Application for Works Approval

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

Works Approval Number	W6787/2023/1
Applicant	Chichester Metals Pty Ltd
ACN	109 264 262
File number	DER2023/000005
Premises	Christmas Creek Mine Site Tenements E46/610, E46/612, M46/320, M46/321, M46/322, M46/323, M46/324, M46/325, M46/326, M46/327, M46/328, M46/329, M46/330, M46/331, M46/332, M46/333, M46/334, M46/335, M46/336, M46/337, M46/338, M46/339, M46/340, M46/341, M46/342, M46/343, M46/344, M46/345, M46/346, M46/347, M46/348, M46/349, M46/350, M46/351, M46/352, M46/353, M46/354, M46/355, M46/403, M46/406, M46/412, M46/413, M46/414, M46/415, M46/416, M46/417, M46/418, M46/419, M46/420, M46/421, M46/422, M46/423, M46/424, G46/7, L46/49, L46/56, L46/58, L46/86, L46/87, L46/106, L46/111, E46/566 and L46/66 NEWMAN WA 6753 As defined by the coordinates in Schedule 2 of the works approval As defined by the premises maps attached to the issued works approval
Date of report	20 June 2023
Decision	Works approval granted

Christine Pustkuchen
Digitally signed by Christine Pustkuchen
Date: 2023.06.20 15:47:37 +08'00'

A/Manager, Resource Industries
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Table of Contents

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 W6787/2023/1 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

On 03 January 2023, the applicant submitted an application 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 Hall Mining Hub at the premises. The premises is approximately 60 km south of Nullagine.

The proposed activities for Hall Mining Hub include the following:

- 13.5km Hall Overland Conveyor;
- Primary Ore Crushing Plant; and
- Ore Processing Facility (OPF) Infeed.

As the active mining footprint of the Christmas Creek Mine Site continues to expand, additional construction activities are required to develop the Hall Mining Hub and its associated maintenance facilities. The purpose of this infrastructure is to enable the transfer of ore material from the western pits of the Christmas Creek Mine Site to the existing Christmas Creek Ore Processing Facility (OPF1 and OPF2).

There are no changes to the approved throughput capacity of 77 million tonnes per annual period due to the operation of the proposed Primary Ore Crushing Plant and Hall Overland Conveyor.

The premises relates to the category and assessed production / design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6787/2023/1. 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 W6787/2023/1.

2.2.1 Hall Overland Conveyor

The proposed Hall Overland Conveyor will connect the proposed Primary Ore Crushing Plant with existing OPF1 and OPF2. Ore will be fed into the Primary Ore Crushing Plant and then transported by the 13.5 km Hall Overland Conveyor to OPF1 and OPF2.

Refer to Figure 1 for dust controls design of the Hall Mining Conveyor and Figure 2 for stormwater controls design of the Hall Mining Conveyor.

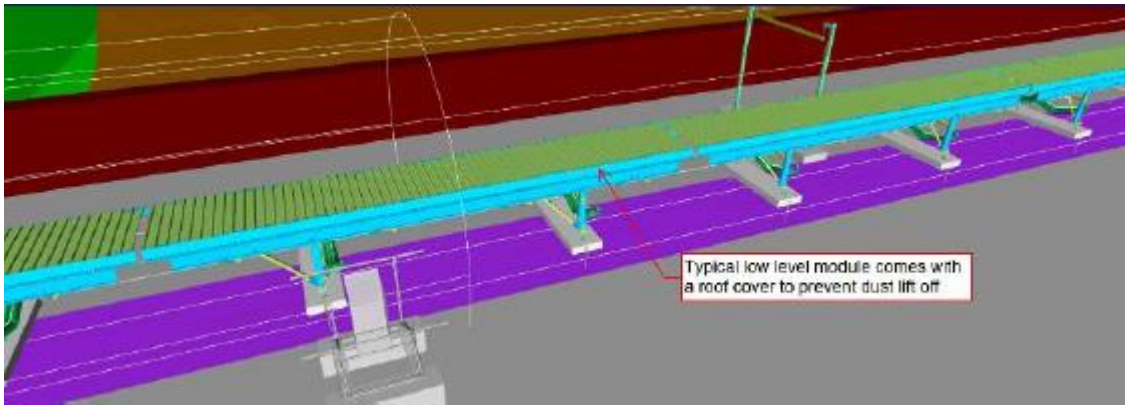

Figure 1: Low Level Module Design of Hall Mining Conveyor Roof Cover

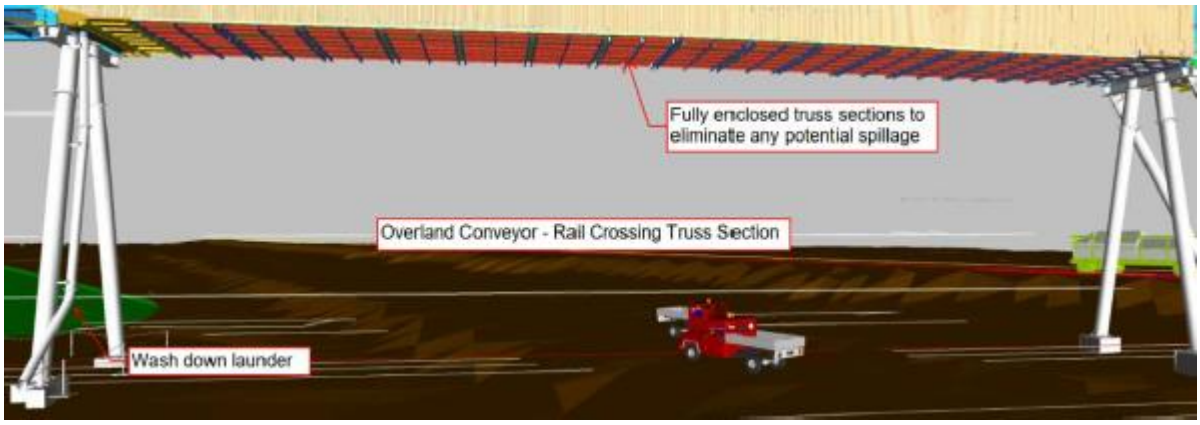

Figure 2: Hall Overland Conveyor rail crossing truss section

2.2.2 Primary Ore Crushing Plant

Ore from mining pits and ROM pads will be fed via haul trucks into the Primary Ore Crushing Plant. The proposed design criteria for the Primary ore Crushing Plant are shown in Table 1.

Table 1: Primary Ore Crushing Plant Design Criteria

Parameter	Value	Unit
Primary Ore Crushing Plant Nominal Throughput	3,000	tph
Primary Ore Crushing Plant Design Throughput	4,200	tph
Primary Crushing Plant Sprint Throughput	4,500 to 5,000	tph
Primary Crushing Plant Life of Asset Average Rate	>2,200	tph
Design Life	20	years

Refer to Figure 3, Figure 4, Figure 5, Figure 6 and Figure 7 for dust controls design of the Primary Ore Crushing Plant. Refer to Figure 8 for stormwater controls design of the Primary Ore Crushing Plant.

Ore is then conveyed along the Hall Mining Conveyor to OPF1 and OPF2.

