



Works Approval

Works Approval Number	W6145/2018/1
Works Approval Holder	JAB Management Pty Ltd
ACN	085 343 095
Registered business address	48 Newark Turn NORTH COOGEE WA 6163
File Number	DER2018/000631
Duration	06/08/2018 to 05/08/2023
Date of issue	02/08/2018
Prescribed Premises	Category 70 - Screening etc. of material
Premises	Pivot Hill Quarry Mining Lease M80/637 WYNDHAM WA 6740 As shown in Schedule 1

This Works Approval is granted to the Works Approval Holder, subject to the following conditions, on 3 August 2018, by:

Date signed: 3 August 2018
Alana Kidd
Manager, Resource Industries

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

Explanatory notes

These explanatory notes do not form part of this Works Approval.

Defined terms

Definition of terms used in this Works Approval can be found at the start of this Works Approval. Terms which are defined have the first letter of each word capitalised throughout this Works Approval.

Department of Water and Environmental Regulation

The Department of Water and Environmental Regulation (DWER) is established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the *Environmental Protection Act 1986* (WA) (EP Act). The Department also monitors and audits compliance with licences and works approvals, takes enforcement action and develops and implements licensing and industry regulation policy.

Works Approval

Section 52 of the EP Act provides that an occupier of any premises commits an offence if any work is undertaken on, or in relation to, the premises which causes the premises to become, or to become capable of being, Prescribed Premises, except in accordance with a works approval.

Section 56 of the EP Act provides that an occupier of Prescribed Premises commits an offence if Emissions are caused or increased or permitted to be caused or increased, or Waste, noise, odour or electromagnetic radiation is altered or permitted to be altered from Prescribed Premises, except in accordance with a works approval or licence.

Categories of Prescribed Premises are defined in Schedule 1 of the *Environment Protection Regulations 1987* (WA) (EP Regulations).

This Works Approval does not authorise any activity which may be a breach of the requirements of another statutory authority including, but not limited to, the following:

- conditions imposed by the Minister for Environment under Part IV of the EP Act;
- conditions imposed by DWER for the clearing of native vegetation under Part V, Division 2 of the EP Act;
- any requirements under the *Waste Avoidance and Resource Recovery Act 2007*;
- any requirements under the *Environmental Protection (Controlled Waste) Regulations 2004*; and
- any other requirements specified through State legislation.

It is the responsibility of the Works Approval Holder to ensure that any action or activity referred to in this Works Approval is permitted by, and is carried out in compliance with, statutory requirements.

The Works Approval Holder must comply with the Works Approval. Contravening a Works Approval Condition is an offence under s.55 of the EP Act.

Responsibilities of Works Approval Holder

Separate to the requirements of this Works Approval, general obligations of Works Approval Holders are set out in the EP Act and the regulations made under the EP Act. For example, the Works Approval Holder must comply with the following provisions of the EP Act:

- the duties of an occupier under s.61; and

- restrictions on making certain changes to Prescribed Premises unless the changes are in accordance with a Works Approval, Licence, closure notice or environmental protection notice (s.53).

Strict penalties apply for offences under the EP Act.

Reporting of incidents

The Works Approval Holder has a duty to report to the Department all Discharges of Waste that have caused or are likely to cause Pollution, Material Environmental Harm or Serious Environmental Harm, in accordance with s.72 of the EP Act.

Offences and defences

The EP Act and its regulations set out a number of offences including:

- Offence of emitting an Unreasonable Emission from any Premises under s.49.
- Offence of causing Pollution under s.49.
- Offence of dumping Waste under s.49A.
- Offence of discharging Waste in circumstances likely to cause Pollution under s.50.
- Offence of causing Serious Environmental Harm (s.50A) or Material Environmental Harm (s.50B).
- Offence of causing Emissions which do not comply with prescribed standards (s.51).
- Offences relating to Emissions or Discharges under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)*.
- Offences relating to noise under the *Environmental Protection (Noise) Regulations 1997 (WA)*.

Section 53 of the EP Act provides that a Works Approval Holder commits an offence if Emissions are caused, or altered, from a Prescribed Premises unless done in accordance with a Works Approval, Licence or the requirements of a closure notice or an environmental protection notice.

Defences to certain offences may be available to a Works Approval Holder and these are set out in the EP Act. Section 74A(b)(iii) provides that it is a defence to an offence for causing Pollution, in respect of an Emission, or for causing Serious Environmental Harm or Material Environmental Harm, or for discharging or abandoning Waste in water to which the public has access, if the Works Approval Holder can prove that an Emission or Discharge occurred in accordance with a Works Approval.

This Works Approval specifies the Emissions and Discharges, and the limits and Conditions which must be satisfied in respect of specified Emissions and Discharges, in order for the defence to offence provision to be available.

Authorised Emissions and Discharges

The specified and general Emissions and Discharges from the Works authorised through this Works Approval are authorised to be conducted in accordance with the Conditions of this Works Approval.

Amendment of Works Approval

The Works Approval Holder can apply to amend the Conditions of this Works Approval under s.59 of the EP Act. An application form for this purpose is available from DWER.

The CEO may also amend the Conditions of this Works Approval at any time on the initiative

of the CEO without an application being made.

[Duration of Works Approval](#)

The Works Approval will remain in force for the duration set out on the first page of this Works Approval or until it is surrendered, suspended or revoked in accordance with s.59A of the EP Act.

[Suspension or revocation](#)

The CEO may suspend or revoke this Works Approval in accordance with s.59A of the EP Act.

Definitions and interpretation

Definitions

In this Works Approval, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
Books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
Condition	means a condition to which this Works Approval is subject under s.62 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
Department Request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Works Approval Holder in writing and sent to the Works Approval's address for notifications, as described at the front of this Works Approval, in relation to: (a) compliance with the EP Act or this Works Approval; (b) the Books or other sources of information maintained in accordance with this Works Approval; or (c) the Books or other sources of information relating to Emissions from the Premises.
Discharge	has the same meaning given to that term under the EP Act.
DWER	Department of Water and Environmental Regulation
Emission	has the same meaning given to that term under the EP Act.
Environmental Harm	has the same meaning given to that term under the EP Act.
EP Act	means the <i>Environmental Protection Act 1986</i> (WA).
EP Regulations	means the <i>Environmental Protection Regulations 1987</i> (WA).
Implementation	has the same meaning given to that term under the EP Act.

Agreement or Decision	
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
Material Environmental Harm	has the same meaning given to that term under the EP Act.
Pollution	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Works Approval applies, as specified at the front of this Works Approval and as shown on the map in Schedule 1 to this Works Approval.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Processing Area	means the operational crushing and screening areas including material stockpile areas, hardstand and laydown areas
Reportable Event	means an exceedance above the target limit specified in Column 4 of Table 6, in Schedule 3.
Serious Environmental Harm	has the same meaning given to that term under the EP Act.
Unreasonable Emission	has the same meaning given to that term under the EP Act.
Waste	has the same meaning given to that term under the EP Act.
Works	refers to the Works described in Schedule 2, at the locations shown in Schedule 1 of this Works Approval to be carried out at the Premises, subject to the Conditions.
Works Approval	refers to this document, which evidences the grant of the works approval by the CEO under s.54 of the EP Act, subject to the Conditions.
Works Approval Holder	refers to the occupier of the Premises being the person to whom this Works Approval has been granted, as specified at the front of this Works Approval.

