# Decision Report

## Application for Works Approval

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

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|---|---|
| **Works Approval Number** | W6769/2023/1 |
| **Applicant** | Onslow Iron Pty Ltd |
| **ACN** | 649 012 395 |
| **File number** | DER2022/000623 |
| **Premises** | West Pilbara Iron Ore Project<br>M08/480, M08/484, G08/88, L08/67, L08/68, L08/69 and L08/181<br>CANE WA 6710<br>As defined by the premises maps attached to the issued works approval |
| **Date of report** | 25 May 2023 |
| **Decision** | Licence granted |

Alana Kidd
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**Alana Kidd**
**MANAGER, RESOURCE INDUSTRIES**
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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# 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 W6769/2023/1 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

Mineral Resources Limited (MRL) of which Onslow Iron Pty Ltd (applicant) is a wholly owned subsidiary has replaced API Management Pty Ltd (APIM) as the manager and agent on behalf to the Red Hill Iron Ore Joint Venture (RHIOJV).

The RHIOJV includes Australian Premium Iron Joint Venture (APIJV) participants (which are currently Aquila Steel Pty Ltd and AMCI (IO) Pty Ltd) for which APIM acts for and on behalf of; and MRL (APIM 2022a).

Tenure M08/480, G08/88, L08/67, L08/68, L08/69 and L08/181 is held by Aquila Steel Pty Ltd and AMCI (IO) Pty Ltd. M08/484 is held by APIM and Red Hill Iron Limited.

APIM have given authority for the applicant "*to access the Tenure for the purposes of works described in the Works Approval Application which includes attending to all matters necessary for its approval*" (APIM 2022b).

On 20 December 2022, the applicant submitted an application (Onslow Iron 2022) for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to undertake construction of the following items of infrastructure to support mining operations at the Kens Bore Deposit at the premises:

- Central Processing Facility (CPF) crushing and screening (C&S) plant – Three (3)x C&S trains (Category 5) – refer to section 2.2.1;
- C&S plant at the Run of Mine (ROM) pad (Category 5) – refer to section 2.2.1;
- A mobile C&S plant (Category 12) – refer to section 2.2.2;
- Gas fired power station consisting of 12x 3.3 megawatt (MW) generators (Category 52) – refer to section 2.2.3;
- Three (3)x wastewater treatment plants (WWTPs) and associated treated effluent irrigation spray fields (Category 54) – refer to section 2.2.4;
- Used tyre storage facility (Category 57) – refer to section 2.2.5;
- Class II putrescible landfill facility (Category 64) – refer to section 2.2.6;
- Bulk Fuel and Chemical Storage (Category 73) – refer to section 2.2.7; and
- Mobile concrete batch plant (Category 77) – refer to section 2.2.8.

The premises is located approximately 45 km south-west of the town of Pannawonica.

The premises relates to the categories and assessed design capacity under Schedule 1 of the

*Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6769/2023/1. 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 W6769/2023/1.

### 2.2.1 Category 5

Proposed mining of the Kens Bore Deposit will be via conventional open pit mining methods. Mining will occur above the water table; no pit dewatering will be required.

The CPF which includes crushing, processing, stockyard, and road train load-out components will be capable of processing up to 7,000 tonnes of ore per hour (wet tonnage, Dust Extinction Moisture (DEM) up to 8%), or approximately 45 million tonnes per annum (Mtpa).

The CPF crushing and screening plant will consist of a three stage (primary processing, secondary processing, and tertiary processing), closed circuit operation that produces a Direct Shipping Ore (DSO) product. Figures 1 and 2 depict the process flow.

ROM ore will be reclaimed from the ROM pad and transported to the primary crushing circuit and passed over vibrating screens (grizzly screens) which remove the fine material, with the oversized material reporting to jaw crushers. Crushed rock from the jaw crushers then joins the undersize material from the grizzly screens, before being transported via the primary conveyor to the secondary crushing circuit.

