- 3) Mobilisation of the Plant to site.
- 4) Installation and connection of Plant sections.
- 5) Connection to power and water supply, electrical instrumentation works.

Construction of the premises is anticipated to take approximately two months. The site is proposed to be bunded and graded to ensure that all stormwater, wash-down and spillage water run-off is contained and directed to a collection and settling sump.

Clearing of 5.1ha of native vegetation is required as part of the proposal to construct the mobile crushing and screening plant pad. The applicant has advised that clearing will be carried out under Regulation 5, Item 20 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* which allows up to 10ha to be cleared on a mining tenement per year.

2.2.2 Time limited operations

Mined ore material will be hauled to the Plant and either directly fed into the crusher or placed onto the feed stockpile awaiting processing. Stockpiled material will be passed through a screen. All suitable screened material will be crushed and screened, and then loaded onto trucks for haulage or stockpiled awaiting transport. A process diagram is provided in Figure 1.

Power will be provided to the site by individual diesel gensets. All gensets and fuel will be stored on self-bunded areas to contain potential spills. A dedicated service vehicle will refuel the gensets and is equipped with a spill kit.

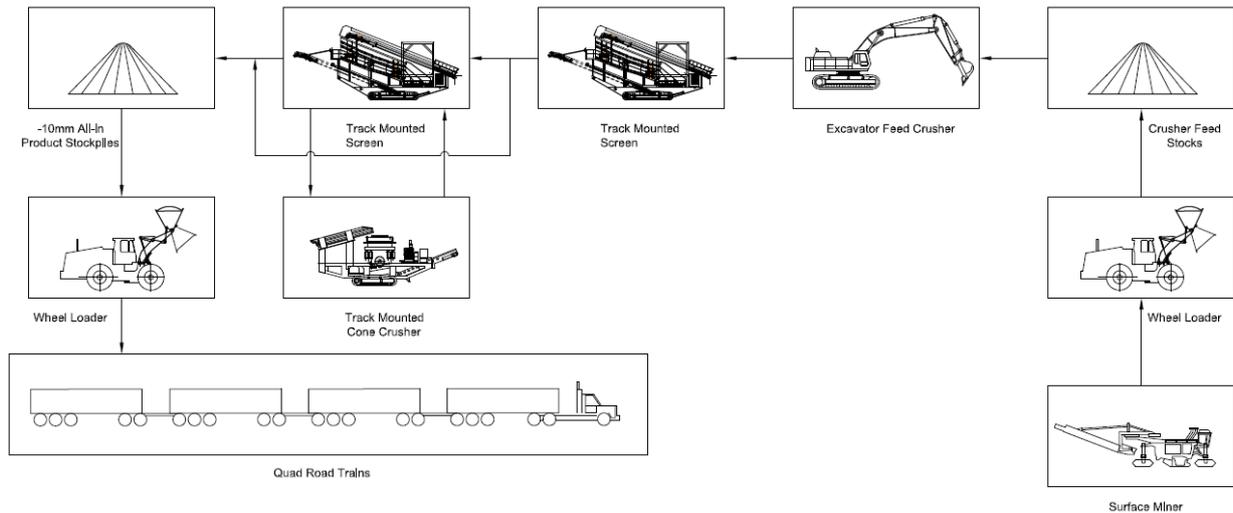


Figure 1: Process diagram for the proposed mobile plant

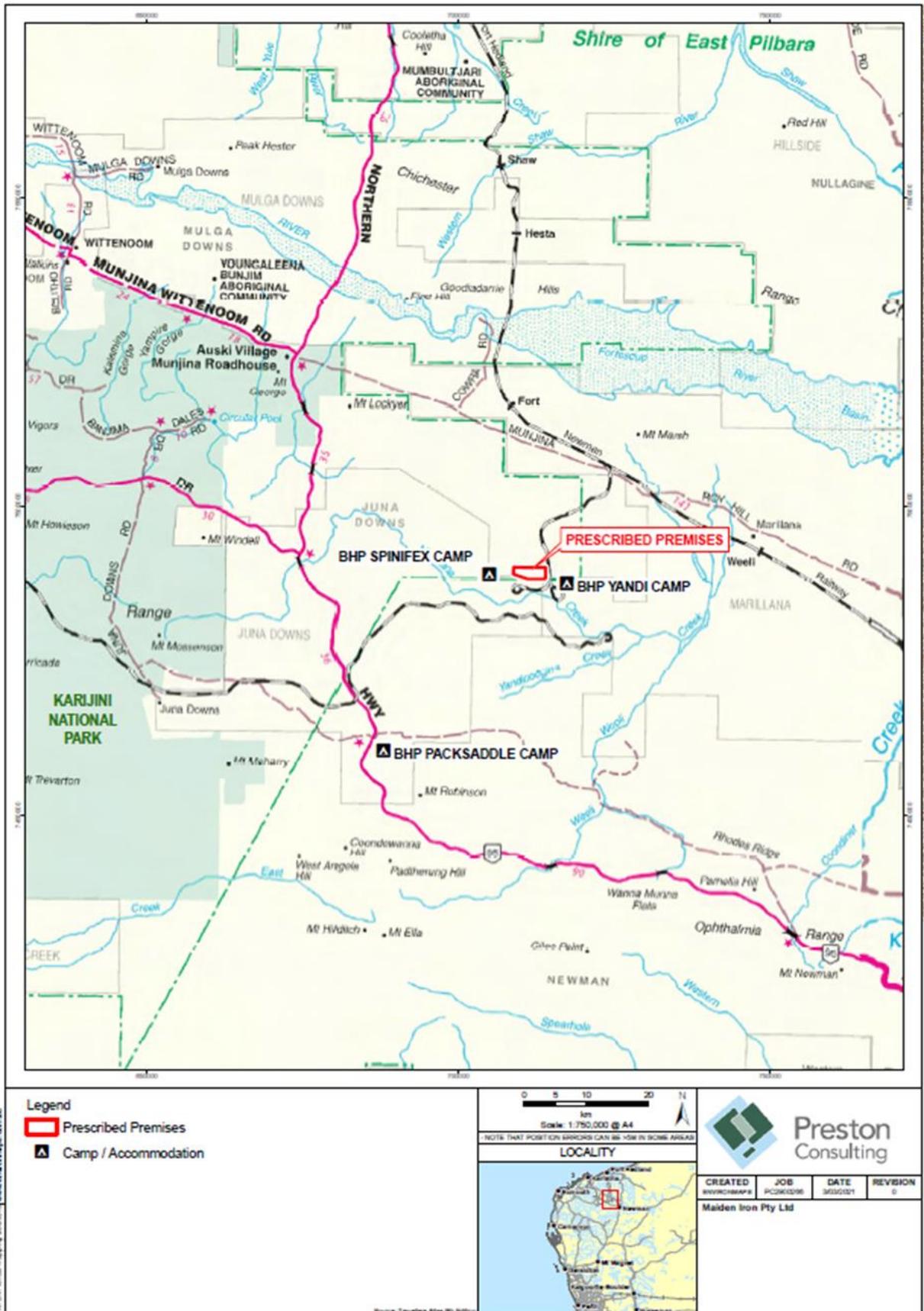


Figure 2: Proposed premises location – Regional context map (Preston, 2021)