Interpretation

In this Works Approval:

- (a) the words 'including', 'includes' and 'include' will be read as if followed by the words 'without limitation';
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

- (c) where tables are used in a Condition, each row in a table constitutes a separate Condition;
- (d) any reference to an Australian or other standard, guideline or code of practice in this Works Approval means the version of the standard, guideline or code of practice in force at the time of granting of this Works Approval and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Works Approval; and
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act.

Conditions

Infrastructure and equipment

1. The Works Approval Holder must install and undertake the Works for the infrastructure and equipment:
 - (a) specified in Column 1;
 - (b) to the requirements specified in Column 2; and
 - (c) at the location specified in Column 3 of Table 2 below.
2. The Works Approval Holder must not depart from the requirements specified in Column 2 of Table 2 except:
 - (a) where such departure does not increase risks to public health, public amenity or the environment; and
 - (b) all other Conditions in this Works Approval are still satisfied.
3. Within 7 days of the completion of the Works specified in Column 1 of Table 2, the Works Approval Holder must provide to the CEO written confirmation (including photographic evidence) confirming each item of infrastructure specified in Column 1 of Table 2 below has been constructed with no material defects and to the requirements specified in Column 2 of Table 2.
4. Where a departure from the requirements specified in Column 2 of Table 2 occurs and is of a type allowed by Condition 2, the Works Approval Holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 2(b).

Table 2: Infrastructure and equipment requirements table

Column 1	Column 2
Infrastructure/Equipment	Requirements (design and construction)
Mobile crushing, screening and conveyor stacking infrastructure (Terex® Pegson XR400 self-contained screening unit or equivalent)	Install screening and stacking infrastructure as per manufacturer's requirements.
	Must be equipped with appropriate dust controls; such as water suppression sprays and dust curtains
	To be positioned within area depicted PH-L1 in Schedule 1: Premises Layout Map
Surface water drainage and storage infrastructure	To be installed as depicted in Schedule 1: Premises Layout Map
	The Processing Area must be bunded and drain such that: <ul style="list-style-type: none"> • Clean surface water run-off is directed away from the Processing Area; and • Surface water run-off within the Processing Area is directed to the mine void or water management dams.

Emissions

5. The Works Approval Holder must not cause any Emissions from the Works authorised through this Works Approval except for general Emissions described in Column 1 of Table 3, subject to the exclusions, limitations or requirements specified in Column 2, of Table 3.

Table 3: Authorised Emissions table

Column 1	Column 2
Emission type	Exclusions/Limitations/Requirements
General Emissions (excluding Specified Emissions)	
Emissions which arise from undertaking the Works set out in Schedule 2.	<p>Emissions excluded from General Emissions are:</p> <ul style="list-style-type: none"> • Unreasonable Emissions; or • Emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or • Discharges of Waste in circumstances likely to cause Pollution; or • Emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or • Emissions or Discharges which do not comply with an Approved Policy; or • Emissions or Discharges which do not comply with prescribed standard; or • Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or • Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.

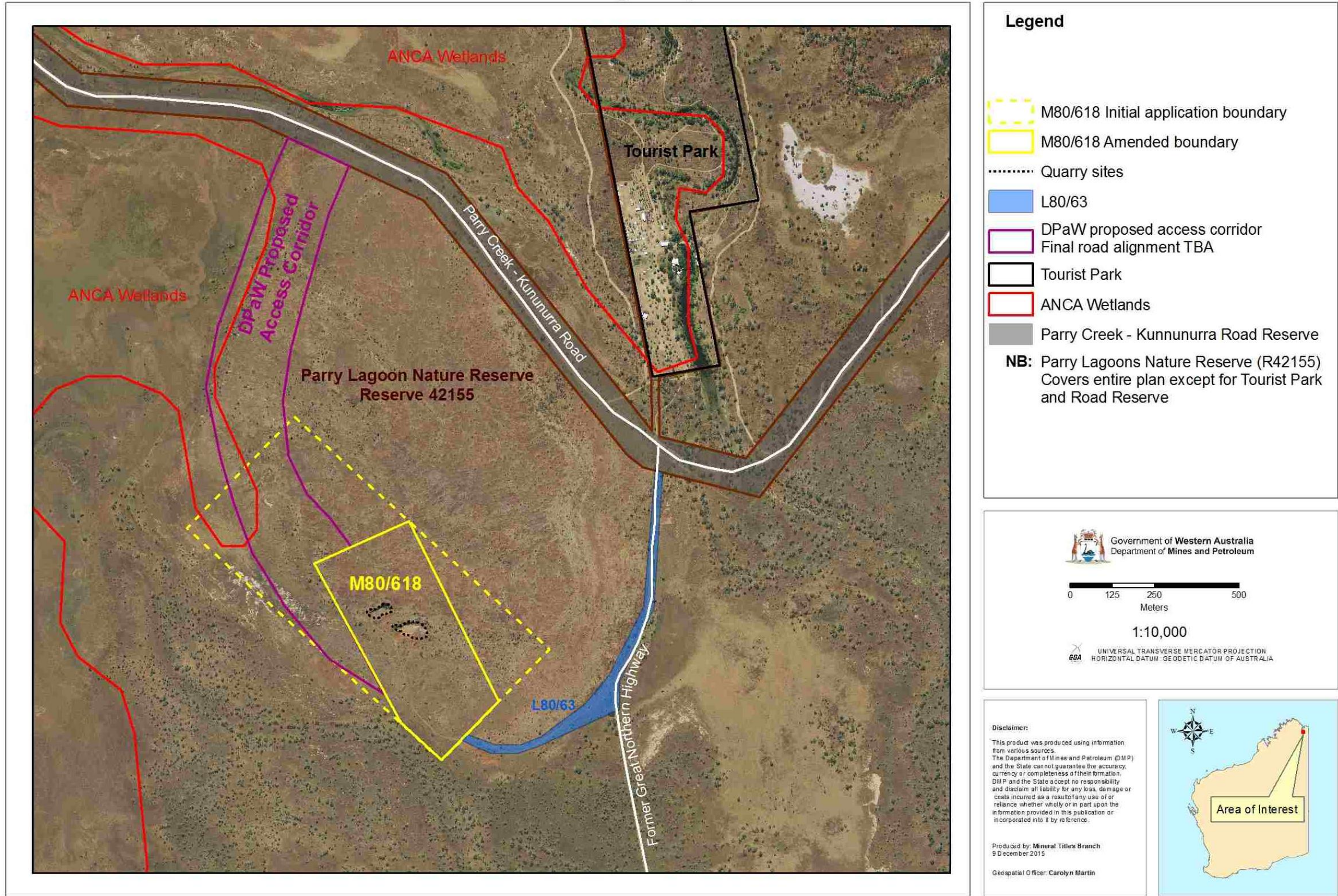
Record-keeping

6. The Works Approval Holder must maintain accurate Books including information, reports and data in relation to the Works and the Books must:
 - (a) be legible;
 - (b) if amended, be amended in such a ways that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) be retained for at least 3 years from the date the Books were made; and
 - (d) be available to be produced to an Inspector or the CEO.
7. The Works Approval Holder must comply with a Department Request within 14 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

