



Application for Works Approval

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

Works Approval Number	W6597/2021/1
Applicant	BHP Nickel West Pty Ltd
ACN	76 004 184 598
File number	DER2021/000522
Premises	Mt Keith Operations Legal description Mining tenements M53/165, M53/166, M53/167, M53/56 and M53/57 L53/63, L53/82 and L53/122
Date of report	17 May 2022
Decision	Works approval granted

**MANAGER, RESOURCES INDUSTRIES
REGULATORY SERVICES**

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

Table of Contents

1. Decision summary	1
2. Scope of assessment	1
2.1 Regulatory framework	1
2.2 Application summary and overview of premises	1
2.3 Scope of works	3
2.3.1 Crushing & Conveying	3
2.3.2 Stockpile & Reclaim Conveyor	3
2.3.3 Grinding	3
2.3.4 Process Services	4
2.3.5 Site Development	4
2.3.6 Power Supply	4
2.4 Part IV of the EP Act	4
2.5 Clearing	5
3. Risk assessment	5
3.1 Source-pathways and receptors	5
3.1.1 Emissions and controls	5
3.1.2 Receptors	7
3.2 Environmental noise assessment	9
3.3 Air quality assessment	13
3.3.1 Change in air quality between current operations and De-Bottlenecking Project	14
3.3.2 Comparison of air quality of De-Bottlenecking Project (at FY25) against air emission criteria	14
3.4 Hydrology assessment	15
3.4.1 Change to Premises terrain	16
3.4.2 Regional flood frequency	17
3.5 Risk ratings	18
4. Consultation	21
5. Conclusion	21
References	21
Appendix 2: Application validation summary	23

Table 1: Proposed applicant controls	5
Table 2: Sensitive human and environmental receptors and distance from prescribed activity	7
Table 3: Risk assessment of potential emissions and discharges from the Premises during construction, commissioning and operation	19

Table 4: Consultation	21
Figure 1: Proposed site layout.....	2
Figure 2: Mt Keith surrounding noise sensitive receptors	12
Figure 3: Mt Keith catchment delineations.....	15
Figure 4: Digital elevation model comparing current (top) and proposed (bottom) terrain surfaces	16

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, works approval W6597/2021/1 has been granted.

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

BHP Nickel West Pty Ltd (the applicant, or BHP NiW) owns and operates the Mt Keith Nickel mine (the Premises, NMK), located about 460 kilometres north of Kalgoorlie, Western Australia.

The Mt Keith Nickel mine uses conventional crushing, semi-autogenous grinding (SAG) and ball milling, separation, floatation, thickening, and recovery to produce nickel concentrate. Nickel concentrate is transported by road to the BHP Nickel West Leinster operations for further blending and drying, prior to transportation to BHP Nickel West Kalgoorlie smelter.

The Mt Keith satellite operation (MKS) is located approximately 15 km south of NMK. MKS consists of two open pits, a waste rock dump (incorporating landfill) and ancillary infrastructure. MKS ore is transported to NMK for processing via haul road.

The open pit mine supporting NMK is nearing the end of its economic life and volumes extracted from this pit are reducing. Most future ore required to support NMK production will be drawn from the MKS deposits. MKS ores are significantly harder than those mined at Mount Keith and additional grinding capacity is required to maintain ore throughput and processing currently approved under L6453/1990/12 (L6453).

To meet this requirement, BHP's NiW Mount Keith Debottlenecking Project (MKDP) proposes to build an additional SAG mill circuit at NMK's process plant. In addition, BHP Nickel West Pty Ltd are proposing to install a mobile crushing and screening plant to screen approximately 500,000 tonnes of material per year.

On 6 September 2021, the applicant applied for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act). The application is to undertake construction works relating to the installation of a mobile crushing and screening plant, and an additional SAG mill, coarse ore stockpile No.2 (COS2, or 'stockpile 2'), conveyors and associated infrastructure (collectively known as the 'additional SAG mill circuit') at the premises (Figure).

The premises relates to the categories 5 and 12 and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6597/2021/1. 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 W6597/2021/1.

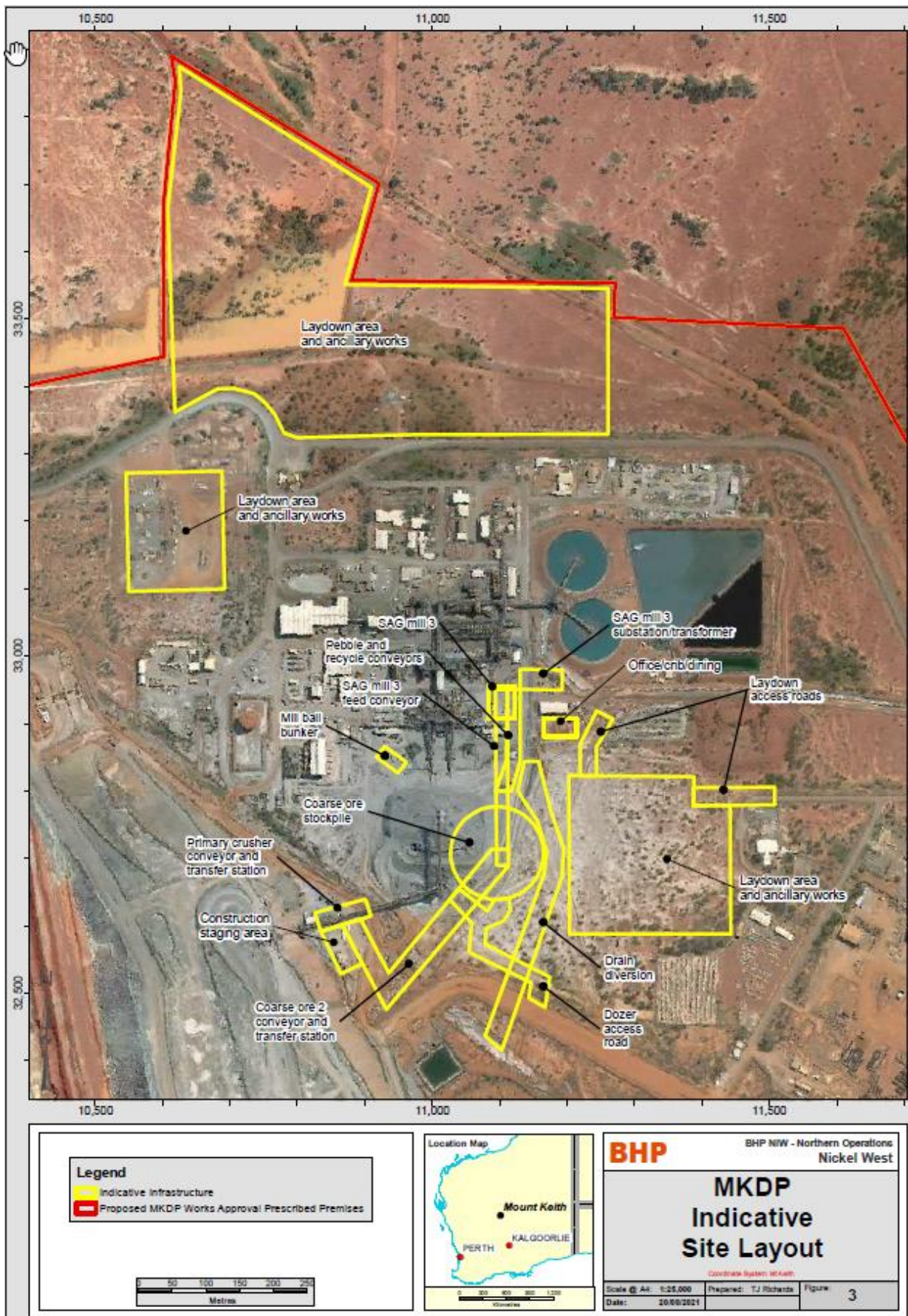


Figure 1: Proposed site layout

Works approval W6597/2021/1 (May 2022)

IR-T13 Decision report template (short) v3.0 (May 2021)

2.3 Scope of works

MKDP is to be located on the eastern side of the existing Mount Keith process plant adjacent to the existing coarse ore stockpile (COS) and SAG Mill 2 circuit (Figure). To construct and commission the MKDP, the following works are required:

- additional SAG mill circuit (no increase to existing throughput of 13,500,000 tonnes per year)
- mobile crushing and screening activities (500,000 tonnes per year).