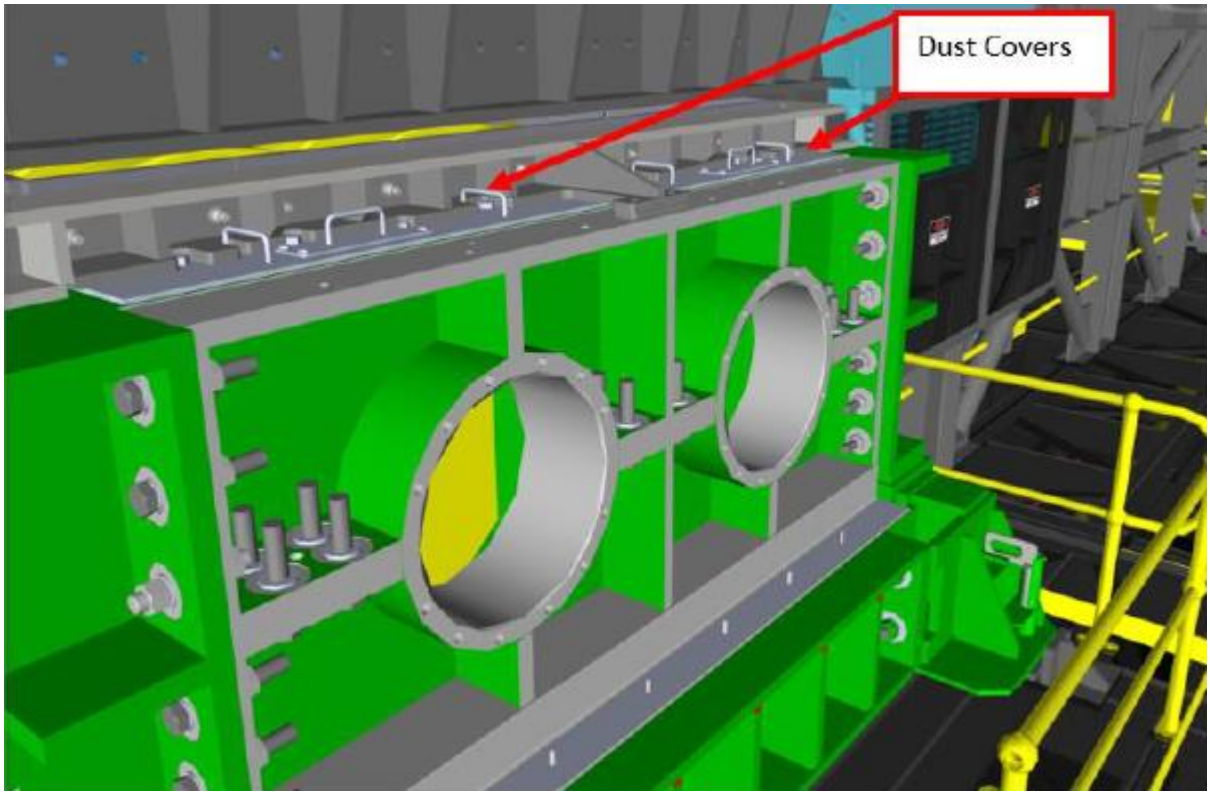

Figure 3: Sizer dust covers

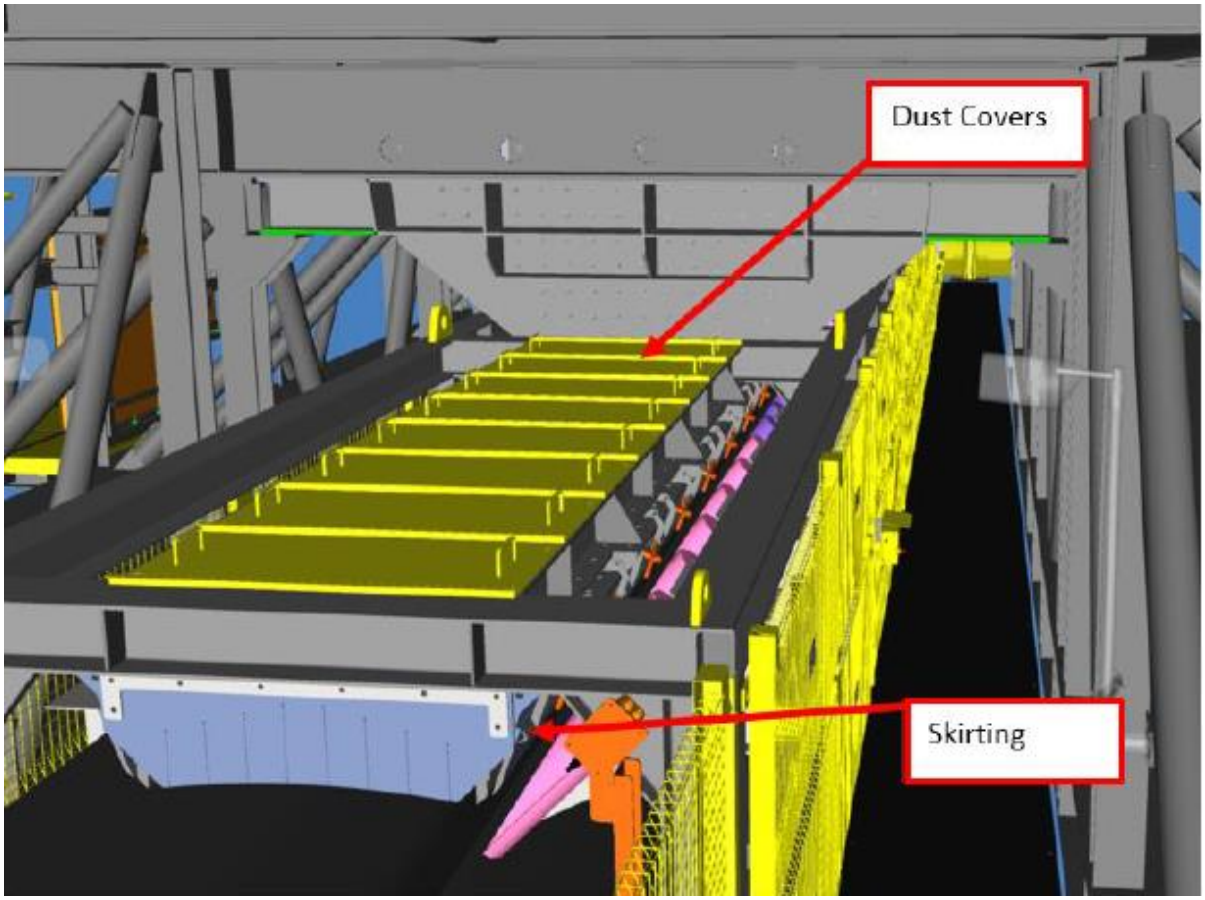

Figure 4: Loading module skirting and dust covers

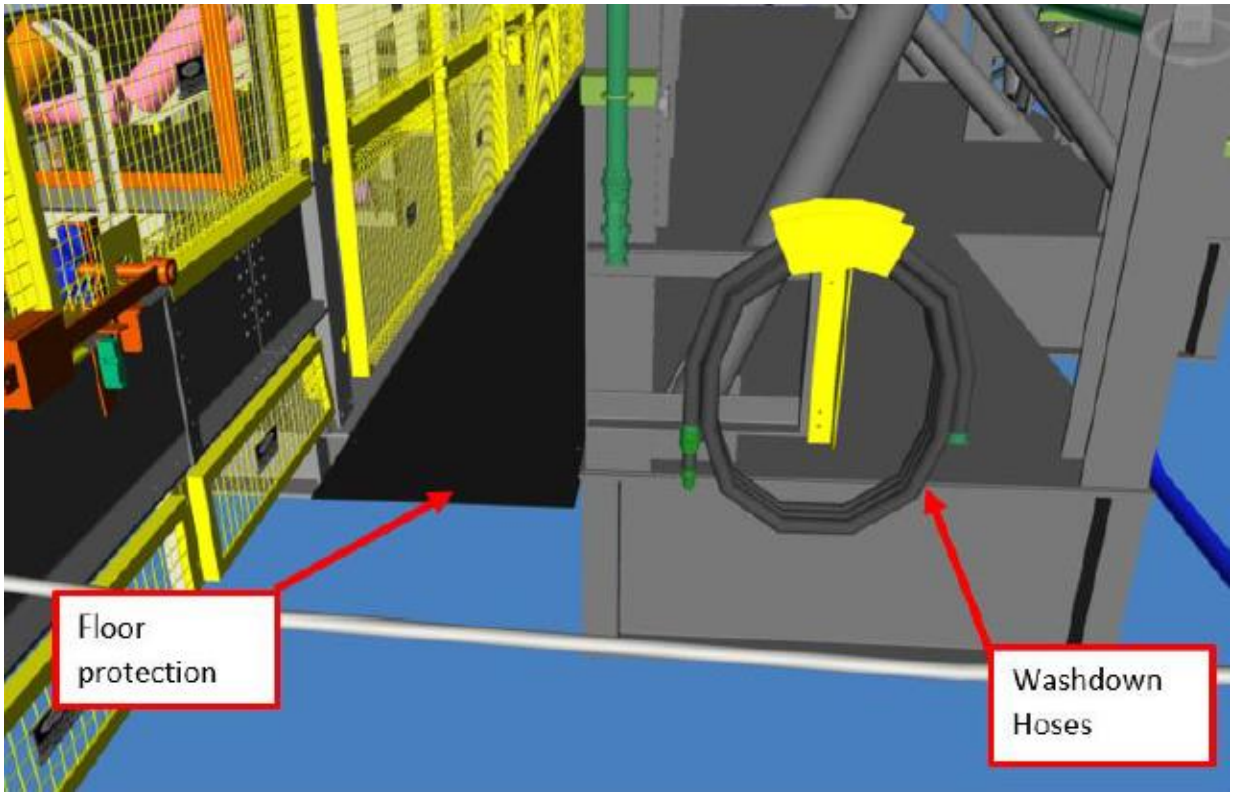

Figure 5: Primary Crushing Plant dust suppression

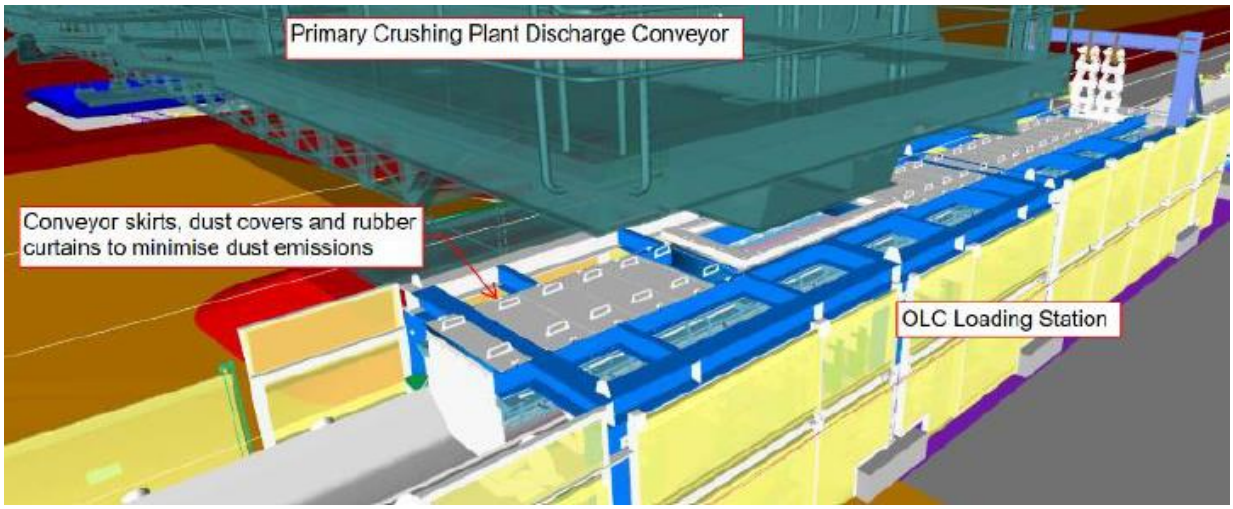