Schedule 1: Maps

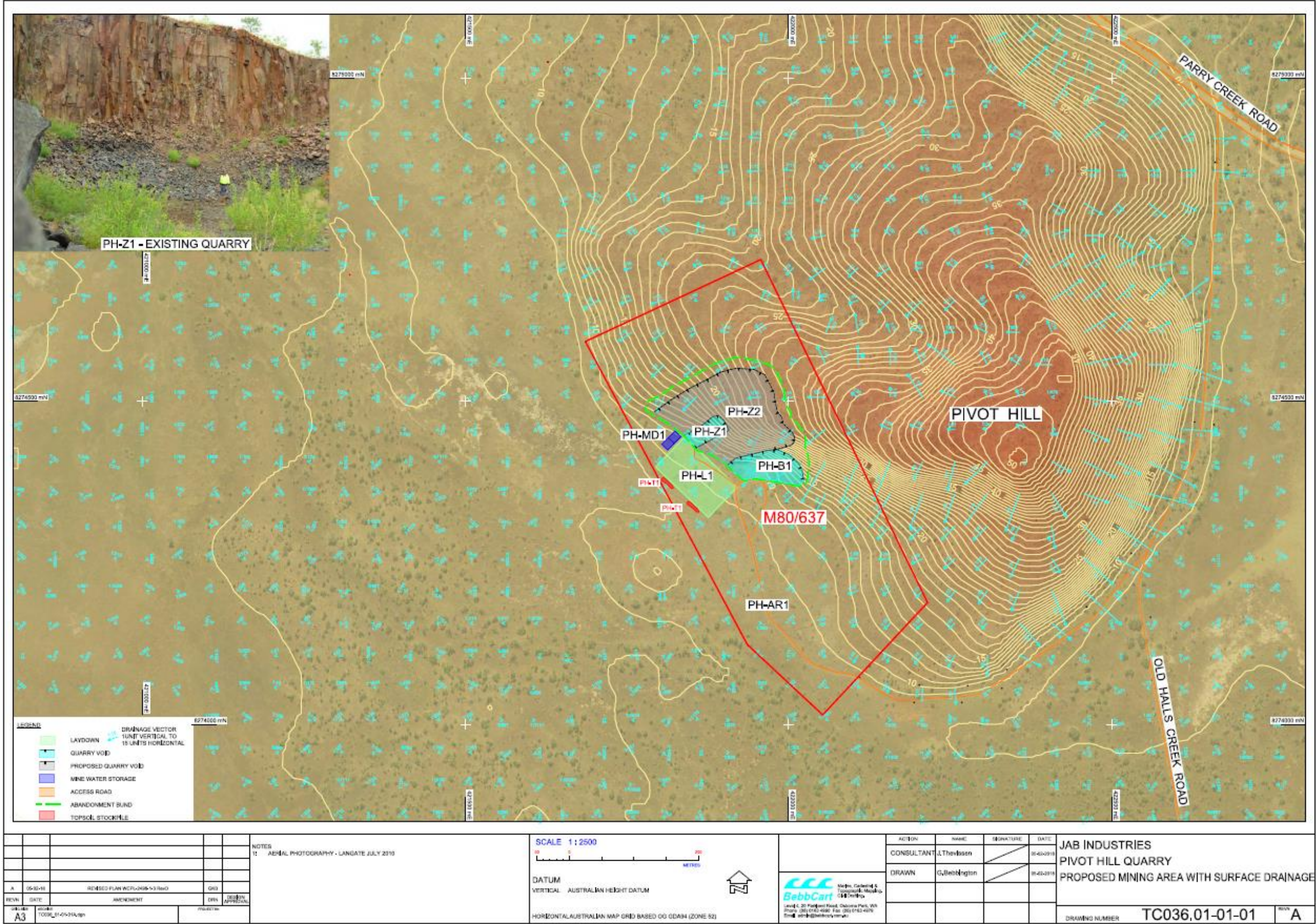
Premises map

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



Premises Layout Map

The Premises layout plan is shown in the map below.



Schedule 2: Works

At the time of assessment, Emissions and Discharges from the Works listed in Table 4 were considered in the determination of the risk and related Conditions for the Works Approval.

Table 4: Authorised Works

Works	Specifications/Drawings
Installation of mobile crushing, screening and stacking circuit, hardstand and surface water drainage / storage infrastructure	To be installed and operated as per locations indicated in Schedule 1: Premises Layout Map



Decision Report

Application for Works Approval

Division 3, Part V *Environmental Protection Act 1986*

Works Approval Number W6145/2018/1

Applicant JAB Management Pty Ltd

ACN 085 343 095

File Number DER2018/000631

Premises Pivot Hill Quarry
Mining Lease M80/637
WYNDHAM WA 6740
As shown in Schedule 1 of the Works Approval

Date of Report 3 August 2018

Status of Report Final

Table of Contents

1. Definitions of terms and acronyms	3
2. Purpose and scope of assessment	4
2.1 Application details	4
3. Background	4
4. Overview of Premises	5
4.1 Operational aspects	5
4.2 Infrastructure	6
4.3 Exclusions to the Premises	8
5. Legislative context	8
5.1.1 Planning approvals	8
5.1.2 Department of Mines, Industry Regulation and Safety	8
5.2 Part V of the EP Act	9
5.2.1 Applicable regulations, standards and guidelines	9
5.2.2 Clearing	9
6. Consultation	9
7. Location and siting	9
7.1 Siting context	9
7.2 Residential and sensitive Premises	9
7.3 Specified ecosystems	10
7.4 Groundwater and water sources	11
7.5 Geology	12
7.6 Meteorology	12
7.6.1 Wind direction and strength	12
7.6.2 Rainfall and temperature	12
8. Risk assessment	14
8.1 Determination of emission, pathway and receptor	14
8.2 Consequence and likelihood of risk events	18
8.3 Acceptability and treatment of Risk Event	19
8.4 Works Approval controls	19
9. Determination of Works Approval conditions	19
10. Applicant's comments	20
11. Conclusion	20
Appendix 1: Key documents	21
Appendix 2: Summary of applicant's comments on risk assessment and draft conditions	23

List of Tables

Table 1: Definitions	3
Table 2: Documents and information submitted during the assessment process.....	4
Table 3: Prescribed Premises Categories applied for.....	4
Table 4: Pivot Hill Quarry Category 70 infrastructure	6
Table 5: Relevant approvals and tenure.....	8
Table 6: Receptors and distance from activity boundary	10
Table 7: Environmental values	10
Table 8: Groundwater and water sources.....	11
Table 9: Analysis of ore / waste rock characteristics	12
Table 10. Identification of emissions, pathway and receptors during construction	14
Table 11: Identification of emissions, pathway and receptors during operation	15
Table 12: Risk rating matrix.....	18
Table 13: Risk criteria table.....	18
Table 14: Risk treatment table	19
Table 15: Summary of conditions to be applied.....	20

List of Figures

Figure 1: Premises location map.....	5
Figure 2: Premises layout plan.....	7
Figure 3: Wyndham Aero – mean rainfall and temperature statistics (BOM 2018).....	13

1. Definitions of terms and acronyms

In this Decision Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER). DWER was established under section 35 of the <i>Public Sector Management Act 1994</i> and is responsible for the administration of the <i>Environmental Protection Act 1986</i> along with other legislation.
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Risk Event	As described in <i>Guidance Statement: Risk Assessment</i>

2. Purpose and scope of assessment

On 9 April 2018, JAB Management Pty Ltd, (the Applicant) submitted an Application (JAB 2018) for a Works Approval to construct a Prescribed Premises (Category 70 Screening etc of material) at the Pivot Hill Quarry, located within mining lease M80/637.

This mining lease is located 20km southeast of Wyndham within Parry Lagoons Nature Reserve, which is also registered as a Wetland of International Importance listed under the Ramsar Convention (refer Figure 1).