MKDP primarily comprises the installation of an additional SAG mill, additional coarse ore stockpile, conveyors, and associated infrastructure. This additional grinding capacity will allow the plant to operate at its full capacity of 13,500,000 tonnes per year, approved under L6453. The Delegated Officer notes that no increase in throughput to Category 5 is requested by the applicant.

The proposed installation of the MKDP 'additional SAG mill circuit' includes the following infrastructure and modifications:

2.3.1 Crushing & Conveying

- Primary Crusher
 - Modifications to existing crushing conveyors and existing transfer station for the diversion and transfer of ore to new coarse ore stockpile No.2 (COS2) conveyor
 - New transfer station to split ore between the existing crushing conveyor and new stockpile conveyor including concrete foundations and earthworks
- COS2 Conveying
 - Stockpile 2 feed conveyors including transfers, take-ups, drive station, stacking conveyor, supporting structure, concrete foundations, earthworks, and raw water booster pump

2.3.2 Stockpile & Reclaim Conveyor

- New COS2 (ore capacity of up to 144,196 tonnes)
 - Earthwork's pad and drainage for COS2 including modifications to existing access road and drainage system
- Ore Reclaim
 - Reclaim vault, conveyor tunnel, escape tunnel, chutes, feeders, support structures, concrete foundations, sump pump, water reticulation systems, cathodic protection, and earthworks
 - SAG Mill 3 feed conveyor including ball handler, belt weigh scale, protection structures, take-up, supporting structures, concrete foundations, and earthworks

2.3.3 Grinding

- Semi-autogenous Grinding (SAG) Mill Module 3 (ore processing capacity of up to 4.2 Mtpa)
 - Installation of SAG Mill Module 3
 - SAG Mill trommel cover and discharge oversize chute
 - SAG Mill liner handler, re-lining tool, hoist and overhead rail support structure and pump hopper
 - Pebble recycle conveyors
 - Cyclone feed pumps and piping
 - Cyclone cluster, cyclone davit crane, underflow and overflow collection tanks and discharge piping

- Product trash screen feed box, distributor, screen, underflow boiler box, oversize chute, and trash bunker
- Product transfer pump hopper, transfer pumps, valves, and piping to existing plant deslime feed tanks
- Supporting structures, concrete foundations, and earthworks.

2.3.4 Process Services

- Pipe / Cable Racks & Corridors
 - Remediation of existing pipe rack south of SAG Mill 3
 - Modifications to existing mill building and screen building at interface locations for the distribution of new services to project facilities
- Process Air & Water Services
 - Tie-in and piping of process air, instrument air, process water, potable water, raw water and fire water to new facilities
 - The applicant currently undertakes water abstraction activities and holds a groundwater licence (GWL 69507) for an allocation of 10.95 gigalitres per annum. Raw water will be extracted from the Albion Downs bore field for the additional MKDP SAG mill circuit and the applicant estimate that with the additional quantity of ore being processed, the increase of raw water use will be between 5 - 10%.

2.3.5 Site Development

- Laydown Areas
 - Laydown areas for a mobile concrete batching plant, temporary construction facilities; storage of construction materials and equipment, including tie-in to existing site access roads and potable water services. The Delegated Officer notes that the applicant will carry out concrete batching in accordance with the *Environmental Protection (Concrete Batching and Cement Product Manufacturing) Regulations 1998*.
 - Laydown area(s) for a mobile crushing and screening plant located in the proposed Works Approval prescribed premise.
 - Construction access roads and pedestrian footpaths

2.3.6 Power Supply

- High Voltage (HV) Distribution
 - 11 kV buried cables connecting the SAG Mill 3 substation to the switchyard/transformer
 - SAG Mill 3 Substation and transformer compound earthworks, earthing, concrete foundations, slabs, walls, bunding, fencing, bollards and area lighting, with culverts provided beneath the existing access road for cabling to the SAG Mill 3 facilities and conveyance infrastructure
 - Extension of the existing Primary Crusher Substation including earthworks, earthing, concrete foundations, slabs, walls, bollards, and area lighting to power the COS2 conveying infrastructure

2.4 Part IV of the EP Act

Ministerial Statement (MS) 415 was issued on 7 May 1996 and approves the design and operation of the Mt Keith Nickel Mine central discharge tailings storage facility. A section 45c under the EP Act was approved on 14 October 2019 to increase tailings storage capacity, delineate the development envelope, and amend the proposed description and elements.

MS1087 was published on 28 December 2018 for the Mt Keith Satellite project which involves

the development of a nickel mine as a satellite to the existing Mt Keith Mine. A section 45c under the EP Act was approved on 16 September 2020 to revise the development area and increase the clearing area.

2.5 Clearing

Clearing of the MKDP area is authorised under Native Vegetation Clearing Permit (NVCP) CPS 8877/1. Any clearing is to be compliant with conditions of CPS 8877/1. BHP NiW state that the internal Environment and Heritage Impact assessment process is implemented on site to ensure all activities are undertaken in accordance with regulatory approvals and clearing will not be considered further in this amendment assessment. Priority flora management will be undertaken in accordance with CPS 8877/1. No assessment of clearing is conducted in this report and no clearing is authorised under W6597/2021/1.

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	<ul style="list-style-type: none"> • Material handling from loading and unloading activities involving <ul style="list-style-type: none"> ○ loading trucks ○ unloading trucks ○ bulldozing ○ crushing ○ stacking • Material transfer <ul style="list-style-type: none"> ○ by conveyors ○ transfer stations • Wheel-generated dust from roads and haul roads 	Air / windborne pathway	<p><u>New SAG mill circuit</u></p> <ul style="list-style-type: none"> • Water dousing at the primary crusher; a new dust spray will be installed at the stockpile stacking conveyor, and the main conveyors are provided with washdown nozzles. • Water carts used as required to minimise dust emissions at haul roads, conveyors, transfer points and COS2. <p><u>Mobile Crushing/Screening</u></p> <ul style="list-style-type: none"> • Mobile crushing/screening plant fitted with spray nozzles to minimise dust <p><u>General</u></p> <ul style="list-style-type: none"> • Vehicle speed limits to be in place.