Figure 6: Primary Crushing Plant Loading Station

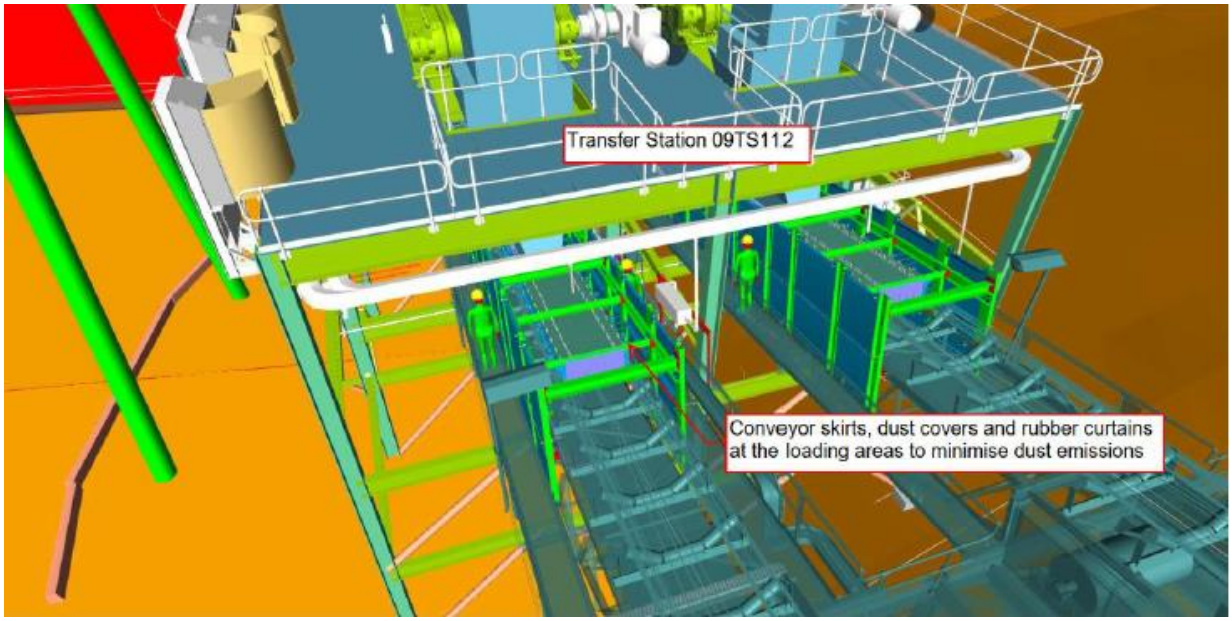

Figure 7: Loading Points at Transfer Station

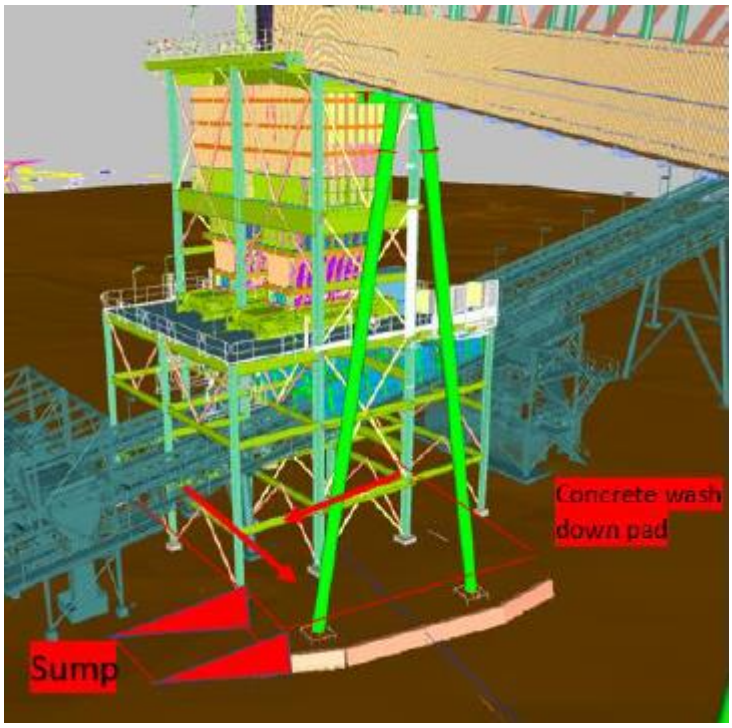

Figure 8: Transfer Station wash down concrete pad with drive in sump arrangement.