The Applicant is seeking to re-establish quarrying activities at the Premises, which will be then processed by a mobile crushing and screening plant to provide supplies of crushed rock for an estimated period of around 10 years (depending on local supply and demand requirements). No infrastructure will be permanently constructed on the Premises.

This Decision Report includes an assessment of potential environmental and public health impacts associated with construction and operation of the proposed crushing and screening infrastructure.

2.1 Application details

Table 2 lists the documents submitted during the assessment process.

Table 2: Documents and information submitted during the assessment process

Document/information description	Date received
Application Form: Category 70 Works Approval including: <ul style="list-style-type: none">Attachment 1A: M8000637 Tenement Report (4 April 18);Attachment 1B: ASIC JAB Management Pty Ltd (4 April 2018);Attachment 1C: ASIC JAB Industries (4 April 2018);Attachment 1C: JAB Letter of Authority (4 April 2018)Attachment 2: Premises Map TC036.01-01-01 A3 Red;Attachment 3A: PM-552-289493 Summary Pivot Hill Quarry;Attachment 3B: M80_637 Surveyed Clearing Permit Area;Attachment 4A: Pivot Hill DPaW Access track letter; andAttachment 4B: Pivot Hill OEPA public advice given;Attachment 4C: Community Consultation M80_637;Attachment 6A: Ramsar Wetland Boundary Pivot Hill Site 2;Attachment 6B: 2015-10-30 map M80-618 situation;Attachment 6C: JAB Location Pivot Hill Project (05 April 18);Attachment 8A: JAB Works Approval Fee Application (9 April 2018);Attachment 8B: JAB PPL Licence Fee Application (5 April 2018); andAttachment 8C: JAB Works Approval Cost Estimate (9 April 2018).	9 April 2018

3. Background

Table 3 lists the prescribed premises categories that have been applied for.

Table 3: Prescribed Premises Categories applied for

Classification of Premises	Description	Approved Premises production or design capacity or throughput
Category 70	Screening etc. of material: premises on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	45 000 tonnes per year

4. Overview of Premises

4.1 Operational aspects

The Pivot Hill Basalt Quarry was established prior to 1985 as a small scale quarry on the southern side of Pivot Hill to supply crushed rock for local construction use. The site was used by both the Main Roads Western Australian and the Shire of Wyndham East Kimberley for rock-quarrying for construction materials.

The Applicant is proposing to re-establish mining and conduct crushing and screening activities during the dry season months for around 10 years. Under normal operations, the site will operate between 7.00am to 5.00pm Monday to Friday. Access to the site will be via the Great Northern Highway and the existing Parry Creek Road. An access road from Parry Creek Road to the quarry will be established under the recommendation of Department of Biodiversity Conservation and Attractions (DBCA).

The crushing and screening plant will be run intermittently in short campaigns during the day to maintain required volume of crushed and screened material. Broken rock will be trammed to the mobile crushing screening plant to be crushed and screened to into two or more sized products ranging in size from fines to aggregates (typically 4.5mm to 25mm).

There will be no waste disposal or storage onsite.

Figure 1 shows the location of the Premises (Mining Lease M80/618), including the proposed access road, the adjacent ANCA Wetland (Parry Floodplain Wetland) and Parry Creek Tourist Farm, which is all located within Parry Lagoon Nature Reserve and Ramsar Wetland Ord River Floodplain.

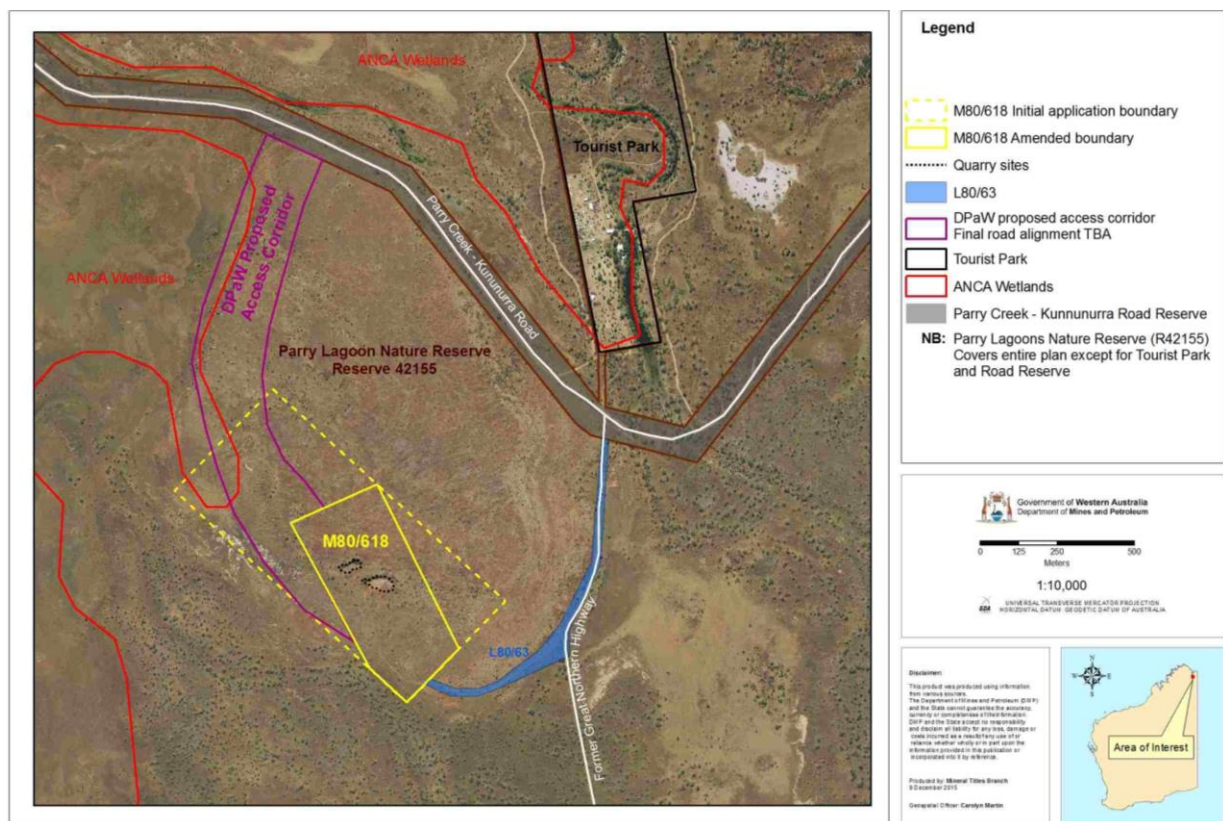


Figure 1: Premises location map

4.2 Infrastructure

The Pivot Hill Quarry infrastructure, as it relates to Category 70 activities, is detailed in Table 4 and with reference to the Premises Layout Map shown in Figure 2 (also attached in the Works Approval).