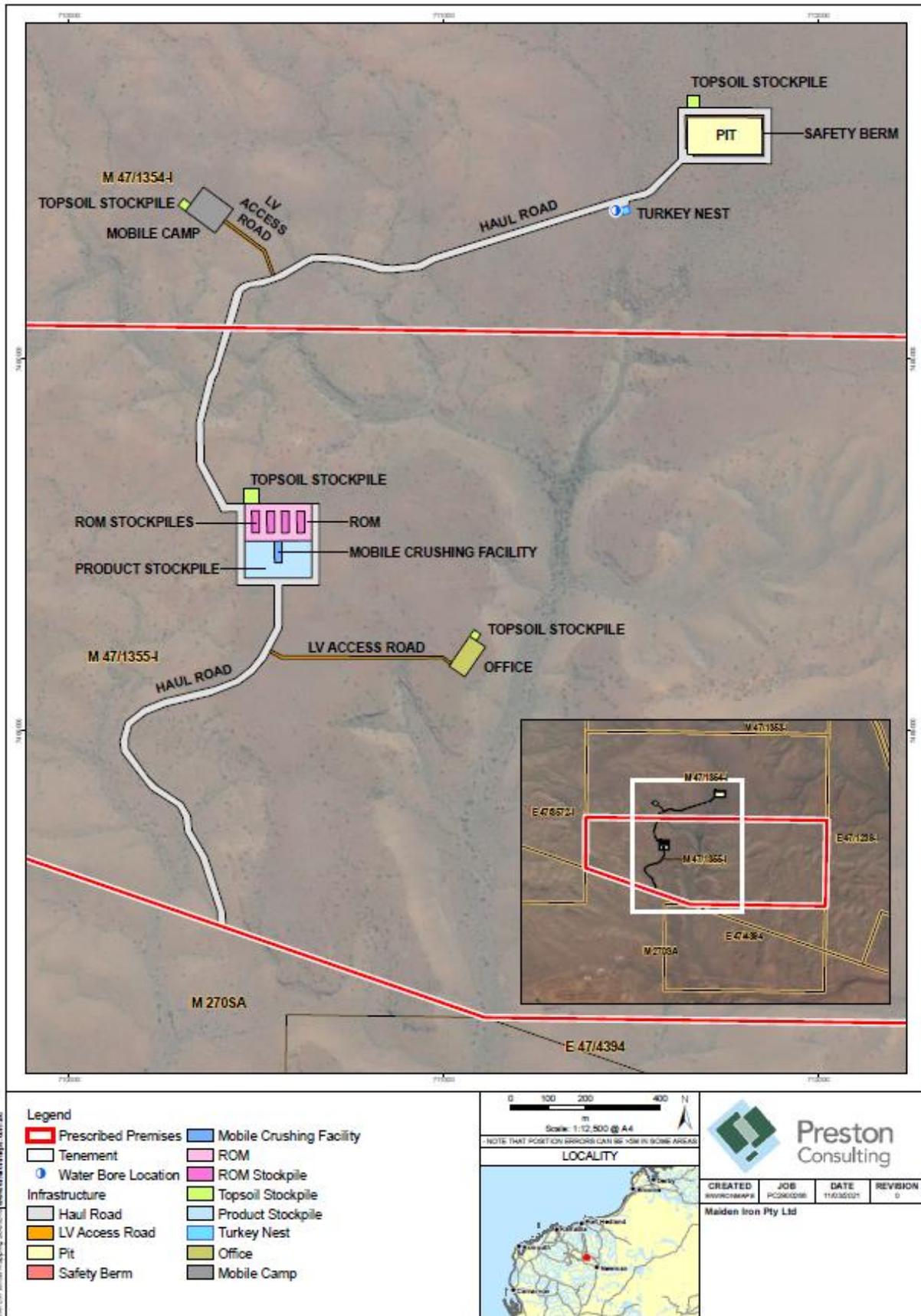


Figure 3: Proposed Premises site layout plan (Preston, 2021)