The material from the primary crushing circuit will be screened prior to secondary crushing. The undersize material will report directly to the product conveyor while the oversize is fed to the secondary crushers and then to the tertiary screens. The tertiary screen undersize material also reports directly to the product conveyor while the tertiary oversize material is processed through tertiary cone crushers. The tertiary crusher product re-circulates through the secondary and tertiary circuits until it is fine enough to pass through the tertiary screens.

The DSO product is then conveyed to the product stockyard via the sampling station, where it will be stacked in two rows using one of two travelling, slewing luffing stackers containing four stockpiles each. A bucketwheel reclaimer will discharge product onto the Truck Load Out conveyor. The Truck Load Out will consist of a large surge bin and multiple outlets for loading road trains which will transport the ore to the Port of Ashburton.

C&S plant at the ROM pad

A C&S plant will be located at the premises to be used as a contingency at the ROM pad, should the CPF C&S plant commissioning period be delayed or extended.

The C&S plant at the ROM may only be required for 2 years, but it is possible that this plant will remain onsite to facilitate any ore processing, should the CPF C&S plant breakdown or be shut down for scheduled maintenance.

As the C&S plant at the ROM will be used for ore processing it falls within category 5. The expected throughput of this plant is 7 Mtpa. This will not change the category 5 design capacity of 45 Mtpa, as this plant will only be used as a contingency to the CPF C&S plant.