Emission	Sources	Potential pathways	Proposed controls
	<ul style="list-style-type: none"> • Wind erosion from stockpiles and open areas (inclusive of pits and waste rock landforms) 		<ul style="list-style-type: none"> • Water carts employed for unsealed roads. • Closest sensitive receptor (Wanjarri Nature Reserve camping area) is ~5 km to the south-east.
Noise	Noise emissions (crushing activity and new SAG mill circuit – construction/ commissioning activities)	Air / windborne pathway	<p>Based on an environmental noise assessment the applicant demonstrates that noise levels will comply with <i>Environmental Protection (Noise Regulations) 1997</i>.</p> <p>Existing controls exist on-site, and no additional controls were proposed.</p> <p>The Delegated Officer considers noise emissions are unlikely to be an environmental risk, based on the distance to the nearest sensitive receptors, and will not consider noise from construction further in this assessment.</p>
Operation			
Dust	<ul style="list-style-type: none"> • Material handling from loading and unloading activities involving <ul style="list-style-type: none"> ○ loading trucks ○ unloading trucks ○ bulldozing ○ crushing ○ stacking • Material transfer <ul style="list-style-type: none"> ○ by conveyors ○ transfer stations • Wheel-generated dust from roads and haul roads • Wind erosion from stockpiles and open areas (inclusive of pits and waste rock landforms) 	Air / windborne pathway	<p><u>New SAG mill circuit</u></p> <ul style="list-style-type: none"> • MKDP Air Quality Assessment (Environmental Technologies & Analytics 2021) determined the MKDP air quality impact to be minor compared to nominated ambient air quality assessment criteria • Water sprays are available at conveyors, transfer points and COS2 <p><u>General</u></p> <ul style="list-style-type: none"> • Vehicle speeds are controlled • Water carts employed for unsealed roads
Noise	Noise emissions (crushing activities and new SAG mill circuit – construction/ commissioning activities)	Air / windborne pathway	<p>Environmental noise assessment modelling (Talis 2020) determined that the new SAG mill circuit will comply with the <i>Environmental Protection (Noise Regulations) 1997</i>.</p> <p>No further noise mitigation is expected to be required.</p>
Sediment laden stormwater	Stormwater Sediment runoff	Surface Water (runoff)	<p><u>Mobile Crushing/Screening</u></p> <ul style="list-style-type: none"> • Bunds around mobile crushing and screening plant

Emission	Sources	Potential pathways	Proposed controls
			<u>New SAG mill circuit</u> <ul style="list-style-type: none"> Additional drain diversion to be installed around COS2 MKDP flood modelling indicate no adverse flooding effects for the 1% Annual Exceedance Probability (AEP) 1% (BHP 2020) <u>General</u> <ul style="list-style-type: none"> Existing drainage structures
Hydrocarbon spills/leaks	Hydrocarbon contaminated soil or water	Soils via direct contact Surface Water (runoff) Groundwater via infiltration	Immediate removal of spilled material; contaminated material disposed of at bioremediation area or an approved location in accordance existing NMK site procedures, and conditions of Licence L6453

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 Delegated Officer notes that the reports supplied as supporting documentation by the applicant often consider employees (and others) as receptors. Where relevant, this will be noted for informational purposes only, and not take into consideration when setting conditions in works approval W6597/2021/1.

Table 2 and Figure 1 below provides a summary of potential human and environmental receptors that may be impacted because of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental Siting* (DWER 2020)).

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

Human receptors	Distance from prescribed activity
Land users	<ul style="list-style-type: none"> Wanjarri Nature Reserve camping area – located approximately 5 km southeast of the Prescribed Premises boundary and 22.5 km from proposed activities; and Albion Downs Pastoral Station – located approximately 14.2 km from Prescribed Premises boundary and 17.5 km from the proposed activities.
Environmental receptors	Distance from prescribed activity
Groundwater	The Premises is located within the East Murchison Groundwater Area proclaimed under <i>Rights in Water and Irrigation Act 1914</i> .

Surface Water Lines	Two seasonal surface water lines intersect the Prescribed Premises boundary. Upon review of aerial imagery, the surface water lines do not intersect the areas of proposed activity.
Remnant native vegetation	Native vegetation occurs within the Prescribed Premises boundary. Clearing is proposed within the boundary of the Mt Keith Debottlenecking area. However, is expected to be minimal given the area has been previously cleared and has been heavily disturbed.
DBCA legislated tenure	Reserve R30897 known as the Wanjarri Nature Reserve (A class) vested with the Conservation Commission of WA for the purpose of 'Conservation of flora and fauna' located approximately 5 km southeast of the Prescribed Premises boundary and 9.2 km southeast of the proposed activity.
Priority Ecological Community	A Priority Ecological Community (Pec) P1 known as the Violet Range (Perseverance Greenstone Belt) vegetation complexes (banded ironstone formation) is located approximately 11.3 km south of the Prescribed Premises boundary.
Priority flora species	<p>According to the Department of Biodiversity, Conservation and Attractions (DBCA) database, two records of priority flora species have been recorded within and directly adjacent to the Prescribed Premises boundary:</p> <ul style="list-style-type: none"> • <i>Tribulus adelacanthus</i> (Priority 3) – located within the Prescribed Premises boundary; and • <i>Eremophila pungens</i> (Priority 4) – located within 50 m north of the Prescribed Premises boundary. <p>The applicant has advised that these records will be retained and do not form part of the proposed clearing area for the Mt Keith De-Bottlenecking Project.</p> <p>The following records of priority flora have been recorded within 3 km of the Prescribed Premises boundary area:</p> <ul style="list-style-type: none"> • <i>Tribulus adelacanthus</i> (Priority 3) – 685 m north. • <i>Olearia mucronata</i> (Priority 3) – 435 m west. • <i>Thryptomene sp. Leinster</i> (B.J. Lepschi & L.A. Craven 4362) (Priority 3) – 1.4 km north. • <i>Eremophila pungens</i> (Priority 4) – 1.6 km north, 2.8 km northeast and 2.9 km northeast. • <i>Sida picklesiana</i> (Priority 4) – 2.9 km northeast.
Conservation significant fauna species	<p>According to the DBCA database, two records of fauna species have been recorded within and directly adjacent to the Prescribed Premises boundary:</p> <ul style="list-style-type: none"> • brush-tailed mulgara (<i>Dasycercus blythi</i>) (Priority 4) – 2.9 km north, 5.2 km southwest and 5.3 km southwest. • northern shield-backed trapdoor spider (<i>Idiosoma clypeatum</i>) (Priority 4) - 5.7 km southeast. • Black-flanked rock-wallaby, black-footed rock-wallaby (<i>Petrogale lateralis lateralis</i>) (Threatened) – 7.1 km west.
Aboriginal Sites of Significance	<p>Two Aboriginal Heritage sites are located partially or wholly within the proposed Mt Keith De-Bottlenecking Project premises:</p> <ul style="list-style-type: none"> • Mt Keith Station - ID 1483 (registered site); and • Mt Keith Silcrete Quarry - ID 17228 (lodged). <p>The applicant has noted that 'The proposed work area is located within the Mt Keith Mine Development (1993) Section 18 Approval Area. Government Consent to Disturb heritage sites DPLH ID 1483 and DPLH ID 17228 was</p>

	<p>granted with the Mt Keith Mine Development (1993) Section 18 Approval’.</p> <p>The applicant noted that a meeting was held between BHP Nickel West and the Tjiwarl Aboriginal Corporation in August 2020 to discuss the proposed activities and noted the Tjiwarl did not identify any concerns with the proposed works given they are within the Mount Keith operational site area.</p>
--	---

3.2 Environmental noise assessment

The applicant engaged Talis Consultants to undertake an environmental noise assessment for its Mt Keith De-Bottlenecking Project (Talis 2020). The noise sensitive receptors which have been considered in the Talis report are listed in Table 3 and shown in Figure 2.