2.2.3 OPF Infeed

This includes a 200m^3 surge bin with dual discharge and reversable feeders directly feeding OPF1 with pre-crushed rock.

Dust controls include the use of spray bars, dust covers and foggers.

Stormwater drainage management will be in place to ensure that there is no flooding or inundation during rainfall events around the key components of the OPF infeed. Stormwater drainage controls around the OPF Infeed will include, but not limited to, the construction of bunding, windrows and/or collection drain systems to segregate and divert stormwater around

the facility.

Refer to Figure 9 for an additional two drainage points (in green) that will be installed at the head end conveyor launder that reports sediment laden stormwater to concrete catchment bunds where sediment will be collected.

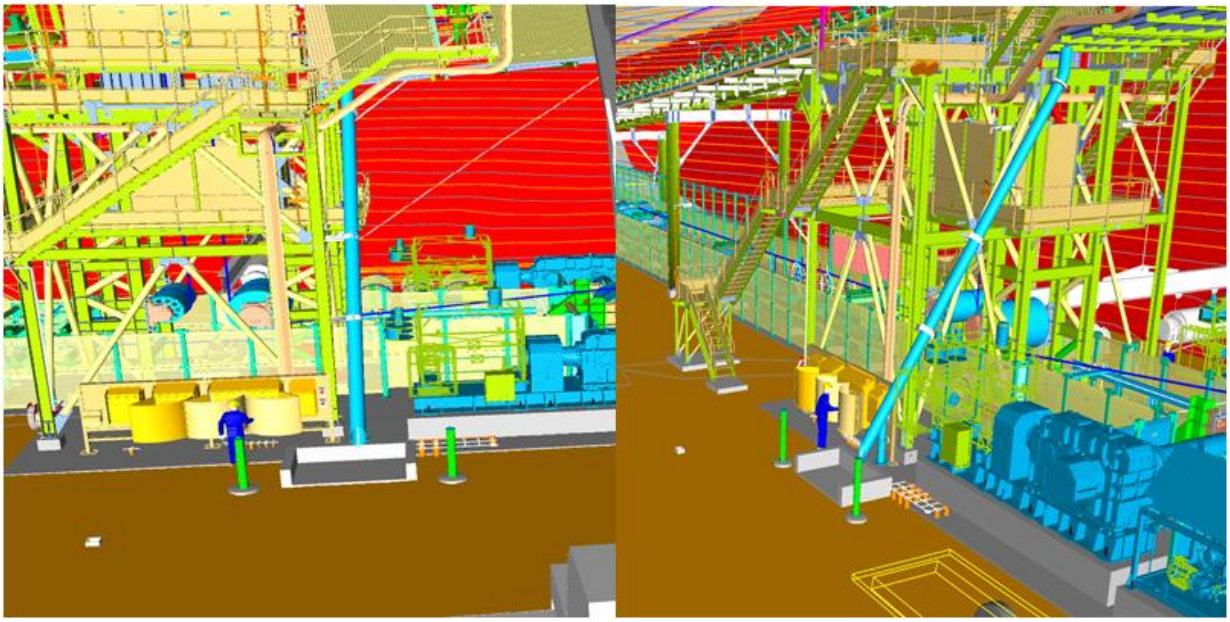

Figure 9: Typical head end launder storm drain and catchment

Refer to Figure 10 for two culverts (CV19 and CV20) that will be installed to ensure stormwater runoff from the OPF footprint is contained within the existing surface water drainage collection within the stock yard with surface water flows reporting underneath the conveyor into the drain system.

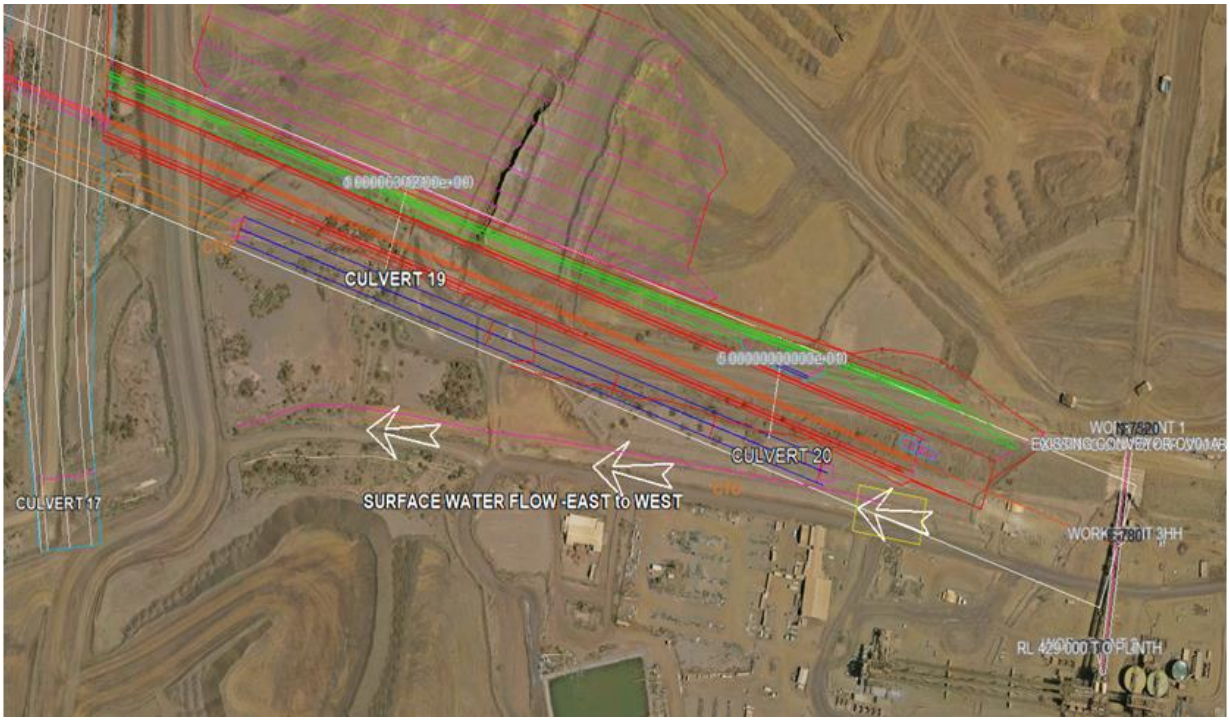

Figure 10: Surface water drainage design, including the Hall conveyor culverts and discharge points

Refer to Figure 11 for the additional drainage installed into the existing surface water system to promote surface water flows away from the head end and stock yard greater area. There will be two collection drain systems to remove stormwater, one will report flows from the head end to the south west and the other collection drain system will report flows to the east.