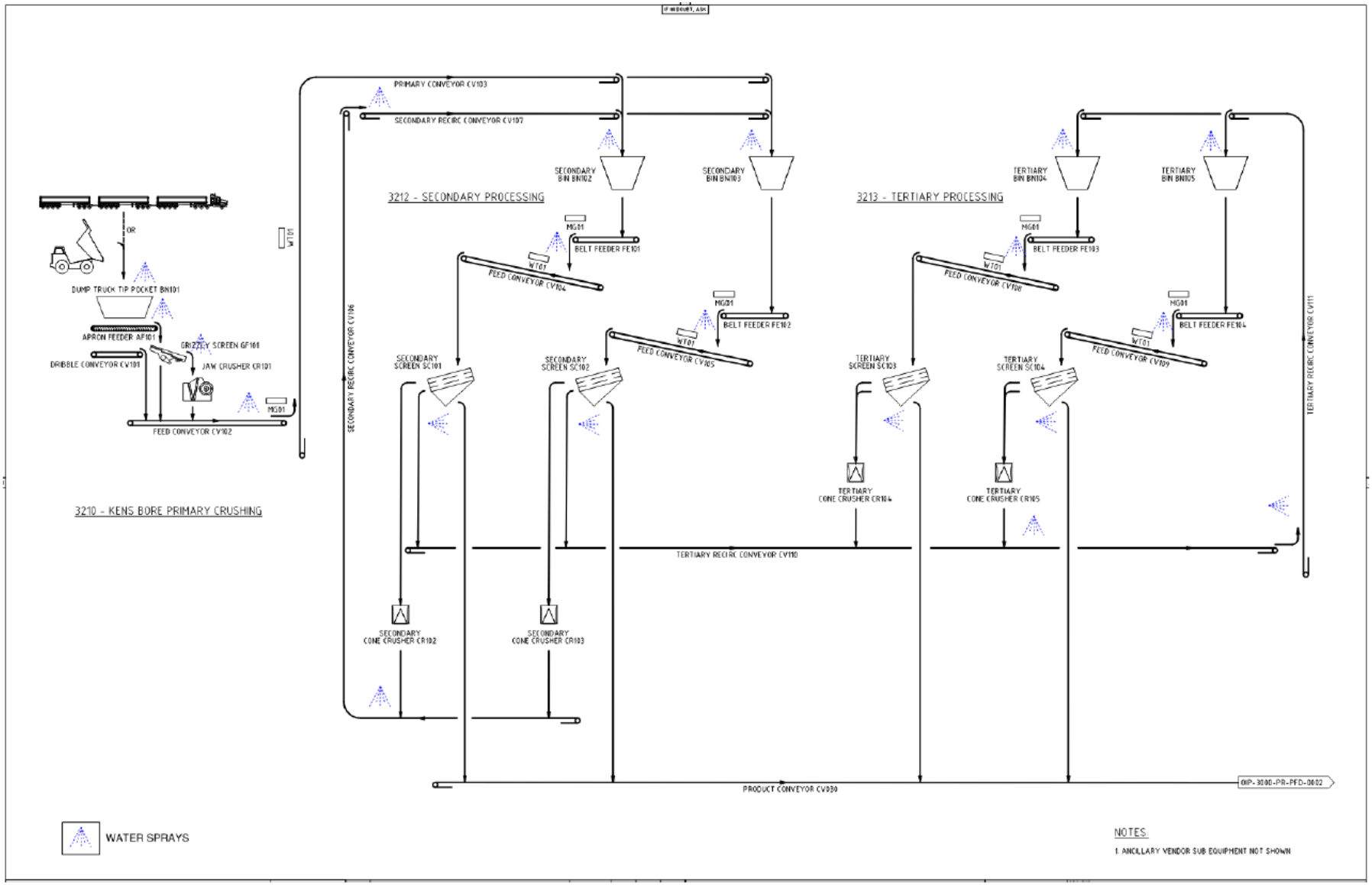


**Figure 1: CPF process flow – C&S Train 1 (as an example)**

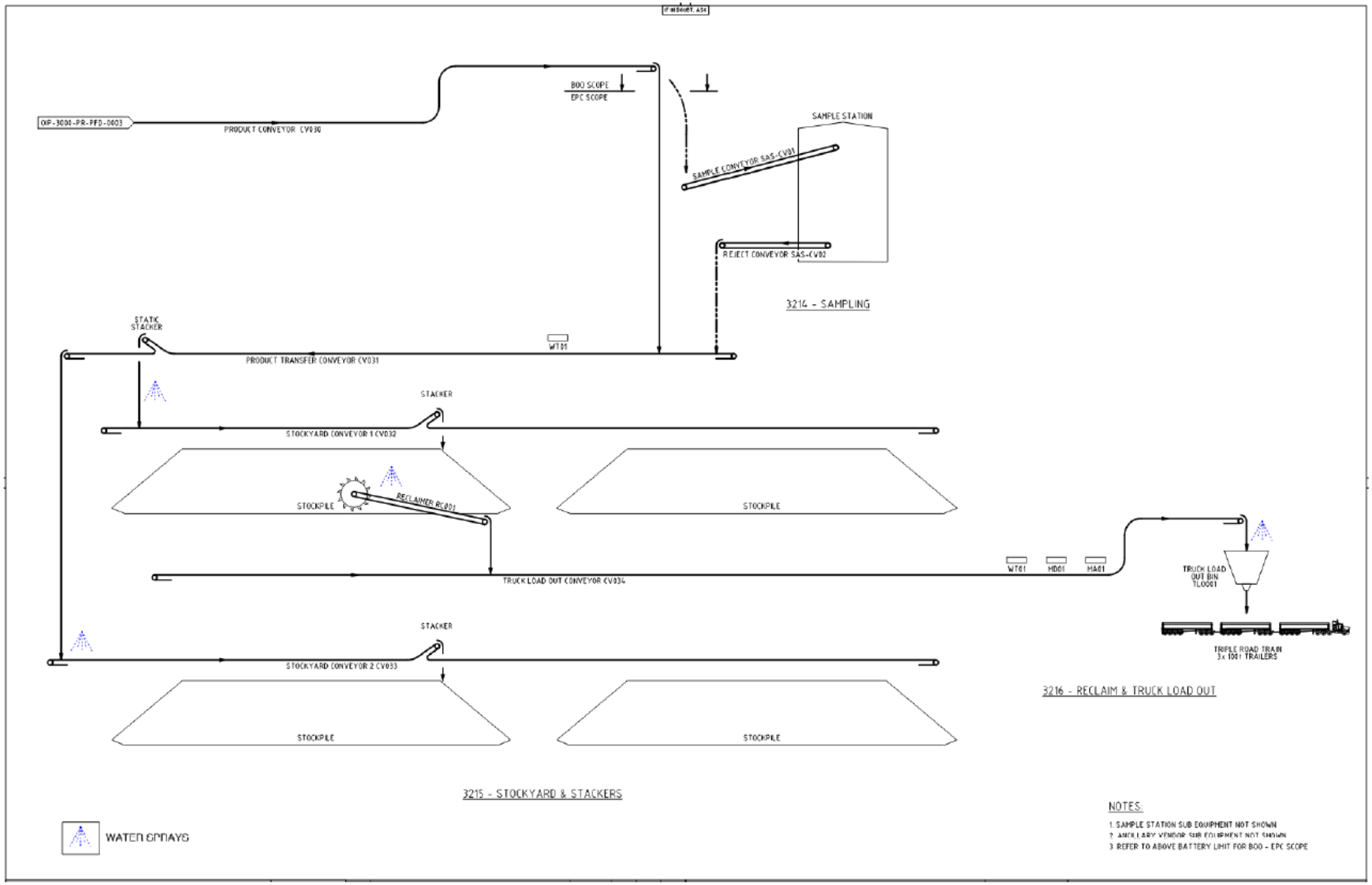


**Figure 2: CPF process flow - Stockyards**

### 2.2.2 Category 12

A mobile C&S plant is required to support project earthworks and construction activities. The expected throughput of this plant is 1.7 Mtpa.

The mobile C&S plant works by placing material into the feed hopper via an excavator or front-end loader. Product material is then stockpiled for transport to the construction work front as required.

This mobile C&S plant will be operated adjacent to borrow pits and/or other mine area within the construction work front. This plant may only be required for 2 years, but it is possible that this plant will remain onsite to facilitate any road maintenance throughout operations.

To note: the applicant has an existing works approval W6667/2022/1 (expires 03/10/2027) for a 200,000 tpa mobile C&S plant. The mobile C&S plant (authorised under W6667/2022/1) is not within the scope of the assessment documented in this decision report.

### 2.2.3 Category 52

The power station will have a capacity of 40 MW, which will consist of 12x 3.3 MW reciprocating gas powered generators. The generators will be installed within a purpose-built engine hall.