Table 3: Mt Keith surrounding noise sensitive receptors

Receptor	Distance from Premises boundary
R1 – Mt Keith Accommodation Village	7 km
R2 - Albion Downs Pastoral Station	17.5 km
R3 - Ramelius Operation	>30 km
R4 - Wanjarri Nature Reserve Shearing Shed	22.5 km
R5 - Western Areas (Cosmos) Camp	>40 km
R6 - Yakabindie Pastoral Station	>40 km

Modelled received noise has been assessed against the Noise Regulations, which define maximum allowable noise levels that can be received at a sensitive premises, such as a residential area. These are determined by a combination of a base noise level plus an Influencing Factor (IF). The result is termed the “assigned level”.

The assigned noise levels include L_{A1} , L_{A10} and L_{AMAX} noise parameters, defined as:

- L_{AMAX} means an assigned level which is not to be exceeded at any time
- L_{A1} means an assigned level which is not to be exceeded for more than 1% of time; and
- L_{A10} means an assigned level which is not to be exceeded for more than 10% of time.

For noise sensitive premises, the time of day also affects the assigned levels. Table 4 presents the assigned noise levels for noise sensitive residential premises. As the facility is operational 24 days, 7 days a week, the L_{A10} assigned noise level is set at the lowest assigned level of 35 + IF decibels (dB).

Table 4: Assigned noise levels as defined in *the Environmental Protection (Noise) Regulations*

Type of premises receiving noise	Time of day	Assigned Levels (dB)		
		L _{A10}	L _{A1}	L _{Amax}
Noise sensitive premises: highly sensitive area	0700 to 1900 hours Monday to Saturday	45 + IF	55 + IF	65 + IF
	0900 to 1900 hours Sunday and public holidays	40 + IF	50 + IF	65 + IF
	1900 to 2200 hours all days	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and public holidays	35 + IF	45 + IF	55 + IF
Industrial	All hours	65	80	90

Based on the proximity of each noise sensitive receptor to industrial and commercial land use and any major and secondary roads, an Influencing Factor (IF) can be added to allowable assigned levels. Considering the rural and remote area, Talis Consultants did not set an IF in their model and the applicable assigned noise level for all the nearby noise sensitive receptors was left at 35 dB.

Talis modelled noise contours using SoundPlan v8.2 and input noise sources, ground topographical data, meteorological data, and sensitive receiver point locations. Detailed noise source data for the existing Mt Keith Operations was calculated by Talis from information provided by BHP NiW and the latest site-based Occupational Noise Survey source data. The overall Sound Power Levels (SWLs) of the existing Mt Keith Operations was calculated to be 129 dBA.

The noise model was setup to represent the existing and proposed Mt Keith operations in the following model scenarios:

- Current Operations (Scenario 1)
- Current Operations + Mt Keith De-Bottlenecking Project (Scenario 2).

The worst-case modelling results are summarised in Table 5.

Table 5: Noise modelling results

Sensitive Premises	Assigned Level (L _{A10})	Model Prediction (L _{A10})	
		Scenario 1 (Existing Mt Keith Operations)	Scenario 2 (Existing Mt Keith + NMKD Project Operations)
R1	35	23.7	23.9
R2		11.4	11.5
R3		7.5	7.6
R4		13.0	13.0
R5		4.9	4.9
R6		4.7	4.7

The Talis report asserts that the model outcomes show that both the current and future Mt Keith Operations comply with the Noise Regulations, and as a result, no noise mitigation was proposed by the applicant. The Delegated Officer considers that, due to the separation distance between the proposed Mt Keith De-Bottlenecking Project activities and sensitive receptors, there is no likely pathway for noise emissions to sensitive receptors.

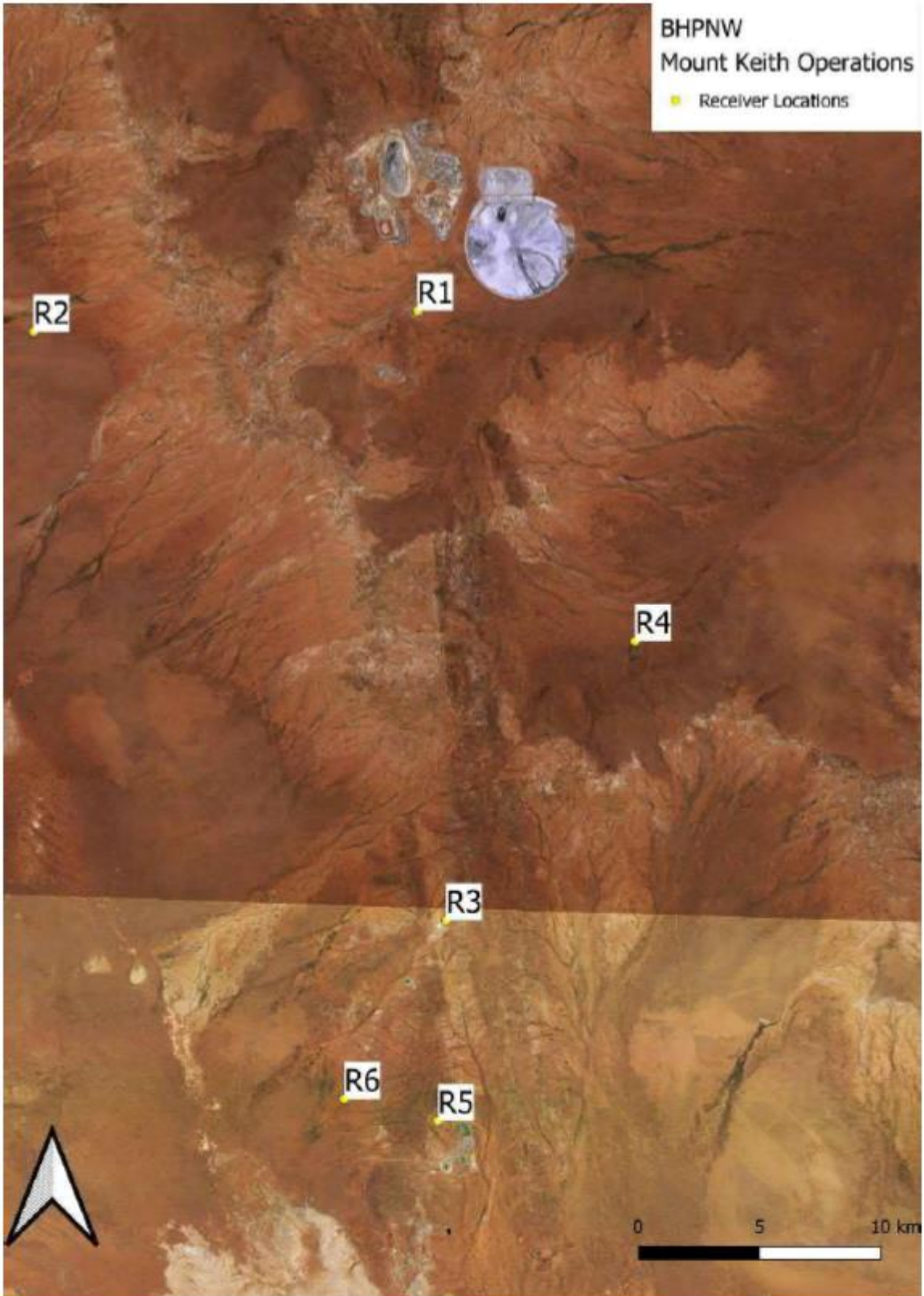


Figure 2: Mt Keith surrounding noise sensitive receptors

3.3 Air quality assessment

The applicant commissioned Environmental Technologies & Analytics Pty Ltd (ETA 2021) to undertake an air quality assessment for the Mt Keith Debottlenecking Project, to investigate the potential air quality impacts associated with the introduction of a new coarse ore stockpile, a third semi-autogenous grinding mill, associated conveyors and transfer stations.