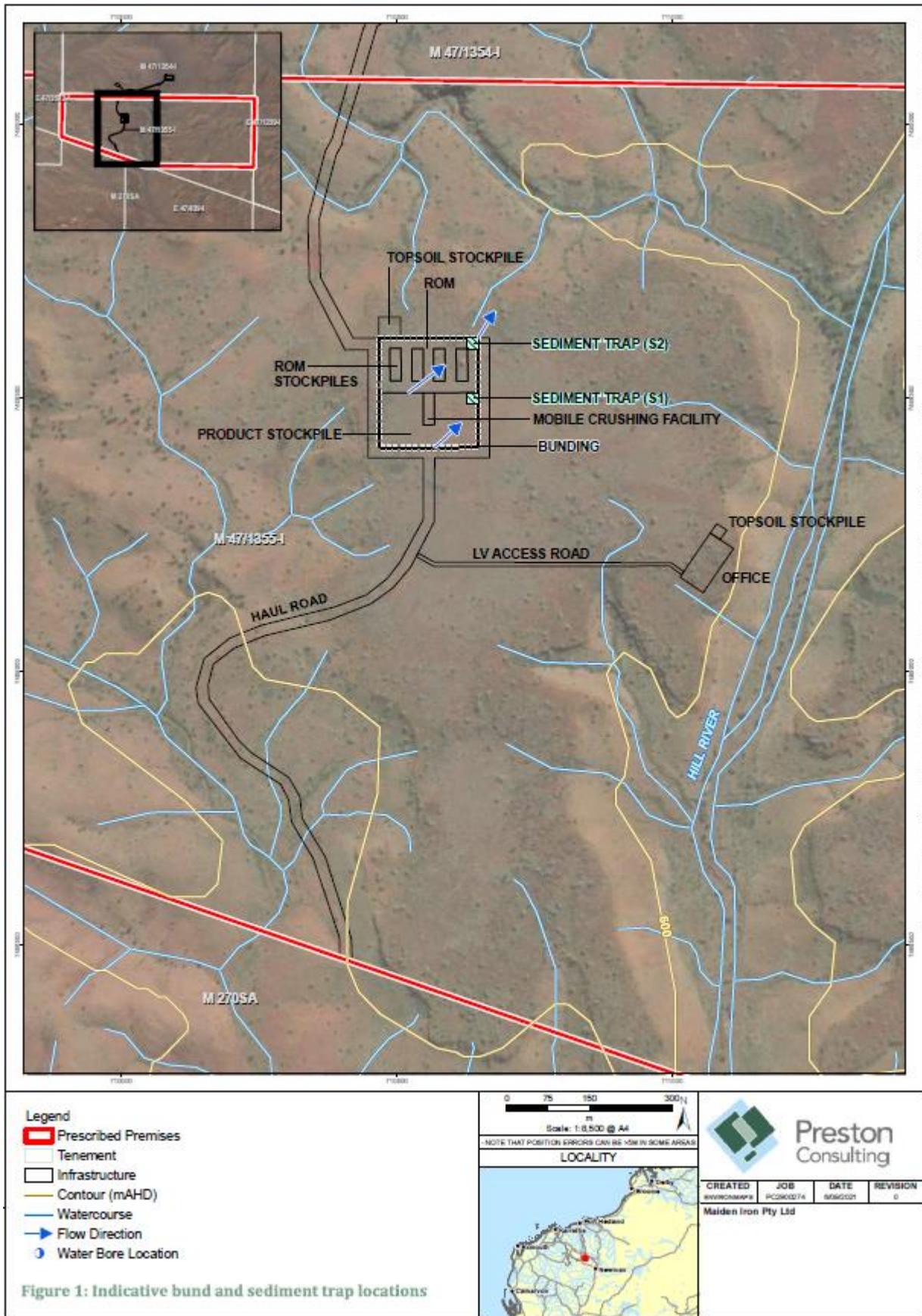


Figure 4: Proposed site bunding and sedimentation basin locations (Preston, 2021)

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 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			
Dust	Excavation and stockpiling of soils Earthworks Movement of vehicles and plant on the premises	Air/ wind dispersal	None provided.
Noise and vibration	Excavation works Earthworks Construction and placement of new infrastructure/equipment Vehicle movement	Air / wind dispersal Ground	The nearest sensitive human receptor is 6.5km from the proposal area. <i>Environmental Protection (Noise) Regulations 1997.</i> Equipment regularly serviced and maintained. Incident reporting system to log, manage and rectify incidents and excessive noise emissions.
Contaminated or sediment laden stormwater runoff	Excavation and stockpiling of soils Earthworks Movement and use of vehicles and plant on the premises Refuelling activities	Stormwater and surface water run off	Hydrocarbons not stored in large quantities. Hydrocarbons stored in accordance with AS1940-2017. Fuel storage self-bunded. Service vehicles to refuel equipped with spill kits. ROM pad to be graded and bunded to direct sediment to sediment traps.

Emission	Sources	Potential pathways	Proposed controls
Operation			
Dust	<p>Movement of vehicles and plant on the premises</p> <p>Operation of the mobile crushing and screening plant</p> <p>Stockpiles</p> <p>Product handling</p>	Air/ wind dispersal	<p>Sprinklers employed on the crushers and screens.</p> <p>Shields and covers employed on the conveyors and transfer points.</p> <p>Opportunistic inspections for dust emissions during operations to ensure that dust control measures are being implemented and are effective.</p> <p>Additional water application provided to source if visible dust emissions noted, or alternative treatments applied.</p> <p>Monitoring of meteorological and climatic conditions/ forecasts.</p> <p>Additional water applied in high-risk weather conditions</p> <p>Incident reporting system to log, manage and monitor excessive dust incidents.</p>
Noise and vibration	<p>Operation of mobile crushing and screening plant and associated infrastructure and equipment</p> <p>Vehicle movement</p>	Air/ wind dispersal Ground	<p><i>Environmental Protection (Noise) Regulations 1997.</i></p> <p>Equipment regularly serviced/ maintained.</p>
Contaminated or sediment laden stormwater runoff	<p>Excavation and stockpiling of soils</p> <p>Earthworks</p> <p>Movement and use of vehicles and plant on the premises</p> <p>Refuelling activities</p>	Stormwater and surface water run off	<p>Hydrocarbons not stored on site in large quantities.</p> <p>Hydrocarbons stored in accordance with AS1940-2017.</p> <p>Service vehicles to refuel equipped with spill kits.</p> <p>ROM pad graded to capture all stormwater, wash-down water and spillage water run off to sediment traps and a settling sump.</p> <p>Perimeter bunding installed to minimise stormwater entering the ROM pad and activity area.</p> <p>Runoff from stockpiles to be directed to a sediment basin/sump.</p> <p>Hydrocarbon and chemical storage areas to be inspected on a regular basis.</p> <p>Sediment sumps to be inspected regularly, excavated if required to maintain capacity.</p> <p>Spill kits inspected on a regular basis and replenished as required.</p>