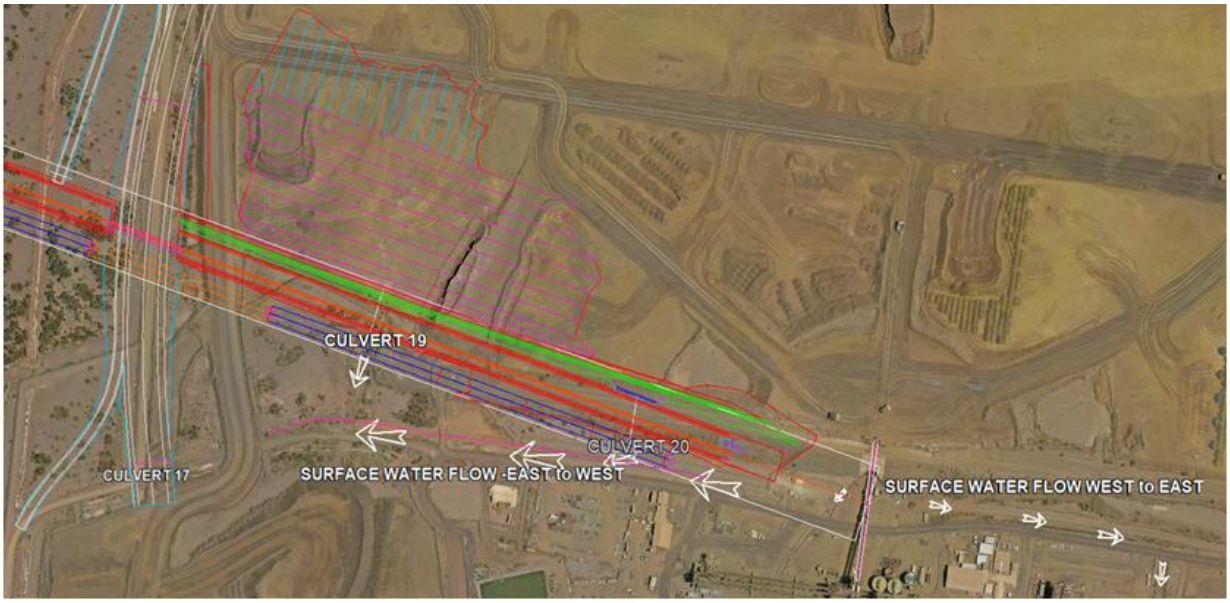

Figure 11: Surface water drainage system for the head end and stock yard area

2.3 Part IV of the EP Act

The Christmas Creek Mine Site is approved under Part IV of the EP Act as part of the Pilbara Iron Ore and Infrastructure Project (Christmas Creek, East-West Railway and Mindy Mindy Mine) Revised Proposal, Ministerial Statement 1033 (MS 1033) (Stage B Project below).

The Pilbara Iron Ore and Infrastructure Project includes the following approved stages under Part IV of the EP Act:

- Stage A Project: Port and north-south railway from south of the Chichester Ranges in the Central Pilbara to Port Hedland (MS 690);
- Stage B Project: Christmas Creek and Mindy Mindy mines and an east-west rail spur (MS 707);
- Cloudbreak Iron Ore Project: The Cloudbreak iron Ore Mine (MS 721).

The Stage B Project was approved in 2010 under Part IV of the EP Act (MS 707).

The Christmas Creek Water Management Scheme was approved in 2013 under Part IV of the EP Act (MS 871).

The Christmas Creek Iron Ore Mine Expansion was approved in 2016 (MS 1033) with EPA Report 1567 stating that the proposal is constituted by the following additional activities for the Christmas Creek iron ore mine:

- Development of additional mine pits;
- Development of additional permanent waste landforms and tailings disposal facilities; and
- Development of additional infrastructure including conveyors, roads, drainage and other associated mine infrastructure.

The Hall Mining Hub is, therefore, within scope of the Part IV of the EP Act approvals.

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 / operation which have been considered in this decision report are detailed in Table 2 below. Table 2 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 2: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Vehicle movements, installation and construction of infrastructure for the Hall Mining Hub	Air / windborne pathway	• Water sprays and/or water trucks; and • Enforcing speed limits.
Noise	Vehicle movements, installation and construction of infrastructure for the Hall Mining Hub	Air / windborne pathway	SCREENED OUT DUE TO NO NEARBY SENSITIVE RECEPTORS
Hydrocarbons / chemicals	Spills / leaks during the storage and use during construction	Seepage to soil and groundwater	• Chemicals and hydrocarbons shall be stored in accordance with the relevant Australian Standards and Storage Data Sheets; • Chemicals and hydrocarbons shall be stored within bunds of appropriate capacity; • Bunds must have a net capacity of at least 110% of the capacity of the largest vessel, and 25% of the total capacity of all vessels stored within the bund; • If two or more vessels operate as a single unit, the capacity of all such vessels shall be utilised when calculating the necessary compound capacity; • Any leakage and spills from storage facilities must be contained to prevent contamination of surrounding soil,

Emission	Sources	Potential pathways	Proposed controls
			watercourses, and drainage systems; • Suitable spill response equipment shall be available and maintained in close proximity to the chemical and hydrocarbon storage location; • All chemicals and hydrocarbons shall be appropriately segregated from potential ignition sources; • Storage Data Sheets shall be readily available for all stored chemicals and hydrocarbons. These shall be in close proximity to the chemical and hydrocarbon storage location; • Chemical and hydrocarbons shall be stored in areas with adequate ventilation, readily available first aid and eyewash stations, egress pathways in case of emergency and sufficient segregation between storage areas; • All permanent chemical and hydrocarbon storage locations must be sufficiently impervious to retain spillage and be made of suitable construction materials (for example, HDPE, geosynthetic clay liners, and/or concrete); • Where practical, bunds shall be covered (or under cover) to prevent rainfall collection, reducing the bund's available capacity; • Bunds shall be sufficiently designed to allow practical recovery of any spillage and/or any collected and potentially contaminated rainfall. This recovery should occur when needed to ensure optimal availability of bund capacity; • Discharge of any spillage and/or rainfall from within a bund is not permitted; • Bunds shall not be higher than 1.5m in height unless there are means for safe and rapid entry and exit; • Earthen bunds must be lined and sealed with an appropriate material to ensure containment of any chemical or hydrocarbon spills, have a flat section of at least 600mm wide where any walls are 1m or more in height, have a wall slope consistent with the angle of repose of the material and never have a capacity less than the nominated capacity. Original height markers should be installed to

Emission	Sources	Potential pathways	Proposed controls
			support this; and • Portable bunding units are the least preferred method of chemical and hydrocarbon storage. These are intended to be utilised as temporary storage only. This includes instances where goods are in transit or are within handling areas.
Operation			
Hall Overland Conveyor			
Dust	Movement of ore through Hall Overland Conveyor	Air / windborne pathway	• Spray bars, dust covers at chutes, transfer points and OPF infeed along the higher dust risk areas of the Hall Overland Conveyor; • Conveyor skirts, dustcovers and rubber curtains, wash down points and water sprays; • Enclosed chutes will be fitted at transfer points; • Roof covers on the stretch of the conveyor in higher dust risk areas (Refer to Figure 1); • Using the overland conveyor will reduce dust emissions when compared to conventional transportation of ore via haul truck to the OPF; • Water sprays and/or water trucks; and • Enforcing speed limits.
Noise	Operation of Hall Overland Conveyor	Air / windborne pathway	• Composite idlers, noise monitoring and or other noise-suppressing equipment; • Engineering controls have been applied to the construction and operation of the conveyor such as the use of low noise equipment to reduce noise levels to be in accordance with the guideline for the Management of noise in Western Australian mining operations and the FMG Standard Engineering Specification for Idler Assemblies (100-SP-ME-0007 Rev 5) to ensure that the average noise levels and exposure limits of 82 dB(A) are not exceeded; and • Composite noise idler rollers will be installed on the Hall Overland Conveyor, to further reduce noise emissions in comparison to the noise emitted from traditional steel idler rollers. SCREENED OUT DUE TO NO NEARBY