The ETA report describes two operational scenarios, noting that the throughput tonnage is identical for both scenarios:

- Scenario 1: Current configuration with a single crusher / coarse ore stockpile (COS) with associated transfer stations and conveyors.
- Scenario 2: Debottlenecking – single crusher and two COS with associated transfer stations and conveyors and an additional SAG mill circuit.

The objective of the air quality assessment was to investigate the potential for particle emissions to adversely impact on air quality in the area surrounding the Premises. This is done by comparison to the relevant ambient air quality criteria, and to confirm the likely change in emission brought on by operational Scenario 2.

To ensure that the model predictions remained conservative, ETA's emission estimation was based on financial year 2025 (FY25), with a total mined tonnage (ore and waste) of 130.2 million tonnes per annum (Mtpa). ETA indicate that this represents the maximum foreseeable forecast tonnage. Emission estimation was undertaken using the emission equations and factors contained within the National Pollutant Inventory *Emission Estimation Technique Manual for Mining* (EA, 2012).

ETA estimated air quality emissions using the WRF/CALMET/CALPUFF modelling suite. Ground-level particulates (as Total Suspended Particulate (TSP), particulate matter less than 10 micron (μm) in aerodynamic diameter (PM_{10}), and $\text{PM}_{2.5}$ concentrations) were predicted across the model domain and compared against the relevant air quality assessment criteria (see Table 6).

Table 6: BHP NiW summary of air quality assessment criteria

Pollutant	Air quality assessment criteria			Reference
	Concentration ¹	Averaging Period	Allowable Exceedances	
PM ₁₀	50 $\mu\text{g}/\text{m}^3$	24-hour	exception event	NEPM (NEPC, 2015)
	25 $\mu\text{g}/\text{m}^3$	annual	none	
PM _{2.5}	25 $\mu\text{g}/\text{m}^3$	24-hour	exception event	NEPM (NEPC, 2015)
	8 $\mu\text{g}/\text{m}^3$	annual	none	
TSP	90 $\mu\text{g}/\text{m}^3$	24-hour average	none	Kwinana EPP (EPA, 1999); DWER (2019)

Notes:

¹ Concentrations referenced to 0°C

Considering the distance to nearest residences or neighbouring sensitive receptors, ETA modelled the potential air quality impact on Mt Keith accommodation village and at seven points along Goldfields Highway.

The Delegated Officer notes that ETA is aware that DWER guidelines exclude on-site personnel as sensitive receptors, but these were included in the ETA report for information purposes. The Delegated Officer also notes that the Goldfields Highway is not a sensitive receptor, but these data points have been included to provide an indication of the potential impact along the highway.

3.3.1 Change in air quality between current operations and De-Bottlenecking Project

ETA's model results indicate that overall, the change in ground level concentrations between the two scenarios is predicted to be minor and is restricted to the immediate vicinity of the processing mill. Specifically:

- For TSP - The magnitude and extent of impacts are largely unchanged between the two scenarios.
- For PM₁₀ - The predicted change in ground level concentrations between the two scenarios is predicted to be minor and is restricted to the immediate vicinity of the processing mill.
- For PM_{2.5} - The magnitude and extent of impacts are largely unchanged between the two scenarios.
- For deposition-- The magnitude and extent of impacts are largely unchanged between the two scenarios.

This result was expected by ETA as there is no change in the total mining tonnage between the two scenarios, and the introduction of an additional COS (and associated infrastructure) and SAG mill does not result in an increase in Category 5 processing capacity that has already been assessed and approved under Licence L6453.

As the modelling was undertaken for the year forecast with the highest maximum tonnage, ETA also expect this result to represent the conservative worst-case scenario. The inference is made by the applicant that the non-modelled years would have lower estimated project emissions and therefore lower potential impacts.

3.3.2 Comparison of air quality of De-Bottlenecking Project (at FY25) against air emission criteria.

The ETA report provided a comparison of the modelling results against ambient air quality assessment criteria in Table 6. These comparisons were given as an indicator for potential changes to the nominated receptors, noting that the chosen receptors are not 'sensitive' receptors and so the regulatory criteria for amenity and health may not apply.

The comparison indicates that:

- For TSP the maximum forecast tonnage (FY25) leads to –
 - the maximum and 99th percentile results being higher than the 24-hour assessment criteria at the Accommodation Village, with the 90th percentile being approximately 80% of the 24- hour assessment criteria of 90 µg/m³.
- For PM₁₀ the maximum forecast tonnage (FY25) leads to –
 - an annual average PM₁₀ at the Accommodation Village of less than 50% of the assessment criteria of 25 µg/m³.
 - the maximum and 99th percentile results being higher than the 24-hour assessment criteria at the Accommodation Village, with the 90th percentile being approximately 50% of the 24- hour assessment criteria of 50 µg/m³.
- For PM_{2.5} the maximum forecast tonnage (FY25) leads to –
 - an annual average PM_{2.5} at the Accommodation Village of less than 50% of the assessment criteria of 8 µg/m³.
 - the maximum results being higher than the 24-hour assessment criteria at the Accommodation Village, with the 99th percentile being less than 75% of the 24-hour

assessment criteria of 25 µg/m³.

- For deposition
 - The indicative criterion for potential effects on vegetation (7 g/m²/month) is only exceeded over the mine and along parts of the haul route.

The Delegated Officer notes that receptors chosen for the air quality assessment are not sensitive receptors identified in

Table 2, and were chosen to give some indication of changes between existing conditions at Mt Keith versus those expected following the construction of the De-Bottlenecking Project.

The applicant has proposed to use water as the primary mechanism for dust suppression, with water applied by water carts as necessary, and water sprays built into infrastructure as required.

The Delegated Officer notes that these proposed dust control measures (refer to Table 1) are consistent with those described in *A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities* (DEC 2011) available on the DWER website. These controls are deemed suitable and necessary to manage dust emissions during operations and have therefore been conditioned as regulatory requirements within works approval W6597/2021/1.

The Delegated Officer considers that the De-Bottlenecking Project is not expected to produce any significant impact on the sensitive receptors, identified in

Table 2.

3.4 Hydrology assessment

The proposed MKDP is to be constructed in the upper catchment area that drain east into Lake Maitland, approximately 50 km east of MKDP (refer to Figure 3). Lake Maitland is an ephemeral lake and dries to clay pans in the dry season. The applicant indicates that apart from a limited period after significant storm events, the majority of surface water runoff from NMK and MKDP is unlikely to reach Lake Maitland.