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.

The nearest sensitive human receptor is the BHP Yandi Creek Accommodation Village, approximately 6.5km south-east of the Premises. Given the distance to the Accommodation Village, it is not considered to be a likely receptor to the construction and operational activities undertaken under this works approval.

Table 2 below provides a summary of 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 environmental receptors and distance from prescribed activity

Environmental receptors	Distance from prescribed activity
There are several small watercourses and drainage lines across the Mining Tenement that connect to Marillana Creek to the south.	Waterlines within the proposal area connect to Marillana Creek 2.6km south of the proposed premises.
Surface Water management: Pilbara Surface Water Area (<i>RIWI Act 1914</i>)	Within the proposal area

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 W6550/2021/1 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. 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 operation

Risk events					Risk rating ¹	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood			
Construction								
Excavation and stockpiling of soils Earthworks Movement and use of vehicles and plant on the premises Refuelling activities Construction and placement of new infrastructure/equipment	Hydrocarbon/chemical spills (contamination) or sediment from cleared areas/stockpiles	Stormwater run-off and surface water run-off impacting surface water quality and vegetation health	Watercourses and drainage lines within the premises area/Mining Tenement	See Section 6.	C = Minor L = Rare Low risk rating	Y	Condition 1	N/A
Operation (including time-limited-operations operations)								
Movement of vehicles and plant on the premises Operation of the mobile crushing and screening plant Stockpiles Product handling Excavation and stockpiling of soils Earthworks Movement and use of vehicles and plant on the premises Refuelling activities	Hydrocarbon/chemical spills (contamination) or sediment from cleared areas/stockpiles	Stormwater run-off and surface water run off impacting surface water quality and vegetation health	Watercourses and drainage lines within the premises area/Mining Tenement	See Section 6.	C = Minor L = Possible Medium risk rating	N	Condition 1 (bundling of the ROM pad and Mobile crushing facility/stockpiles)	Bundling of the facility and activity areas will prevent sediment and hydrocarbon discharges from the premises during periods of surface water and stormwater run-off.

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.

Works approval: W6550/2021/1

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 (14/06/2021)	None received	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) consulted on the proposal 04/08/2021 (DWER Record A2032278)	<p>Response received from DMIRS on 19/08/2021 (DWER Record A2036416) advising that "The previous Mining Proposal 47680 remains valid and is not replaced by the new Mining Proposal 96725. Under the Mining Act there is no expiry of Mining Proposals, they remain valid until the works have been completed.</p> <p>The original MP 47680 was approved for 130,000t, the new MP 96725 was approved for an additional 70,000t for a total throughput of 200,000t. In regards to the discrepancy between timeframes, the MP was submitted on DMIRS Small Mining Operations proforma which only requires an estimated commencement date and estimated completion date."</p>	Noted.
Applicant was provided with draft documents on 26/08/2021 (DWER Record A2031989)	<p>The Applicant responded on 7/9/21 providing additional information on the proposal, as requested in the draft documentation (DWER Record DWERDT501044).</p> <p>No further comments on the draft documentation were provided.</p>	Licence and Amendment Report updated to reflect details provided on location of Sedimentation basins, construction period and size of area proposed to be cleared for the works.