Table 4: Pivot Hill Quarry Category 70 infrastructure

	Infrastructure	Site Plan Reference
	Prescribed Premises Category 70	
Crushing and screening of basalt rock material, stockpiling of processed material		
1	Mobile crushing / screening plant (Terrex Pegson XR400 or similar)	Figure 2 (area depicted PH-L1)
2	Hardstand	
3	Processed (screened) stockpiles	
4	Surface water drainage infrastructure (bunds and drains)	Not shown
5	Mine water management dams	Figure 2 (area depicted PH-MD1)
6	Loaders, excavators and 2 x Double-B-side-tipper Road Trains	Not shown
	Other activities	
1	Mining / quarrying activities	Within mining lease M80/637

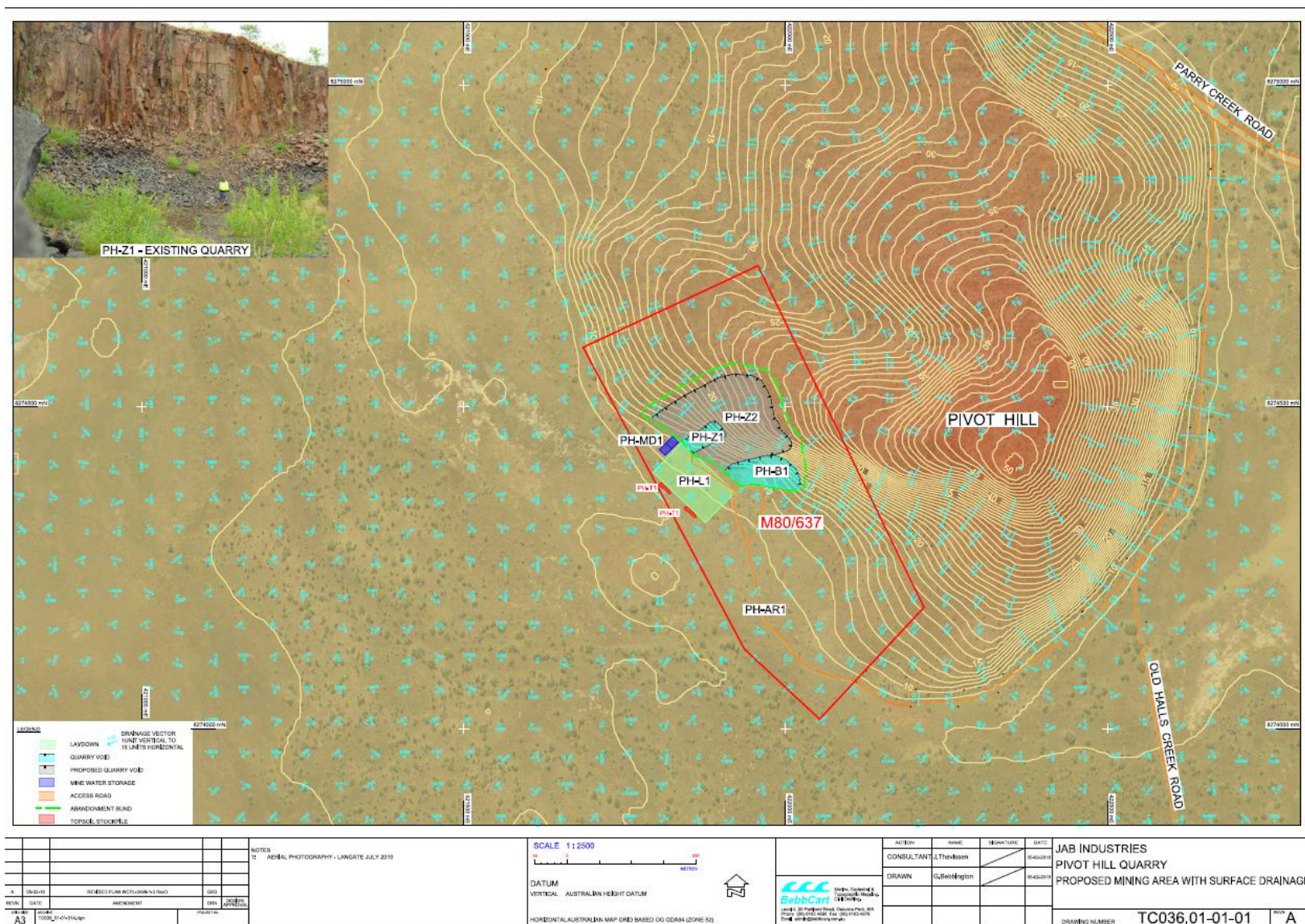


Figure 2: Premises layout plan

Works Approval: W6145/2018/1

IR-T04 Decision Report Template v2.0 (July 2017)

4.3 Exclusions to the Premises

It should be noted that the extraction of rock material (mining) from the quarry void is not directly related to the Prescribed Premises activity of crushing and screening etc. of material. The process of extracting the rock (without crushing and screening) does not meet the definition of category 70 Prescribed Premises and as such, is not considered further in this Decision Report. The mining activities are regulated by DMIRS under the provisions of the *Mining Act 1978* (WA) and other relevant legislation.

5. Legislative context

Table 5 summarises approvals relevant to the assessment.

Table 5: Relevant approvals and tenure

Legislation	Number	Subsidiary	Approval
<i>Mining Act 1978</i> (WA)	Mining Proposal (Reg ID 70247)	JAB Management Pty Ltd	The approved Mining Proposal allows for the mining and processing (crushing and screening) of the basalt rock product via an onsite mobile plant, for up to 45,000 tonnes per annum. The life of mine based on this figure is anticipated to be 10 years, with a total resource estimate of 450,000 tonnes.
Part IV of the EP Act (WA)	N/A	JAB Management Pty Ltd	The proposal construct and operate a quarry and crushing / screening plant within M80/637 was referred to and considered by the Environmental Protection Authority (EPA) in 2015. The decision by the EPA was "Not Assessed: Public Advice Given".
Part V of the EP Act (WA)	Works approval W6145/2018/1	JAB Management Pty Ltd	This application to construct a category 70 (screening etc. of material) Prescribed Premises within M80/637.

5.1.1 Planning approvals

DWER sought comment from the Shire of Wyndham East Kimberley on the Application (JAB 2018) on 15 May 2018. No comments were received.

5.1.2 Department of Mines, Industry Regulation and Safety

Approval to conduct mining / quarrying operations within mining lease M80/637 was granted by DMIRS under the *Mining Act 1978* on 21 December 2017. The approval allows mining of up to 45,000 tonnes per year for up to 10 years. The Mining Lease is due to expire on 20 December 2038.

DWER referred the Application (JAB 2018) to DMIRS for comment on 15 May 2018. A response was received outlining the above information relating to the *Mining Act 1978* approval.

5.1.3 Department of Biodiversity Conservation and Attractions

Department of Biodiversity and Conservation Attractions (DBCA) is responsible for administering the *Conservation and Land Management Act 1984* (CALM Act) and the *Wildlife Conservation Act 1950*. The CALM Act applies to Nature Reserves, including the Parry Lagoons Nature Reserve (Reserve 42155). The Parry Lagoons Nature Reserve is gazetted as a Class C Nature Reserve for the conservation of native flora and fauna.

The DBCA manages the Nature Reserve on behalf of the Conservation Commission of Western Australia.

DWER referred the Application (JAB 2018) to DBCA (Kimberley Region) for comment on 15 May 2018. A response from DBCA was received indicating no objection to the Application provided Applicant controls outlined in the Application supporting documents were implemented.

5.2 Part V of the EP Act

5.2.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations. The guidance statements which inform this assessment are outlined in Appendix 1.

5.2.2 Clearing

A Clearing Permit (CPS 7924/1) was issued by DMIRS on 1 March 2018 for the required clearing of native vegetation associated with the Premises operations.