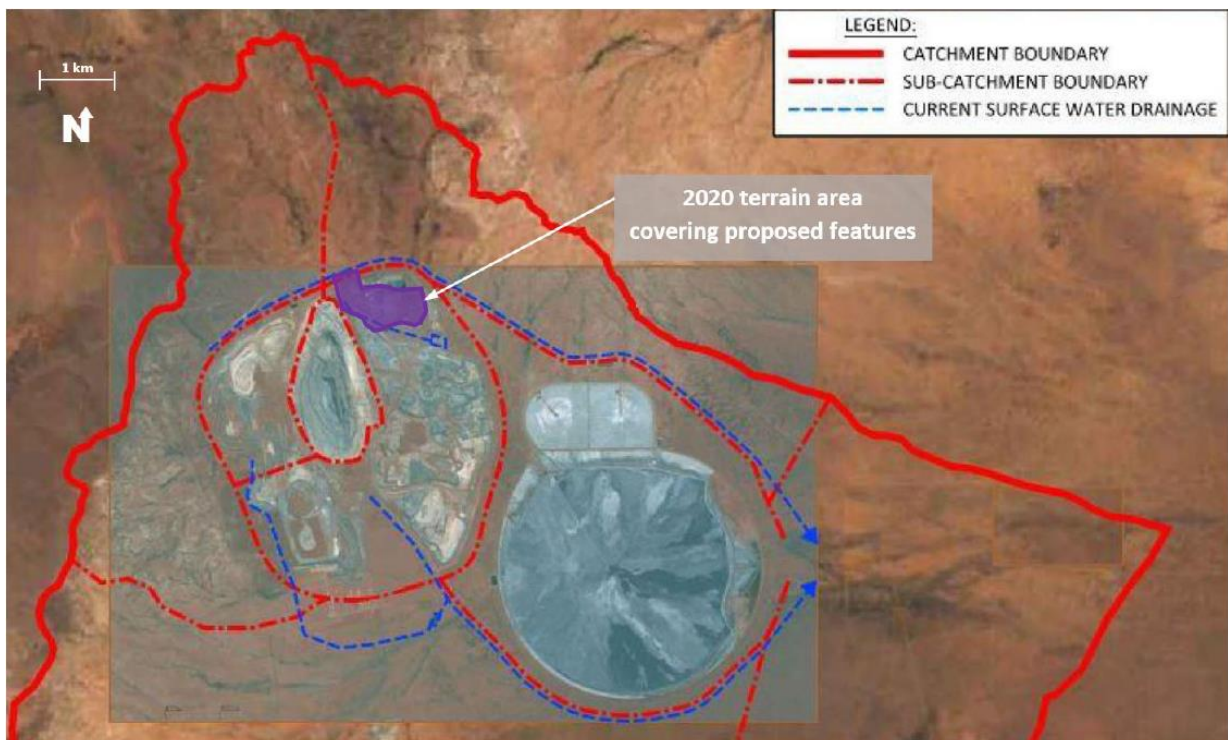


Figure 3: Mt Keith catchment delineations

The applicant notes that historic evidence from the site shows that surface water runoff is more likely to seep into the ground or be contained in smaller pans and drainage features and be lost to evaporation than to reach the receiving lake.

The applicant supplied a hydrological report from Surface Water Solutions (SWS 2020) to summarise hydrological and hydraulic modelling of pre-and post-development scenarios, including a comparison of the impacts of proposed features on flood levels.

The applicant considers that the SWS report provides the hydrologic and hydraulic background to support the design of proposed features associated with the MKD project. The overarching objectives of this study were to:

- Confirm capacity of the existing drainage infrastructure.
- Provide the required 1% Annual Exceedance Probability (AEP) flood level to determine the safe clearance for the proposed substation and SAG 3 mill area.
- Provide conceptual design recommendations for drainage control to minimise impacts on key infrastructure and the surrounding environment.

3.4.1 Change to Premises terrain

Figure 4 compares the existing condition and proposed condition terrain surfaces for the area covering the proposed project features. Areas with changes are labelled on the proposed conditions figure.

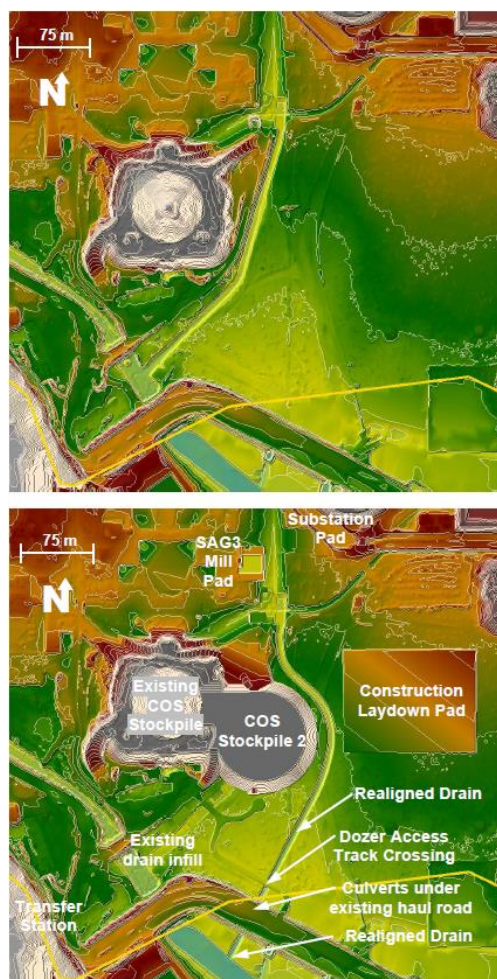


Figure 4: Digital elevation model comparing current (top) and proposed (bottom) terrain surfaces

3.4.2 Regional flood frequency

SWS modelled hydraulic conditions using HEC-RAS version 5.0.7, an integrated system of software developed to model the hydraulics of water flow through natural rivers and other channels. The Mount Keith HEC-RAS model outflow hydrograph, shows a post project peak 100-year average recurrence interval (ARI), 3-hour storm duration discharge rate of approximately 4.2 m³/s. The initial peak flow results from runoff in the immediate area surrounding the outflow, and the second peak results as the additional inflow reaches the outlet of drains.

Based on the model results, the diverted north-south arterial drain around the new coarse ore stockpile (refer to Figure) reduces flood levels in the area upstream of the proposed haul road crossing. The applicant proposes to install suitably sized box culverts (tentatively designed to be 2 x 1,800 mm x 600 mm) under the haul road to sufficiently convey the 1% AEP design event with a maximum headwater to culvert height ratio of 1.5. The applicant state that the box culvert configuration will be selected to meet cover requirements while efficiently conveying flows.

The SWS report compared existing and proposed flow depths, which indicate that the proposed drainage design lowers maximum floodplain elevations in the vicinity of the proposed drain by up to 20 cm. Some localised depth increases are presented around the outside of constructed pads that concentrate flows around the perimeter. A recommendation in the SWS report, to shift the drain to the southeast, would reduce post-project water surface elevations around the constructed pad by an average of approximately 10 cm.

The Delegated Officer is satisfied that the controls suggested by the applicant will be adequate to manage stormwater flow.

3.5 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and considers 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 7.