5. Conclusion

Based on the assessment in this decision report, the Delegated Officer has granted the works approval, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. DER, October 2015. *Guidance Statement: Setting conditions*, Perth.
2. DER, August 2016. *Guidance Statement: Licence duration*, Perth.
3. DWER, October 2019, *Procedure: Prescribed premises works approval and licence*, Perth, Western Australia
4. DWER, December 2020, *Guideline: Decision Making*, Perth, Western Australia.
5. DWER, December 2020, *Guideline: Environmental siting*, Perth, Western Australia.
6. DWER, December 2020. *Guideline: Regulatory principles*, Perth, Western Australia.
7. DWER, December 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
8. Maiden Iron Pty Ltd (2021) Application Form: Works Approval (DWER Record DWERDT433908)
9. Preston Consulting (2021) Extension Bulk Sample Project: Works Approval Application Supporting Attachments, 30 March 2021, Preston Consulting, Perth (DWER Record DWERDT433908)

Appendix 1: Indicative design plans for the proposed plant

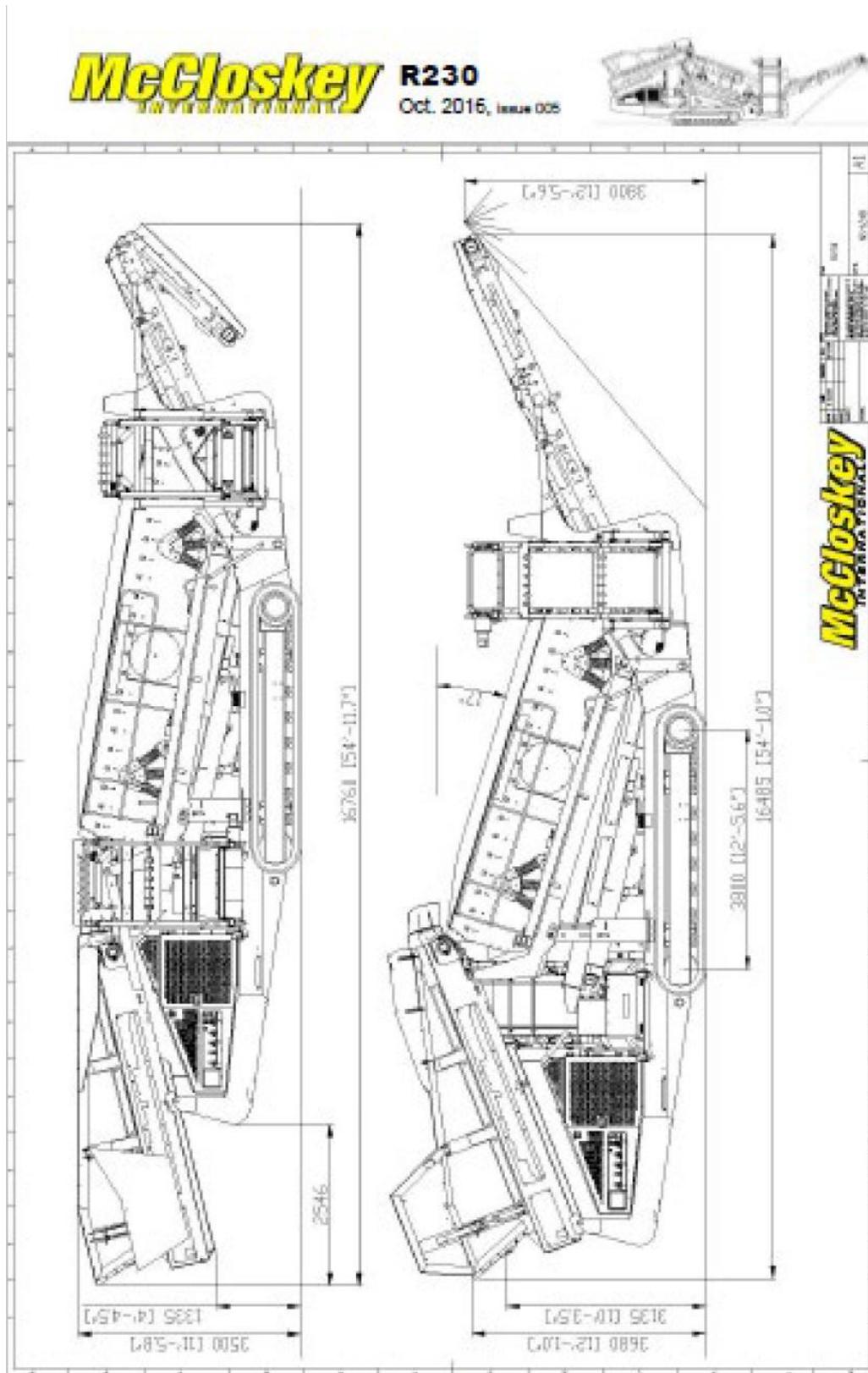


Figure 5: Indicative screen design plan

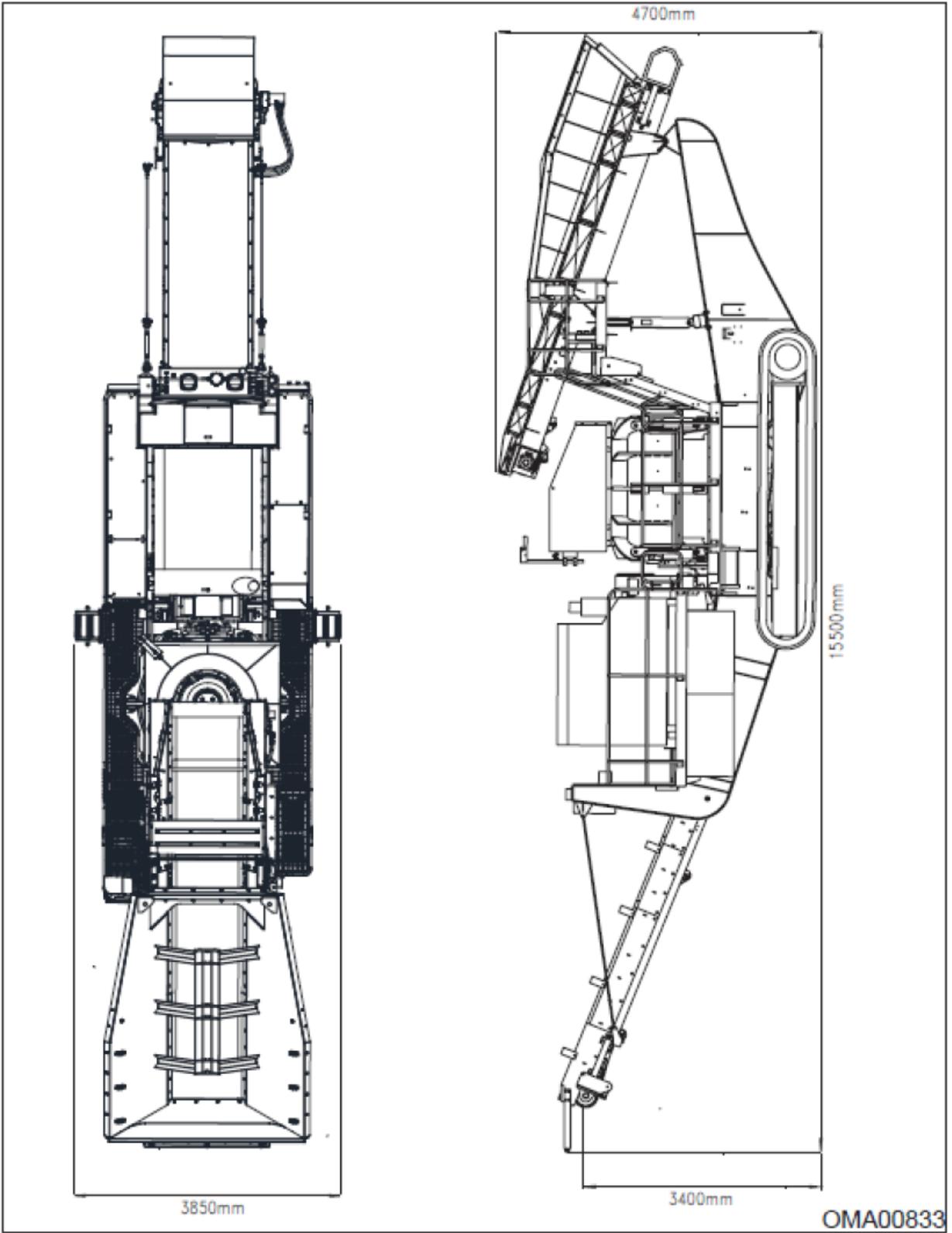
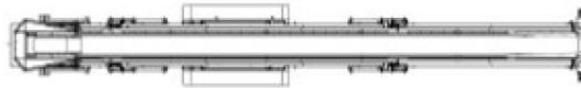