6. Consultation

Copies of the draft Decision Report and Licence were sent to the Applicant on 16 July 2018 for comment. Appendix 2 outlines comments received by the Applicant in relation to the draft assessment.

7. Location and siting

7.1 Siting context

The Premises is located within mining lease M80/637, which sits within the Parry Lagoons Nature Reserve and the Ramsar Wetland Ord River Floodplain. The surrounding landuses are predominantly conservation estate vested in the Conservation Commission of WA, and tourism. Parry Lagoons Nature Reserve and the Ord River Floodplain is of high conservation significance due to the presence of many waterbird species, often in great numbers. It is an area recognized internationally for its significance as a wetland providing for migratory and local waders, waterbirds and shorebirds. It also includes a variety of important habitats such as freshwater springs, components of rainforest, grasslands, woodland, rugged sandstone and floodplain (DEC 2012).

This diversity of habitat supports a large number and variety of fauna, including several that are listed as threatened or specially protected under the *Wildlife Conservation Act 1950* (WA) and the *Environment Protection and Biodiversity Conservation Act 1999* (Cwth).

7.2 Residential and sensitive Premises

The distances to residential and sensitive receptors are detailed in Table 6.

Table 6: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Residential Premises	Parry Farm Tourist Park: the boundary of the Tourist Park is located 830m northeast of the Premises boundary. The nearest dwelling at the Tourist Park is located 920m northeast of the Premises boundary.

7.3 Specified ecosystems

Specified ecosystems are areas of high conservation value and special significance that may be impacted as a result of activities at or Emissions and Discharges from the Premises. The distances to specified ecosystems are shown in Table 7.

The table has also been modified to align with the *Guidance Statement: Environmental Siting* (DER 2016b).

Table 7: Environmental values

Specified ecosystems	Distance from the Premises
Ramsar Sites in Western Australia	The Premises is located within the Ramsar site named the Ord River Floodplain which contains a wide range of wetland types and includes inland and marine components.
Important wetlands – Western Australia	The Premises is located adjacent to the Nationally Important Wetland Parry Floodplain (ANCA Wetland)
Parks and Wildlife Managed Lands and Waters	<p>The Premises is located entirely within the Parry Lagoons Nature Reserve (Class C Nature Reserve 42155) which was gazetted for the purpose of conservation of flora and fauna.</p> <p>The Parry Lagoon Nature Reserve is managed by DBCA on behalf of the Conservation Commission for the conservation of flora and fauna.</p> <p>Ngamoowalem Conservation Park is located (Class C Nature Reserve 49678) is located 6.8km east of the Premises boundary and Ord River Floodplain (Class C Nature Reserve 31967) is located 11km north of the Premises.</p>
Threatened Ecological Communities and Priority Ecological Communities	A Threatened Ecological Community (Kimberley Vegetation Association 838) is located 438m east of the Premises boundary
Biological component	Distance from the Premises
Threatened/Priority Flora	There are no Threatened/Priority Flora known to occur within a 3km buffer of the Premises
Threatened/Priority Fauna	<p>A number of Threatened/Priority Fauna are known to inhabit the area around the Premises.</p> <p>The following have been recorded within a 3km radius of the Premises:</p> <ul style="list-style-type: none"> • <i>Dasyurus hallucatus</i> (Northern Quoll) Endangered fauna (Schedule 2 of the Wildlife Conservation

	<p>(Specially Protected Fauna) Notice 2017);</p> <ul style="list-style-type: none"> • <i>Erythrura gouldiae</i> (Gouldian Finch) Priority Fauna listed as nationally endangered (P4) under the <i>Environment Protection and Biodiversity Conservation Act 1999</i>; <p>The following fauna are migratory birds listed under international agreement (Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice 2017) that have been recorded within a 3km radius of the Premises:</p> <ul style="list-style-type: none"> • <i>Plegadis falcinellus</i> (Glossy Ibis); • <i>Charadrius veredus</i> (Oriental Plover); • <i>Tringa nebularia</i> (Common Greenshank); • <i>Tringa glareola</i> (Wood Sandpiper); and • <i>Limosa limosa</i> (Black-tailed Godwit).
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7.4 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 8.

Table 8: Groundwater and water sources

Groundwater and water sources	Distance from Premises	Environmental value
Public drinking water source areas (PDWSA)	9.3km west southwest of the Premises	The Moolalabra Dam catchment area is a P1 PDWSA supplying drinking water to the town of Wyndham
Major watercourses/waterbodies	<p>The Premises (entire mining lease) is located within the Ramsar Wetland Ord River Floodplain.</p> <p>Parry Floodplain Wetland (ANCA Wetland) is located 200m north west of the Premises boundary at the closest point.</p> <p>A minor river (Parry Creek) is located 1.8km east of the Premises boundary.</p>	The Ord River Floodplain (recognised and protected internationally) and the Parry Floodplain Wetland (recognised and protected nationally) are both highly valued for their significance as wetlands providing for migratory and local waders, waterbirds and shorebirds.
Groundwater	<p>A private bore is located approximately 1km from Premises (based on available GIS dataset – WIN Groundwater Sites).</p> <p>Depth to groundwater at this bore is encountered at approximately 3m below ground level (bgl).</p>	<p>The Premises is located within the Canning-Kimberley Groundwater Proclamation area.</p> <p>The crushing and screening operations will occur on elevated terrain (relative to the private bore located 1km away) and will not intersect the water table.</p>

7.5 Geology

Table 9 details geological characteristics relevant to the assessment.

Table 9: Analysis of ore / waste rock characteristics

Premises Geology	Analysis
The hard-rock resource at Pivot Hill consists of an outcrop of massive tholeiitic basalt covering an area of approximately 150-201ha. The basalt rock is capped by shallow ferrosol soil zones containing residual gravels.	Analysis shows that the rock, which has previously been used for road construction, does not contain sulphides and therefore does not require Acid Rock Drainage management. Risks to the environment are considered low as the material to be processed naturally outcrops at the surface. Laboratory test work has confirmed the basalt is an acid consumer. The basalt consists of a fine even grained feldspar and non-fibrous amphibole minerals.
There will be no waste rock produced during the operation of the Premises. Highly fractured / weathered rock will be used for safety bunds and drainage controls.	

7.6 Meteorology

The closest Bureau of Meteorology (BoM) weather station to the Premises is Wyndham Aero (Station No. 001006) which has been used as a surrogate to estimate meteorological characteristics likely to be experienced at Pivot Hill.

Pivot Hill is located within the Shire of Wyndham-East Kimberley which experiences a tropical monsoonal climate defined by a distinct wet season and dry season. The dry season runs from May to October and is characterised by clear blue skies, easterly winds and warm days with some cool nights. The wet season runs from November to April and is usually hot and humid, featuring low pressure systems that can cause intensive and erratic rainfall patterns. Tropical lows that move out onto the ocean can turn into powerful cyclones during this time of year.

7.6.1 Wind direction and strength

Winds predominantly blow from the east and south east in the mornings between 20 and 30km/hour, and the same in the afternoons with a tendency at times to blow from the north at up to 30km/hour (BOM, 2018).

7.6.2 Rainfall and temperature

The average annual rainfall for Wyndham is 857.4mm per year. The majority of rainfall occurs during the wet season months with up to 93% of rainfall occurring during this period.

Mean maximum daily temperatures range from up to 39.8°C in the hotter wet season days to 31.4°C in the cooler dry season days. Mean minimum daily temperatures range from 26.6°C in the wet season to around 15.4°C in the dry season.