Gas from the power plant will be supplied via the Goldfields Gas Pipeline, transporting the gas to the power station via an underground pipeline where it will enter the delivery station and be further conditioned (filtration, water heaters and gas let down skid).

The power generated at the power station will be distributed to the CPF stockyards and plant loads, Ken's Bore Accommodation Resort and airport, Upper Cane Infrastructure and Borefields.

Commissioning of the power station will be undertaken for the phased start up installed capacity of 24 MW. For each gas genset fuel gas demand is 810 $Sm^3$/hr (766.3 $Nm^3$/hr) for 100% load. For stack testing during commissioning, the not to exceed limits (concentration and mass) for 1 engine at full load is shown in Table 1 (Onslow Iron 2023).

**Table 1: Expected emissions from the power station**

| Emission Component | Not to exceed – Emission Limit (1 engine) full load | Not to exceed Limit (1 engine) full load |
|---|---|---|
| $NO_x$ | 500 mg/$Nm^3$ @5% $O_2$ | 3.35 tonne/yr |
| CO | 1,500 mg/$Nm^3$ @5% $O_2$ | 10.04 tonne/yr |
| $SO_2$ | 13 mg/$Nm^3$ @5% $O_2$ | 0.17 tonne/yr |
| Particulates | 10 mg/$Nm^3$ @5% $O_2$ | 0.067 tonne/yr |

### 2.2.4 Category 54

Three WWTPs are proposed for the premises with a total combined throughput of 217.5 $m^3$/day.