Figure 7: Indicative cone crusher design plan (Preston, 2021)



WEIGHT OF STANDARD
MACHINE: 12700 KG



McCloskey
TS4080
OCT. 2016, ISSUE 000

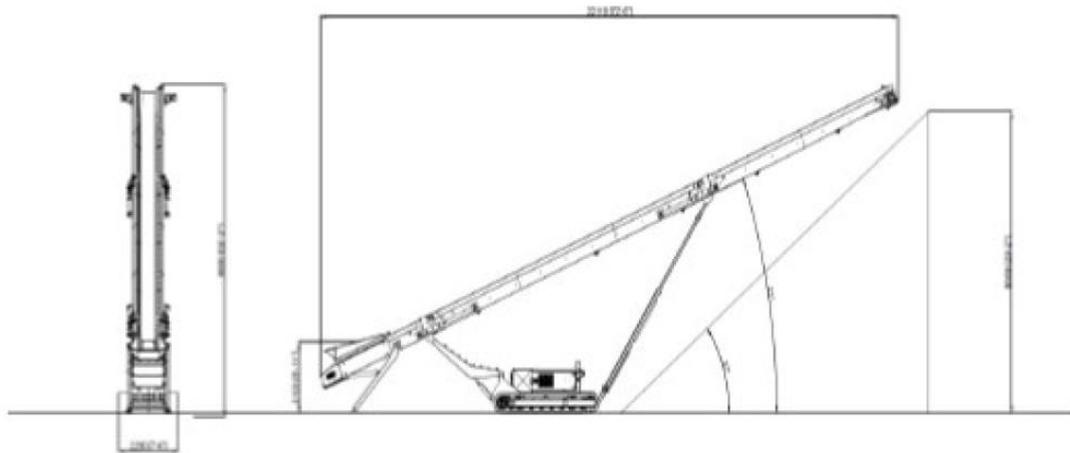


Figure 8: Indicative conveyor design plan (Preston, 2021)

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)		
Application type		
Works approval	<input checked="" type="checkbox"/>	
Date application received	30 March 2021	
Applicant and premises details		
Applicant name/s (full legal name/s)	Maiden Iron Pty Ltd	
Premises name	Extension Bulk Sample Project	
Premises location	Mining Lease M 47/1355 JUNA DOWNS	
Local Government Authority	Shire of Ashburton	
Application documents		
HPCM file reference number:	DER2021/000165, DWERDT433908	
Key application documents (additional to application form):	WORKS APPROVAL APPLICATION SUPPORTING ATTACHMENTS	
Scope of application/assessment		
Summary of proposed activities or changes to existing operations.	Works approval Construction of Category 5 mobile crushing facility	
Category number/s (activities that cause the premises to become prescribed premises)		
Table 1: Prescribed premises categories		
Prescribed premises category and description	Proposed production and design capacity	Proposed changes to the production or design capacity (amendments only)
Category 5: Processing or beneficiation of metallic or non-metallic ore	Design capacity 1,300,000 tonnes per annual period, with estimated throughput of 200,000 tonnes per annual period	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"/>	
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Assessment Number 2035 Ministerial Statement Number 1005 (Issued 2015), now lapsed.
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)

<p>Has the applicant demonstrated occupancy (proof of occupier status)?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Mining lease / tenement <input checked="" type="checkbox"/> Expiry: 05 April 2032</p>
<p>Has the applicant obtained all relevant planning approvals?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/></p>	
<p>Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>The Applicant has advised that clearing will be carried out under Regulation 5, Item 20 of the <i>Environmental Protection (Clearing of Native Vegetation) Regulations 2004</i> which allows up to 10ha to be cleared on a mining tenement per year.</p>
<p>Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Licence/permit No: GWL179211(2) - 19,440kL for dust suppression for Mining activities et al. Expires 29 July 2024 Note: Pump testing is required to determine capacity of the aquifer to provide water needs if the project is expanded.</p>
<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Regional office: N/A</p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)

<p>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>)</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p><i>Mining Act 1978</i> <i>Dangerous Goods Safety Act 2004</i></p>
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	
<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	