Emission	Sources	Potential pathways	Proposed controls
			SENSITIVE RECEPTORS
Sediment laden stormwater	Stormwater ingress to processing areas	Direct discharges to land	• Includes a ground level drive-in bund below the conveyor for head end containment and collection of ore; • Fully enclosed truss sections along the conveyor route with a suitable washdown launder bund arrangement at the rail crossing to eliminate any potential spillage of material to the ground (Refer to Figure 2); • Sump for the collection of washdown waste is proposed at the bottom of the launders to collect any material; • Transfer station wash down concrete pad sump will be designed with a drive-in bund. This will ensure that any potential spills at loading points are contained to prevent any uncontrolled release water and material to the environment (Refer to Figure 8; • Use of belt wash stations at the return end of the conveyor to minimize the carry back of ore; • Primary and secondary scrapers to be installed at the return side of Hall Overland Conveyor head pulley to minimise the carry back of ore; • Primary scrapers will be useful in removing the majority of the material clinging to the belt whilst secondary scrapers will assist in the removal of the finer materials; • The ore is dry and above water table belt wash stations are not required, and will not be installed as the proposed system is considered sufficient to minimise the carry back of ore; • Bunding and or windrows along the conveyor to divert stormwater around the site; and • A total of 19 culverts are proposed to be constructed under the conveyor alignment.
Primary Ore Crushing Plant			
Dust	Movement of ore through Primary Ore Crushing Plant	Air / windborne pathway	• Dust covers and skirting around equipment and at transfer points (Refer to Figure 3, Figure 4 and Figure 5); • Primary Crushing Plant Loading Station at the tail end area of the Hall Overland Conveyor will be constructed with various

Emission	Sources	Potential pathways	Proposed controls
			dust management controls including the use of conveyor skirts, dust covers and rubber curtains (Refer to Figure 6); • Loading points at the Transfer Station (near the head end of the Hall Overland Conveyor) will be constructed with conveyor skirts, dust covers and rubber curtains (Refer to Figure 7); • Enclosed chutes will be fitted at transfer points; and • ROM bins and Primary Ore Crushing Plant fitted with spray bars for dust suppression allowing for ore moisture content to be managed to reduce dust lift-off during transport along the conveyor.
Noise	Operation of Primary Ore Crushing Plant	Air / windborne pathway	• Low noise plant and equipment (such as composite noise idlers) will be used where practicable; • Use of protective shields; • Noise emission reduction will be addressed through the maintenance process; and • As necessary, noise emission monitoring will be conducted on fixed plant and emissions reduction will be addressed through the maintenance process. SCREENED OUT DUE TO NO NEARBY SENSITIVE RECEPTORS
Sediment laden stormwater	Stormwater ingress to processing areas	Direct discharges to land	• A concrete canvas will be fitted around the ROM bin structure base and around the Primary Ore Crushing Plant to minimise potential spillage of ore onto the soil below the plant.
OPF Infeed			
Dust	Movement of ore through the OPF Infeed	Air / windborne pathway	• Spray bars, dust covers, foggers will be installed.
Noise	Operation of OPF Infeed	Air / windborne pathway	SCREENED OUT DUE TO NO NEARBY SENSITIVE RECEPTORS
Sediment laden stormwater	Stormwater ingress to processing areas	Direct discharges to land	• Bunding, windrows and/or collection drain systems to segregate and divert stormwater around the facility; • Additional two drainage points installed at the head end conveyor launder that

Emission	Sources	Potential pathways	Proposed controls
			reports sediment laden stormwater to concrete catchment bunds where sediment will be collected (Refer to Figure 9); • Two culverts installed to ensure stormwater runoff from the OPF footprint is contained within the existing surface water drainage collection within the stock yard with surface water flows reporting underneath the conveyor into the drain system (Refer to Figure 10); and • Additional drainage installed into the existing surface water system to promote surface water flows away from the head end and stock yard greater area. Two collection drain systems to remove stormwater namely, one will report flows from the head end to the south west and the other collection drain system will report flows to the east (Refer to Figure 11).
Hydrocarbons / chemicals			
Hydrocarbons / chemicals	Spills / leaks during the storage and use during operation	Direct discharges to land	• Chemicals and hydrocarbons shall be stored in accordance with the relevant Australian Standards and Storage Data Sheets; • Chemicals and hydrocarbons shall be stored within bunds of appropriate capacity; • Bunds must have a net capacity of at least 110% of the capacity of the largest vessel, and 25% of the total capacity of all vessels stored within the bund; • If two or more vessels operate as a single unit, the capacity of all such vessels shall be utilised when calculating the necessary compound capacity; • Any leakage and spills from storage facilities must be contained to prevent contamination of surrounding soil, watercourses, and drainage systems; • Suitable spill response equipment shall be available and maintained in close proximity to the chemical and hydrocarbon storage location; • All chemicals and hydrocarbons shall be appropriately segregated from potential ignition sources; • Storage Data Sheets shall be readily available for all stored chemicals and

Emission	Sources	Potential pathways	Proposed controls
			hydrocarbons. These shall be in close proximity to the chemical and hydrocarbon storage location; • Chemical and hydrocarbons shall be stored in areas with adequate ventilation, readily available first aid and eyewash stations, egress pathways in case of emergency and sufficient segregation between storage areas; • All permanent chemical and hydrocarbon storage locations must be sufficiently impervious to retain spillage and be made of suitable construction materials (for example, HDPE, geosynthetic clay liners, and/or concrete); • Where practical, bunds shall be covered (or under cover) to prevent rainfall collection, reducing the bund's available capacity; • Bunds shall be sufficiently designed to allow practical recovery of any spillage and/or any collected and potentially contaminated rainfall. This recovery should occur when needed to ensure optimal availability of bund capacity; • Discharge of any spillage and/or rainfall from within a bund is not permitted; • Bunds shall not be higher than 1.5m in height unless there are means for safe and rapid entry and exit; • Earthen bunds must be lined and sealed with an appropriate material to ensure containment of any chemical or hydrocarbon spills, have a flat section of at least 600mm wide where any walls are 1m or more in height, have a wall slope consistent with the angle of repose of the material and never have a capacity less than the nominated capacity. Original height markers should be installed to support this; and • Portable bunding units are the least preferred method of chemical and hydrocarbon storage. These are intended to be utilised as temporary storage only. This includes instances where goods are in transit or are within handling areas.

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.

Table 3 and Figure 12 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guideline: Environmental Siting* (DWER 2020)).

Table 3: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	**Distance from prescribed activity**
Nullagine	60 km from the prescribed premises boundary
Marillana Homestead	40km from the prescribed premises boundary
Roy Hill Station	30 km from the prescribed premises boundary
Environmental receptors	**Distance from prescribed activity**
Environmentally Sensitive Areas Environmentally Sensitive Area 3672	3 km south of the prescribed premises boundary
Threatened Ecological Communities Themeda grasslands on cracking clays (Hamersley Station, Pilbara)	170 km west of the prescribed premises boundary
Threatened and/or priority fauna Rainbow bee-eater (merops ornatus) fauna sighting Australian kestrel (falco cenchroides) fauna sighting Magpie-lark (grallina cyanoleuca) fauna sighting Short-tailed mouse (leggadina lakedownensis) fauna sampling – Priority 4 DBCA Pilbara Olive Python (Liasis olivaceus barroni) Schedule 3 - Vulnerable fauna opportunistic collection/search Black-faced Cuckoo shrike (coracina novaehollandia) fauna sighting Sacred kingfisher (todiramphus sanctus) fauna sighting	Mapped within the prescribed premises boundary
Threatened and/or priority flora Priority 1 DBCA flora surveyed: Calotis squamigera Eremophila spongiocarpa Priority 4 DBCA flora surveyed: Eremophila youngii subsp. lepidota	Mapped within the prescribed premises boundary
Aboriginal and other heritage sites GOV DAA Places – NYI20-006	Archaeological Place mapped within the prescribed premises boundary; however, the area has been ethnographically surveyed as per

	NYI_181
Public drinking water source areas Nullagine Water Reserve drinking water source protection P1 PDWSA	62 km northeast of the proposed activities
Rivers, lakes, oceans, and other surface water bodies Fortescue River	2 km south of the proposed activities
Acid sulfate soils Moderate to low-risk acid sulfate soils	129 km north north west of the proposed activities
Groundwater depth and quality	Groundwater in the vicinity of new infrastructure in the Christmas Creek Mine Site project area is generally brackish (>1,000 mg/L TDS) and becomes increasingly saline towards the Fortescue Marsh and with depth (>100,000 mg/L TDS). The Premises which includes the Hall Hub application area sits over three main connected aquifers, the fresh-brackish Tertiary Detritals, brackish Marra Mamba Formation and the hypersaline Oakover formation. The Oakover Formation is approximately 20 m thick and is confined to semi-confined by overlying clays and silts. The water quality in the vicinity of the proposed infrastructure has been identified to be shallow groundwater that is fresh to brackish, whilst deep groundwater is generally saline. All other water quality parameters are within the ANZECC & ARMCANZ (2000) guidelines for fresh and marine water quality. The depth to groundwater in the application area is in the range of approximately 9 m to 26 m below ground level.