Works approval W6597 that accompanies this decision report authorises construction and time limited operations. The conditions in the issued works approval, as outlined in Table 7 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence amendment is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e., Category 12 activities. 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 7: 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								
Installation of new SAG mill circuit, coarse ore stockpile, conveyors, and associated infrastructure Placement of crushing and screening plant and associated equipment. Vehicle movement on unsealed access roads Installation of additional drain diversion constructed around new Coarse Ore Stockpile No. 2 Stormwater infrastructure (earthen bunds) constructed as required to prevent stormwater ingress into the mobile crushing and screening plant operational areas	Dust	Air/windborne pathway causing impacts to health and amenity of closest human receptors.	Wanjarri Nature Reserve Camping Area located approximately 5 km southeast of the Prescribed Premises boundary (22.5 km from proposed activity).	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Conditions 1 to 3 (general infrastructure and compliance reporting), Condition 6, 8 and 9 (dust management)	No residences or sensitive land uses within 15 km of the proposed activity. The Delegated Officer considers that the provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> and section 49 of the EP Act are sufficient to regulate noise emissions during construction of the SAG mill circuit and crushing and screening plant.
	Noise		Albion Downs Pastoral Station – located approximately 14.2 km from Prescribed Premises boundary and 17.5 km from the proposed activities.	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y		
Operation (including time-limited-operations operations)								
Category 5 Operation of new SAG mill circuit and associated equipment at the Premises processing plant.	Dust	Air/windborne pathway causing impacts to health and amenity of closest human receptors	Wanjarri Nature Reserve Camping Area located approximately 5 km southeast of the Prescribed Premises boundary (22.5 km from proposed activity).	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Conditions 1 to 3 (general infrastructure and compliance reporting), Condition 6, 8 and 9 (dust management)	No residences or sensitive land uses within 15 km of the proposed activity. The Delegated Officer considers that the provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> and section 49 of the EP Act are sufficient to regulate noise and dust emissions during operation of the SAG mill circuit and crushing and screening plant.
	Noise		Albion Downs Pastoral Station – located approximately 14.2 km from Prescribed Premises boundary and 17.5 km from the proposed activities.	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y		
	Sediment laden stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Native vegetation located adjacent to the Prescribed Premises boundary. Priority flora located 800 m from the laydown area where the plant will be installed. Two seasonal surface water lines intersect the Prescribed Premises boundary, with the closest being 650 m northeast of the proposed activity.	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Conditions 1 to 3 and Condition 6 (item 3)	The applicant controls proposed are deemed to be suitable by the Delegated Officer and they have been captured as regulatory requirements within works approval W6597/2021/1.
	Hydrocarbon spills/leaks	Direct discharge to land potentially causing contamination of soils and the deterioration of groundwater quality resulting in degradation or death of native vegetation. Overland runoff during rainfall events potentially causing ecosystem disturbance and impacting surface water quality.	Native vegetation located adjacent to the Prescribed Premises. Two seasonal surface water lines intersect the Prescribed Premises boundary, with the closest being 374 m east of the proposed activity.	Refer to Section 3.1	C = Minor L = Possible Medium Risk	Y	Conditions 1 to 3, Condition 6 (item 2) , Condition 7.	The applicant controls proposed are deemed to be suitable by the Delegated Officer and they have been captured as regulatory requirements within works approval W6597/2021/1. While the Delegated Officer considers that the applicant has adequate procedures in place to manage spills and leaks of hydrocarbons, these were not specified in the works approval application. The Delegated Officer has applied additional regulatory requirements to manage hydrocarbon emissions during time limited operations. The Delegated Officer notes that discharges to the environment are also regulated under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i> .

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			
<p><u>Category 12</u></p> <p>Operation of the crushing and screening plant</p> <p>Unloading, loading, stockpiling and storage of material.</p> <p>Vehicle Movements on unsealed surfaces.</p>	Dust	Air/windborne pathway causing impacts to health and amenity of closest human receptors.	<p>Wanjarri Nature Reserve Camping Area located approximately 5 km southeast of the Prescribed Premises boundary (22.5 km from proposed activity).</p> <p>Albion Downs Pastoral Station – located approximately 14.2 km from Prescribed Premises boundary and 17.5 km from the proposed activities.</p>	Refer to Section 3.1	<p>C = Slight</p> <p>L = Unlikely</p> <p>Low Risk</p>	Y	Conditions 1 to 3, Condition 6, 8 and 9.	<p>No residences or sensitive land uses within 15 km of the proposed activity.</p> <p>The Delegated Officer considers that the provisions of section 49 of the EP Act are sufficient to regulate dust emissions during operation of the SAG mill circuit and crushing and screening plant.</p>
		Air/windborne pathway potentially causing degradation or death of adjacent remnant vegetation and priority flora.	<p>Native vegetation located adjacent to the Prescribed Premises boundary.</p> <p>Priority flora located adjacent to laydown area where the plant will be installed.</p> <p>Conservation significant fauna (brush-tailed mulgara (<i>Dasyercus blythi</i>) (Priority 4) recorded 3.9 kms north of proposed activity)</p>	Refer to Section 3.1	<p>C = Slight</p> <p>L = Unlikely</p> <p>Low Risk</p>	Y		
	Noise	Air/windborne pathway causing impacts to health and amenity.	<p>Wanjarri Nature Reserve Camping Area located approximately 5 km southeast of the Prescribed Premises boundary (22.5 km from proposed activity).</p> <p>Albion Downs Pastoral Station – located approximately 14.2 km from Prescribed Premises boundary and 17.5 km from the proposed activities.</p>	Refer to Section 3.1	<p>C = Slight</p> <p>L = Unlikely</p> <p>Low Risk</p>	Y	N/A	<p>No residences or sensitive land uses within 15 km of the proposed activity.</p> <p>The Delegated Officer considers that the provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> and section 49 of the EP Act are sufficient to regulate noise emissions</p>
	Sediment laden/contaminated stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality.	<p>Native vegetation located adjacent to the Prescribed Premises boundary.</p> <p>Priority flora located adjacent to laydown area where the plant will be installed.</p> <p>Two seasonal surface water lines intersect the Prescribed Premises boundary, with the closest being 374 m east of the proposed activity.</p>	Refer to Section 3.1	<p>C = Moderate</p> <p>L = Unlikely</p> <p>Medium Risk</p>	Y	Conditions 1 to 3 and Condition 6 (item 3)	<p>The applicant controls proposed are deemed to be suitable by the Delegated Officer and they have been captured as regulatory requirements within works approval W6597/2021/1.</p>
<p>Hydrocarbon spills or leaks from vehicle and equipment use, refueling or maintenance activities.</p> <p>Spillage, leakage and seepage of hydrocarbons and chemicals used and stored onsite.</p>	Hydrocarbon spills/leaks	<p>Direct discharge to land potentially causing contamination of soils and the deterioration of groundwater quality.</p> <p>Soil contamination may inhibit the growth and survival of remnant native vegetation located adjacent to crushing and screening activities and in turn result in degradation or death of vegetation and priority flora.</p> <p>Overland runoff during rainfall events potentially causing ecosystem disturbance and impacting surface water quality.</p>	<p>Native vegetation located adjacent to the Prescribed Premises (MKDA).</p> <p>Priority flora:</p> <ul style="list-style-type: none"> <i>Tribulus adelacanthus</i> (Priority 3) – located within and adjacent to the Prescribed Premises boundary; and <i>Eremophila pungens</i> (Priority 4) – located directly adjacent to the Prescribed Premises boundary. <p>Wanjarri Nature Reserve Camping Area located approximately 5 km southeast of the Prescribed Premises boundary (22.5 km from proposed activity).</p> <p>Albion Downs Pastoral Station – located approximately 14.2 km from Prescribed Premises boundary and 17.5 km from the proposed activities.</p> <p>Conservation significant fauna (brush-tailed mulgara (<i>Dasyercus blythi</i>) (Priority 4) recorded 3.9 km north of proposed activity).</p>	Refer to Section 3.1	<p>C = Minor</p> <p>L = Possible</p> <p>Medium Risk</p>	Y	Conditions 1 to 3, Condition 6 (item 2) , Condition 7.	<p>The applicant controls proposed are deemed to be suitable by the Delegated Officer and they have been captured as regulatory requirements within works approval W6597/2021/1.</p> <p>While the Delegated Officer considers that the applicant has adequate procedures in place to manage spills and leaks of hydrocarbons, these were not specified in the works approval application. The Delegated Officer has applied additional regulatory requirements to manage hydrocarbon emissions during time limited operations.</p> <p>The Delegated Officer notes that discharges to the environment are also regulated under the <i>Environmental Protection (Unauthorised Discharges) Regulations 2004</i>.</p>

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. **Underline text** depicts additional regulatory controls imposed by department.