Figure 3 shows the average rainfall and maximum temperature statistics for Wyndham Aero.

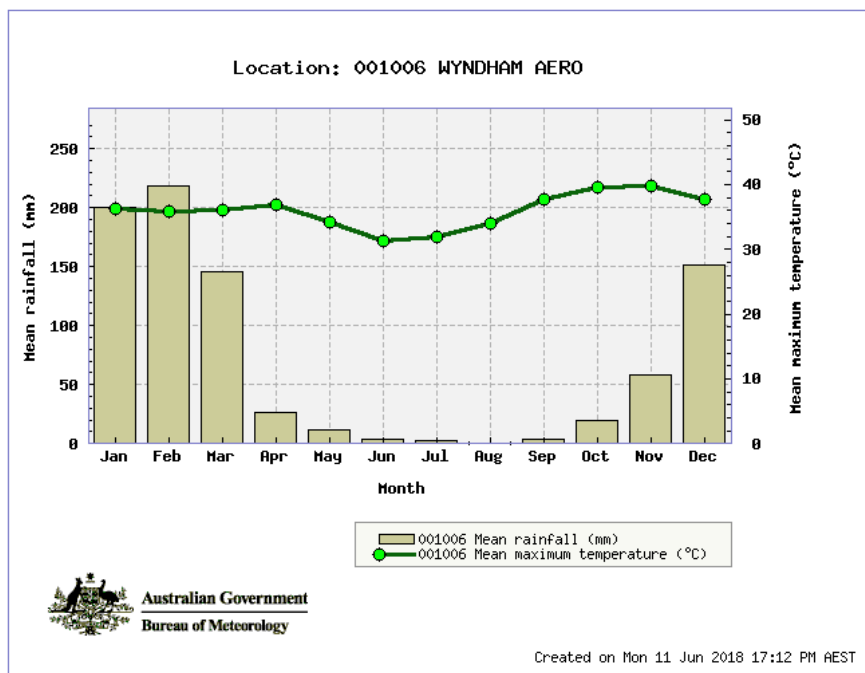


Figure 3: Wyndham Aero – mean rainfall and temperature statistics (BOM 2018)

8. Risk assessment

8.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER will identify all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment.

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. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out through Table 11.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Tables 10 and 11 below.

Table 10. Identification of emissions, pathway and receptors during construction

Risk Events					Continue to detailed risk assessment	Reasoning
Sources/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
Construction, mobilisation and positioning of crushing and screening infrastructure	Vehicle movements on unsealed access roads;	Noise	Air / wind dispersion	Amenity impacts	No	<p>There will be minimal noise during construction of the mobile crushing and screening plant. The plant is a modularised, mobile unit and takes little time to construct.</p> <p>Noise during the construction period will be regulated under the provisions of the <i>Environmental Protection (Noise) Regulations 1997</i>.</p> <p>Dust emissions during construction will be very minimal. A hardstand / laydown area will be constructed which will be the primary location for the crushing and screening plant. Dust will be minimised during construction as required by the application of water via a water cart.</p>
	Installation of mobile crushing and screening plant	Dust				

Table 11: Identification of emissions, pathway and receptors during operation

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
Category 70 Screening etc. of material	Operation of mobile screening and stacking plant	Dust	<p>Parry Farm Tourist Park: the boundary of the Tourist Park is located 830m northeast of the Premises boundary. The nearest dwelling at the Tourist Park is located 920m northeast of the Premises boundary.</p> <p>Native vegetation in the local area.</p>	Air / wind dispersion	<p>Amenity impacts</p> <p>Deposition of dust on adjacent native vegetation affecting photosynthesis</p>	No	<p>Crushing / screening plant will have curtains and water sprays to reduce dust emissions during operations. Water captured in the mining void will be used for dust suppression on roads and stockpiles (using water truck) with additional water trucked to site if required.</p> <p>The Delegated Officer considers that 830m is a sufficient separation distance to have minimum to no impact from intermittent crushing and screening operations.</p> <p>No flora of conservation significance is located in vicinity (3km radius) of proposed crushing / screening plant</p>
		Noise	<p>Parry Farm Tourist Park: the boundary of the Tourist Park is located 830m northeast of the Premises boundary. The nearest dwelling at the Tourist Park is located 920m northeast of the Premises boundary.</p>		Amenity impacts	No	<p>The Delegated Officer notes the crushing and screening plant will be operated intermittently during the dry season in short campaigns (day shift only). Some noise attenuation will occur due to the location of the crushing and screening plant being below the elevated surface topography on the southern side of Pivot Hill (Parry Farm is located to the north east).</p> <p>Noise muffler(s) will be fitted on the crushing / screening plant.</p> <p>Noise emissions must comply with the <i>Environmental Protection (Noise) Regulations 1997</i>.</p>

Risk Events					Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts	
	Stockpiling of crushed / screened material	Dust	<p>Parry Farm Tourist Park: the boundary of the Tourist Park is located 830m northeast of the Premises boundary. The nearest dwelling at the Tourist Park is located 920m northeast of the Premises boundary.</p> <p>Native vegetation in the local area.</p>	Air / wind dispersion	<p>Amenity impacts</p> <p>Deposition of dust on adjacent native vegetation affecting photosynthesis</p>	<p>No</p> <p>Water captured in the mining void will be used for dust suppression on roads and stockpiles (using water truck) with additional water trucked to site if required.</p> <p>The Delegated Officer considers that 830m is a sufficient separation distance to have minimum to no impact from stockpiling operations.</p> <p>No flora of conservation significance is located in vicinity of proposed stockpile areas.</p>
		Stormwater runoff from stockpiles	<p>Surface water bodies (Parry Floodplain Wetland is located 200m north west of the Premises boundary at the closest point)</p>	Direct discharge of sediment within surface water runoff	<p>Contamination of surface water bodies (sediment / hydrocarbons)</p>	<p>No</p> <p>The Premises will not be operated during the wet season months. However, surface water management has been considered to limit potential impacts during the wet season.</p> <p>The perimeter of the operational area will be bunded to direct clean stormwater away from processing areas and stockpiles.</p> <p>Stormwater falling within processing and stockpile areas will flow into mine water storage dams to be collected and re-used for dust control during operations.</p> <p>Laboratory test work has shown the material to be processed contains no sulphides, therefore there is no potential for acid forming materials to be generated.</p> <p>The <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> prohibit the discharge of sediment and / or hydrocarbons to the environment.</p>

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
	Fuel storage and refuelling	Hydrocarbon (fuel) spillage		Direct discharge of hydrocarbons within surface water runoff		No	<p>No fuel or hazardous goods will be stored on site.</p> <p>Refueling of mobile equipment will occur via a mobile refueling truck with spill clean-up equipment available on site.</p> <p>The <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> prohibit the discharge of sediment and / or hydrocarbons to the environment.</p>

8.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 12 below.

Table 12: Risk rating matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 13 below.