Figure 12: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the delegated officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

Works approval W6787/2023/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 4 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. Category 5 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 4: Risk assessment of potential emissions and discharges from the premises during construction, commissioning and operation

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction								
Installation and construction of Hall Overland Conveyor, Primary Ore Crushing Plant and OPF Infeed infrastructure	Dust	Air/windborne pathway causing impacts to vegetation	Vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	N/A	N/A
	Hydrocarbons / chemicals	Direct discharges to land causing contamination of soils, vegetation	Soils, vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, Table 1 Design and construction / installation requirements Requires adequate containment in line with Australian Standards and Storage Data Sheets	N/A
Commissioning and Operation (including time-limited-operations operations)								
Hall Overland Conveyor	Dust	Air/windborne pathway causing impacts to vegetation	Vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, Table 1 Design and construction / installation requirements Requires dust controls to be implemented on the Hall Overland Conveyor Condition 5, Table 2 Environmental commissioning requirement Requires dust equipment maintenance, visual inspections of dust control equipment Condition 10, Table 3 Infrastructure and equipment requirements during time limited operations Requires dust equipment maintenance, visual inspections of dust control	N/A

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
							equipment	
	Sediment laden stormwater	Direct discharges to land causing sedimentation on soils, vegetation	Soils, vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, Table 1 Design and construction / installation requirements Requires stormwater controls to be implemented on the Hall Overland Conveyor Condition 5, Table 2 Environmental commissioning requirement Requires visual inspections of stormwater control equipment Condition 10, Table 3 Infrastructure and equipment requirements during time limited operations Requires visual inspections of stormwater control equipment	N/A
	Hydrocarbons / chemicals	Direct discharges to land causing contamination of soils, vegetation	Soils, vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, Table 1 Design and construction / installation requirements Requires adequate containment in line with Australian Standards and Storage Data Sheets Condition 5, Table 2 Environmental commissioning requirement Requires visual inspections of hydrocarbons / chemicals control equipment Condition 10, Table 3 Infrastructure and equipment requirements during time limited operations Requires visual inspections	N/A

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
							of hydrocarbons / chemicals control equipment	
Primary Ore Crushing Plant	Dust	Air/windborne pathway causing impacts to vegetation	Vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, Table 1 Design and construction / installation requirements Requires dust controls to be implemented on the Primary Ore Crushing Plant Condition 5, Table 2 Environmental commissioning requirement Requires visual inspections of dust control equipment Condition 10, Table 3 Infrastructure and equipment requirements during time limited operations Requires visual inspections of dust control equipment	N/A
	Sediment laden stormwater	Direct discharges to land causing sedimentation on soils, vegetation	Soils, vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, Table 1 Design and construction / installation requirements Requires stormwater controls to be implemented on the Hall Overland Conveyor Condition 5, Table 2 Environmental commissioning requirement Requires visual inspections of stormwater control equipment Condition 10, Table 3 Infrastructure and equipment requirements during time limited operations Requires visual inspections of stormwater control equipment	N/A

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
	Hydrocarbons / chemicals	Direct discharges to land causing contamination of soils, vegetation	Soils, vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, Table 1 Design and construction / installation requirements Requires adequate containment in line with Australian Standards and Storage Data Sheets Condition 5, Table 2 Environmental commissioning requirement Requires visual inspections of hydrocarbons / chemicals control equipment Condition 10, Table 3 Infrastructure and equipment requirements during time limited operations Requires visual inspections of hydrocarbons / chemicals control equipment	N/A
OPF Infeed	Dust	Air/windborne pathway causing impacts to vegetation	Vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, Table 1 Design and construction / installation requirements Requires dust controls to be implemented on the OPF Infeed Condition 5, Table 2 Environmental commissioning requirement Requires visual inspections of dust control equipment Condition 10, Table 3 Infrastructure and equipment requirements during time limited operations Requires visual inspections of dust control equipment	N/A
	Sediment laden	Direct discharges to land causing	Soils, vegetation	Refer to	C = Minor	Y	Condition 1, Table 1 Design and construction /	N/A

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
	stormwater	sedimentation on soils, vegetation		Section 3.1	L = Possible **Medium Risk**		installation requirements Requires stormwater controls to be implemented for the OF infeed Condition 5, Table 2 Environmental commissioning requirement Requires visual inspections of stormwater control equipment Condition 10, Table 3 Infrastructure and equipment requirements during time limited operations Requires visual inspections of stormwater control equipment	
	Hydrocarbons / chemicals	Direct discharges to land causing contamination of soils, vegetation	Soils, vegetation	Refer to Section 3.1	C = Minor L = Possible **Medium Risk**	Y	Condition 1, Table 1 Design and construction / installation requirements Requires adequate containment in line with Australian Standards and Storage Data Sheets Condition 5, Table 2 Environmental commissioning requirement Requires visual inspections of hydrocarbons / chemicals control equipment Condition 10, Table 3 Infrastructure and equipment requirements during time limited operations Requires visual inspections of hydrocarbons / chemicals control equipment	N/A

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk Assessments* (DWER 2020).

Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 27/03/2023	None received	N/A
Local Government Authority advised of proposal on 22/03/2023	None received	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 22/03/2023	None received	N/A
Department of Jobs, Tourism, Science and Innovation (JTSI) advised of proposal on 22/03/2023	None received	N/A
Department of Biodiversity, Conservation and Attractions (DBCA) advised of proposal on 22/03/2023	DBCA replied on 31/03/2023 stating that *DBCA is of the understanding that the Pilbara Iron Ore and Infrastructure Project (Christmas Creek Mine, East-West Railway and Mindy Mindy Mine) – Revised Proposal is the subject of an existing approval under Part IV of the EP Act, with environmental conditions issued under Ministerial Statement 1033. While noting DBCA provided input into the environmental impact assessment for this project, it appears that the infrastructure proposed as part of the works approval application is located in close proximity to priority flora records. Consequently, it is DBCA's expectation that any direct and indirect impacts on priority flora individuals are avoided where possible.*	Noted.
Department of Planning, Lands and Heritage (DPLH) advised of proposal on 31/03/2023	DPLH replied on 05/05/2023 stating that *the proposed works footprint does not intersect with the boundaries of any known Aboriginal sites or Aboriginal heritage Places. Therefore, no approvals under the*	Noted

	Aboriginal Heritage Act 1972 are required. *The majority of the works footprint is not covered by an existing Section 18 ministerial consent, and it is unclear if recent Heritage Surveys have been undertaken for the proposed works area. The new Aboriginal Cultural Heritage Act 2021 (Act) comes into effect on 1 July 2023, the Applicant should familiarise themselves with the new the provisions of the Act 2021.* *The proposal falls within the Nyiyaparli Peopl's Native Title area, that is represented by the Karlka Aboriginal Corporation. The Applicant has discussed the works proposal with the Nyiyaparli Traditional Owners at Working Groups in August and November 2022 and nil issues or concerns were raised.*	
Karlka Nyiyaparli Aboriginal Corporation RNTBC advised of proposal on 22/03/2023	None received.	N/A
Applicant was provided with draft documents on 25/05/2023	The Applicant replied on 09/06/2023. Refer to Appendix 1.	The Applicant replied on 09/06/2023. Refer to Appendix 1.