Accommodation Resort WWTP

A WWTP is required to be constructed to support the Kens Bore permanent Accommodation Resort. The WWTP will be a Membrane Bioreactor (MBR) containerised module system with a design capacity of 200 $m^3$/day. The applicant is proposing to store a maximum of 130 $m^3$ of reverse osmosis (RO) reject in the treated effluent tank of the Accommodation Resort WWTP. The RO reject will be combined with the treated effluent and co-disposed via irrigation to hectare (ha) spray field. Refer to Figure 3 for the process flow.

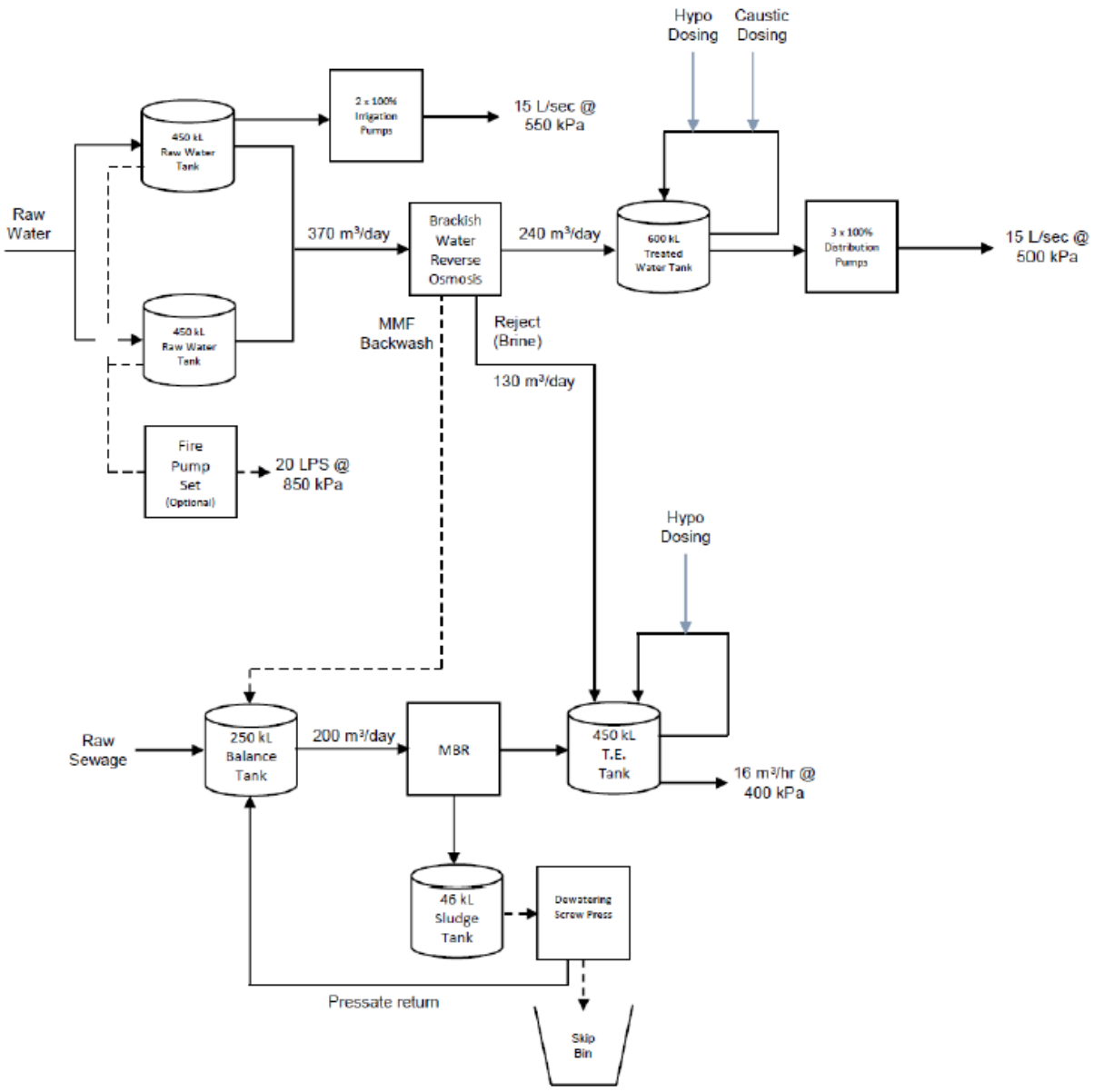


**Figure 3: MBR process flow inclusive of RO reject**

The expected treated effluent target concentrations are shown in Table 2.

**Table 2: Accommodation Resort WWTP treated effluent target concentrations**

| Parameter | Unit | Target Concentration |
|---|---|---|
| Biological Oxygen Demand (BOD) | mg/L | <20 |
| Total Suspended Solids (TSS) | mg/L | <30 |
| Total Nitrogen | mg/L | <20 |
| Total Phosphorus | mg/L | <3 |
| *E.coli* | cfu/100 mL | <1,000 |
| Residual free chlorine | mg/L | 0.2 – 2.0 |
| pH | pH units | 6.5 – 8.5 |

Sludge produced will be collected in a sludge storage tank and then conveyed to the sludge dewatering system.

Up to approximately 400 $m^3$ of sludge cake is expected to be produced and require disposal. The sludge cakes will be stored (for less than 30 days) within a refrigerated sea container at the WWTP (Onslow Iron 2023) prior to disposal to the onsite Class II landfill facility (once approved for operation).

The RO recovery, subject to raw water quality, will be flexible in the management and operation of the RO plant and may result in fluctuations in the system recovery rate. The RO system has been designed with 65% recovery; however, this may fluctuate, impacting the volume of the RO reject reported in the treated effluent tank. The treated effluent tank will receive approximately 75% of water from the MBR and approximately 25% from RO reject. It is anticipated that RO reject water to the treated effluent tank will not exceed 130 kL/day. The RO reject Total Dissolved Solids (TDS) concentrations are anticipated to be below 3,500 mg/L.