Works approval W6597/2021/1 (May 2022)

4. Consultation

Table 8 provides a summary of the consultation undertaken by the department.

Table 8: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 20 October 2021	None received	N/A
Local Government Authority (Shire of Wiluna) advised of proposal on 20 October 2021	None received	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 20 October 2021	DMIRS replied on 15 November 2021 stating that DMIRS had recently met with BHP Nickel West to discuss upcoming projects. DMIRS were anticipating a Mining Proposal submission in November to reflect the work proposed in the Works Approval application. DWER were advised that if any material concerns arise once this Mining Proposal application has been received and is under assessment, DMIRS will contact the department for further discussion.	N/A
Applicant was provided with draft documents on 3 May 2022 and provided comment on 16 May and requested the remainder of the comment period to be waived.	The applicant requested that specific dimensions related to the stormwater drainage culverts be replaced with the term "suitably sized". This request is to allow for any final design changes of the stormwater drainage that may occur during construction of the MKDP.	The Delegated Officer accepts this proposed change as the the revised wording still meets the intent of the proposed stormwater drainage infrastructure to sufficiently convey the 1% AEP design event.

5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. BHP Nickel West Pty Ltd (2021), *Application form: Mount Keith Debottlenecking Project_Works Approval Application_Rev0*, Perth WA
2. BHP Nickel West Pty Ltd (2021), *Mt Keith Debottlenecking Works Approval_Attachment 8 Supplementary Information_Rev0*, Perth WA
3. Environmental Technologies and Analytics (ETA 2021), *1133 Nickel West Northern Operations, Mt Keith Debottlenecking Project Air Quality Assessment*, Perth WA

4. Surface Water Solutions (SWS 2020), *MKD-1-PREP-000000-0001/0 Mt Keith Operation Debottlenecking General Hydrological Project Report*, Kelmscott WA
5. Talis Delivering Solutions (Talis 2020), *TN20010-1 Environmental Noise Assessment, Mt Keith De-bottlenecking Project, BHP Nickel West*, Leederville WA
6. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
7. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
8. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY	
Application type	
Works approval	<input checked="" type="checkbox"/>
Date application received	6 September 2021
Applicant and Premises details	
Applicant name/s (full legal name/s)	BHP Nickel West Pty Ltd
Premises name	Mt Keith Operations
Premises location	Mining tenements: M53/165, M53/166, M53/167, M53/56, and M53/57 Miscellaneous licences L53/63, L53/82 and L53/122 L53/58 – Premises intersects this Miscellaneous Licence owned by TEC Desert Pty Ltd (gas pipeline to power station). This lease has not been included as a land parcel associated to the Premises as there is underlying mining tenement owned by BHP Nickel West and the proposed activities do not occur where the gas pipeline occurs.
Local Government Authority	Shire of Wiluna
Application documents	
HPCM file reference number:	DER2021/000522
Key application documents (additional to application form):	Supporting Documents (DWERDT500, DWERDT501, DWERDT502, DWERDT504, DWERDT505) including: <ul style="list-style-type: none"> • <i>Mount Keith debottlenecking Works Approval Application form;</i> • <i>Mount Keith debottlenecking Works Approval – Attachment 8 – Supplementary Information;</i> • <i>Proof of Occupier Status – Mining Tenement register search;</i> • <i>ASIC Certificate of Registration on Change of Name;</i> • <i>Design Drawings;</i> • <i>Mt Keith Operation Debottlenecking general hydrological project report;</i> • <i>Mt Keith Operation Debottlenecking SPS Concentrator - General Overall Project Process Flow Diagram;</i> • <i>Environmental Technologies and Analytics (2021), Nickel West Northern Operations – Mt Keith Debottlenecking Project Air Quality Assessment Air Quality Assessment Final Report, Version 4, prepared for Nickel West, dated June 2021; and</i> • <i>Talis Delivering Solutions (2020), Environmental Noise Assessment – Mt Keith De-bottlenecking Project, prepared for Nickel West, dated October 2020.</i>
Scope of application/assessment	

Summary of proposed activities or changes to existing operations.	BHP Nickel West Pty Ltd Mount Keith Debottlenecking Project involves the installation of an additional SAG mill circuit at the Mt Keith Nickel Mine (MKN) processing plant. The majority of future ore required to support production at MKN will be drawn from deposits at the Mt Keith satellite operation (MKS). MS ore is significantly harder than ore mined at MKN which is slowing down the throughputs being produced. The new SAG mill is required for additional grinding capacity to allow the processing plant to operate at its full capacity and maintain the currently approved throughput for Category 5. In addition, BHP Nickel West Pty Ltd are proposing to install a mobile crushing and screening plant to screen approximately 500,000 tonnes of material.
---	---

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 5: Processing or beneficiation of metallic or non-metallic ore	13,500,000 tonnes per annum (no increase in throughput)	N/A
Category 12: Screening, etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	500,000 tonnes per annum	

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"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial Statement (MS) 415 was issued on 7 May 1996 and approves the design and operation of the Mt Keith Nickel Mine central discharge tailings storage facility. A section 45c under the EP Act was approved on 14 October 2019 to increase tailings storage capacity, delineate the development envelope, and amend the proposed description and elements. MS1087 was published on 28 December 2018 for the Mt Keith Satellite project which involves the development of a nickel mine as a satellite to the existing Mt Keith Mine. A section 45c under the EP Act was approved on 16 September 2020 to revise the development area and increase the clearing area.
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:

Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input checked="" type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: 8877/1 Clearing of native vegetation within the Mount Keith Debottlenecking Project is authorised under clearing permit CPS 8877/1. Clearing is proposed within the boundary of the Mt Keith Debottlenecking area, however is expected to be minimal given the area has been previously cleared and has been heavily disturbed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A Premises not located within a CAWS area.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Licence/permit No: GWL 69507 – water allocation of 10.95 Giga Litres per annum (GLpa) Raw water will be extracted from the Albion Downs borefield for the additional MKDP SAG mill circuit. An increase of raw water use by 5-10% will be required with the additional quantity of ore being processed.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: East Murchison Groundwater Area Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxx</i>)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<i>Mining Act 1978</i> - Mt Keith satellite operation mining activities commenced in February 2019 following the approval of Mining Proposal ID 76846, with the development of the transport corridor and the first stage of Six Mile Well pit. Mining Proposal ID 84527 was approved on 7 October 2020 following an amendment to increase the development area and clearing area.

		The installation and operation of the pipeline infrastructure is approved under Mining Proposals ID 76846, ID 84527 and 94015 (22 March 2021).
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Classification: Possibly contaminated - investigation required CASS ID: 2429 Date of classification: 20 May 2011 DEC Reference: DEC5625