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. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Fortescue Metals Group Ltd, Fortescue Hall Mining Hub Works Approval Application 03/01/2023, East Perth, Western Australia.
5. Fortescue Metals Group Ltd, RE: NOTIFICATION : APPLICATION FOR A WORKS APPROVAL - REQUEST FOR FURTHER INFORMATION 10/03/2023, East Perth, Western Australia.
6. Fortescue Metals Group Ltd, RE: W6787 Hall Mining Hub 27/03/2023, East Perth, Western Australia.
7. Fortescue Metals Group Ltd, FMG Response to Draft Works Approval W6787/2023/1 - Christmas Creek Hall Mining Hub 09/06/2023, East Perth, Western Australia.

Appendix 1: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response
1, Table 1 Hall overland conveyor	Removal of foggers as they will not be used for dust control at the hall overland conveyor, rather spray nozzles will be used in accordance with historical dust suppression measures for conveyor infrastructure at Fortescue sites. Modification to roof covers to allow for more flexible implementation of dust suppression measures at locations along the conveyor. Roof covers are to be installed along high-risk areas, namely all low-level modules (LLMs), to prevent dust lift off. Change of title from Stormwater controls to Spillage controls as these points are more for the management of spillages. Belt wash stations removed as primary and secondary scrapers are to be installed at the return side of the Hall overland conveyor head pulley to minimise carry back of ore. Since the ore is mined above the water table and is dry, this is considered a sufficient measure. Fortescue requests the requirement for belt wash stations therefore be removed from the condition. Removal of the number of culverts to be installed. Flexibility in the wording of the condition through the removal of a numerical constraint. This will support adequate stormwater management as defined under Primary Approvals for the project, including the installation of additional culverts as required.	Updated as requested.
1, Table 1 Primary ore crushing plant	Change of title from Stormwater controls to Spillage controls as these points are more for the management of spillages.	Updated as requested.
1, Table 1 Hydrocarbons and chemicals	Removal of covering of bunds. Fortescue notes that the requirement to cover bunds to prevent rainfall collection is not applicable to the Project and requests this point be removed. Hydrocarbon spillage in open areas, namely the Fuel Unloading and Heavy Mining Equipment (HME) Fuel & Maintenance Facilities, all runoff will be captured in concrete bunded areas that drain and will be managed within the oily water storage	Updated as requested.

Condition	Summary of applicant's comment	Department's response
	system. Overfilling of the oily water storage systems will be prevented through continued monitoring and maintenance procedures as per standard Fortescue operations.	
2	Increase in timeframe to provide Environmental Compliance Report. A timeframe of 7 days is insufficient to conduct an audit of compliance and prepare an Environmental Compliance Report following construction or installation of infrastructure, in accordance with the complex nature of the infrastructure. Fortescue requests this timeframe is extended to 30 days, which will allow sufficient time to prepare an Environmental Compliance Report, including the required supporting documents, and is in alignment with existing Fortescue Operating Licences.	Updated as requested.
3	Applicant requests to only provide either as constructed plans OR detailed site plans rather than both.	Retained as this is a standard condition.
5, Table 2 Commissioning timeframe	Applicant requests extension of commissioning period from 60 calendar days to 100 calendar days.	Updated as requested.
5, Table 2 Commissioning requirements dust controls	Applicant requests modification in wording from dust extraction to dust suppression and daily visual inspections rather than twice daily visual inspections.	Updated as requested.
5, Table 2 Commissioning requirements Hydrocarbons and chemcials	Applicant requests addition of hydrocarbons and chemcials to wording. Applicant requests addition of potentially contaminated to wording.	Updated as requested.
11	Applicant requests wording change to only submit one TLO report within 180 calendar days, rather than 60 calendar days.	Retained as this is a standard condition. The current condition wording allows flexibility in that the Works Approval Holder can opt to provide one TLO report according to the condition.
12	Applicant requests removal of the TLO report to include a review of operational performance.	Retained as this is a standard condition.
Schedule 1: Maps	Updated map provided.	Updated as requested.
Schedule 2: Premises Boundary	Applicant confirmed GDA2020 Zone 50.	Updated as requested.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	☒				
Licence	☐	Relevant works approval number:		None	☐
		Has the works approval been complied with?		Yes ☐ No ☐	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes ☐ No ☐ N/A ☐	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes ☐ No ☐	
		Date Report received:			
Renewal	☐	Current licence number:			
Amendment to works approval	☐	Current works approval number:			
Amendment to licence	☐	Current licence number:			
		Relevant works approval number:		N/A	☐
Registration	☐	Current works approval number:		None	☐
Date application received		03 January 2023			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Chichester Metals Pty Ltd			
Premises name		Christmas Creek Mine Site			
Premises location		Tenements E46/610, E46/612, M46/320, M46/321, M46/322, M46/323, M46/324, M46/325, M46/326, M46/327, M46/328, M46/329, M46/330, M46/331, M46/332, M46/333, M46/334, M46/335, M46/336, M46/337, M46/338, M46/339, M46/340, M46/341, M46/342, M46/343, M46/344, M46/345, M46/346, M46/347, M46/348, M46/349, M46/350, M46/351, M46/352, M46/353, M46/354, M46/355, M46/403, M46/406, M46/412, M46/413, M46/414, M46/415, M46/416, M46/417, M46/418, M46/419, M46/420, M46/421, M46/422, M46/423, M46/424, G46/7, L46/49, L46/56, L46/58, L46/86, L46/87, L46/106, L46/111, E46/566 and L46/66 NEWMAN WA 6753			
Local Government Authority		Shire of East Pilbara			
Application documents					
HPCM file reference number:		DWERDT706067 DWERDT705957 DWERDT705956 DWERDT705955			

Key application documents (additional to application form):	Application Form Supporting Documentation Appendices Figures
Scope of application/assessment	
Summary of proposed activities or changes to existing operations.	Works approval Construction of Hall Mining Hub: • 13.5km Hall Overland Conveyor; • Primary Ore Crushing Plant; and • Ore Processing Facility (OPF) Infeed.

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	4,200 tonnes per hour 36.792 Mtpa	N/A

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes ☐ No ☒	Referral decision No: Managed under Part V ☒ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☒ No ☐	Ministerial statement No: MS 1033 EPA Report No: 1567
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☒ No ☐	Reference No: EPBC 2013/7055
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	Certificate of title ☐ General lease ☐ Expiry: Mining lease / tenement ☐ Expiry: Other evidence ☐ Expiry:
Has the applicant obtained all relevant planning approvals?	Yes ☐ No ☐ N/A ☒	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 ☒ No ☐	CPS No: MS 1033 authorises the clearing of native vegetation associated with this Hall Mining Hub

Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes ☐ No ☒	Application reference No: N/A Licence/permit No: N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes ☒ No ☐	Application reference No: Licence/permit No: Christmas Creek Groundwater Operating Strategy (CC-PH-HY-0002, Revision 6, April 2016).
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☐ No ☒	Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes ☐ No ☐ N/A ☒ Regional office: N/A
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☒
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☒ No ☐	*Iron Ore (FMG Chichester Pty Ltd) Agreement Act*
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No ☒	N/A
Is the Premises subject to any EPP requirements?	Yes ☐ No ☒	N/A

Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☒ No ☐	Classification: Information Request Incomplete Report Awaiting Classification Date of classification: N/A