Table 13: Risk criteria table

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
			Environment	Public health* and amenity (such as air and water quality, noise, and odour)
Almost Certain	The risk event is expected to occur in most circumstances	Severe	<ul style="list-style-type: none"> onsite impacts: catastrophic offsite impacts local scale: high level or above offsite impacts wider scale: mid-level or above Mid to long-term or permanent impact to an area of high conservation value or special significance[^] Specific Consequence Criteria (for environment) are significantly exceeded 	<ul style="list-style-type: none"> Loss of life Adverse health effects: high level or ongoing medical treatment Specific Consequence Criteria (for public health) are significantly exceeded Local scale impacts: permanent loss of amenity
Likely	The risk event will probably occur in most circumstances	Major	<ul style="list-style-type: none"> onsite impacts: high level offsite impacts local scale: mid-level offsite impacts wider scale: low level Short-term impact to an area of high conservation value or special significance[^] Specific Consequence Criteria (for environment) are exceeded 	<ul style="list-style-type: none"> Adverse health effects: mid-level or frequent medical treatment Specific Consequence Criteria (for public health) are exceeded Local scale impacts: high level impact to amenity
Possible	The risk event could occur at some time	Moderate	<ul style="list-style-type: none"> onsite impacts: mid-level offsite impacts local scale: low level offsite impacts wider scale: minimal Specific Consequence Criteria (for environment) are at risk of not being met 	<ul style="list-style-type: none"> Adverse health effects: low level or occasional medical treatment Specific Consequence Criteria (for public health) are at risk of not being met Local scale impacts: mid-level impact to amenity
Unlikely	The risk event will probably not occur in most circumstances	Minor	<ul style="list-style-type: none"> onsite impacts: low level offsite impacts local scale: minimal offsite impacts wider scale: not detectable Specific Consequence Criteria (for environment) likely to be met 	<ul style="list-style-type: none"> Specific Consequence Criteria (for public health) are likely to be met Local scale impacts: low level impact to amenity
Rare	The risk event may only occur in exceptional circumstances	Slight	<ul style="list-style-type: none"> onsite impact: minimal Specific Consequence Criteria (for environment) met 	<ul style="list-style-type: none"> Local scale: minimal to amenity Specific Consequence Criteria (for public health) met

[^] Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting*.

* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines*.

“onsite” means within the Prescribed Premises boundary.

8.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 14 below:

Table 14: Risk treatment table

Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk Event will not be tolerated. DWER may refuse application.
High	May be acceptable. Subject to multiple regulatory controls.	Risk Event may be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
Medium	Acceptable, generally subject to regulatory controls.	Risk Event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
Low	Acceptable, generally not controlled.	Risk Event is acceptable and will generally not be subject to regulatory controls.

8.4 Works Approval controls

The Delegated Officer notes that the construction and operation of the category 70 crushing and screening operations proposed by the Applicant have the potential to generate the emissions outlined in Tables 10 and 11. However, these emissions have been assessed as not requiring a detailed risk assessment as a result of adequate separation distances combined with Applicant controls to reduce the risks to the environment and human health.

The crushing and screening plant is equipped with water sprays and curtains that are designed to minimise dust while the plant is operational. Dust management for stockpiles and laydown areas will be achieved using a water truck to keep these areas sufficiently damp. Noise will be reduced by way of the infrastructure design (noise mufflers on the crushing and screening plant) and location relative to the sensitive receptor (crushing and screening plant located behind Pivot Hill). Stormwater will be managed by way of bunds and drainage / run-off controls using surface water captured in the processing areas during wet seasons when the Premises is not operating.

Conditions have been included in the Works Approval to include infrastructure and compliance requirements and outline authorised emissions as well as record keeping requirements.

General provisions of the EP Act and the *Environmental Protection (Unauthorised Discharges) Regulations 2004* will also apply to the Premises operations.

The Applicant will be required apply for a category 70 licence or registration once the Premises has been constructed and all compliance requirements under the works approval have been satisfied.

9. Determination of Works Approval conditions

The conditions in the issued Works Approval in Attachment 1 have been determined in accordance with the *Guidance Statement: Setting Conditions* (DER 2015b).

The *Guidance Statement: Licence Duration* (DER 2016a) has been applied and the issued Works Approval expires in three years from date of issue.

Table 15 provides a summary of the conditions to be applied to this works approval.

Table 15: Summary of conditions to be applied

Condition Ref	Grounds
Infrastructure and Equipment 1, 2, 3 and 4	These conditions are valid, risk-based and contain appropriate controls and necessary reporting requirements to ensure compliance.
Emissions 5	This condition is valid, risk-based and consistent with the EP Act.
Record Keeping 6 and 7	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.

DWER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DWER may initiate amendments to the works approval under the EP Act.

10. Applicant's comments

The Applicant was provided with the draft Decision Report and draft Works Approval on 16 July 2018. The Applicant provided comments which are summarised, along with DWER's response, in Appendix 2.

11. Conclusion

This assessment of the risks of activities on the Premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this Decision Report (summarised in Appendix 1).

Based on this assessment, it has been determined that the Works Approval will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Alana Kidd
MANAGER, RESOURCE INDUSTRIES

Delegated Officer
under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	<p>Application Form: Category 70 Works Approval including:</p> <ul style="list-style-type: none"> Attachment 1A: M8000637 Tenement Report (4 April 18); Attachment 1B: ASIC JAB Management Pty Ltd (4 April 2018); Attachment 1C: ASIC JAB Industries (4 April 2018); Attachment 1C: JAB Letter of Authority (4 April 2018) Attachment 2: Premises Map TC036.01-01-01 A3 Red; Attachment 3A: PM-552-289493 Summary Pivot Hill Quarry; Attachment 3B: M80_637 Surveyed Clearing Permit Area; Attachment 4A: Pivot Hill DPaW Access track letter; and Attachment 4B: Pivot Hill OEPA public advice given; Attachment 4C: Community Consultation M80_637; Attachment 6A: Ramsar Wetland Boundary Pivot Hill Site 2; Attachment 6B: 2015-10-30 map M80-618 situation; Attachment 6C: JAB Location Pivot Hill Project (05 April 18); Attachment 8A: JAB Works Approval Fee Application (9 April 2018); Attachment 8B: JAB PPL Licence Fee Application (5 April 2018); and Attachment 8C: JAB Works Approval Cost Estimate (9 April 2018). 	JAB 2018	DWER records (A1650592)
2.	Department of Environment and Conservation, September 2012. Ord River and Parry Lagoons Nature Reserves Management Plan 77, Department of Environment and Conservation, Perth	DEC 2012	<p>Accessed at:</p> <p>https://www.dpaw.wa.gov.au/images/documents/parks/management-plans/decarchive/ord-river-and-parry-lagoons-nature-reserves-management-plan-2012_webversion.pdf</p>
3.	DER, July 2015. Guidance Statement: Regulatory principles. Department of Environment Regulation, Perth.	DER 2015a	<p>Accessed at: www.dwer.wa.gov.au</p>
4.	DER, October 2015. Guidance Statement: Setting conditions. Department of Environment Regulation, Perth.	DER 2015b	
5.	DER, August 2016. Guidance Statement: Licence duration. Department of Environment Regulation, Perth.	DER 2016a	

6.	DER, November 2016. Guidance Statement: Environmental Siting. Department of Environment Regulation, Perth.	DER 2016b	
7.	DER, November 2016. Guidance Statement: Risk Assessments. Department of Environment Regulation, Perth.	DER 2017a	
8.	DER, November 2016. Guidance Statement: Decision Making. Department of Environment Regulation, Perth.	DER 2017b	

Appendix 2: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of Applicant comments	DWER response
Comments received from Applicant in relation to draft works approval and decision report	<ol style="list-style-type: none">1. JAB is happy to accept the terms outlined in the draft Instrument.2. JAB has no specific comment and wishes to waive the consideration period.3. JAB requests that the Works Approval be issued as soon as possible.	The works approval and decision report will be finalised and issued as soon as possible.