The average TDS when combined with the treated effluent is expected to be approximately 2,000 to 2,500 mg/L for normal operation.

To note: An existing works approval W5064/2011/1 (expires 31/12/2025) is held for a category 85 WWTP with a capacity of 95 $m^3$/day at the Accommodation Resort. This WWTP (authorised under W5064/2011/1) is not within the scope of the assessment documented in this decision report and will be decommissioned and removed from site, following the completion of the Accommodation Resort WWTP (being assessed under this decision report).

The WWTPs will discharge to the same spray field during operation of the two facilities.

CPF WWTP

The CPF WWTP will be a Sequence Batch Reactor (SBR) system with a design capacity of 15 $m^3$/day.

The SBR treatment process operates in five steps:

1. Filling of the reactor basin;
2. Reaction phase – the reaction phase is a combination of anoxic and aerobic phases to achieve high levels of BOD and nitrogen removal;
3. Settling phase;
4. Decant phase; and
5. Idle phase.

The expected treated effluent target concentrations are shown in Table 3. Treated effluent will be disposed of via irrigation to a 2.19 ha spray field.

**Table 3: CPF WWTP treated effluent target concentrations**

| Parameter | Unit | Target Concentration |
|---|---|---|
| BOD | mg/L | <20 |
| TSS | mg/L | <30 |
| Total Nitrogen | mg/L | <30 |
| Total Phosphorus | mg/L | <8 |
| *E.coli* | cfu/100 mL | <1,000 |
| Residual free chlorine | mg/L | 0.2 – 2.0 |
| pH | pH units | 6.5 – 8.5 |

Sludge produced from the process will be stored within the sludge tank and will be collected for disposal offsite in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004*.

Upper Cane WWTP

The Upper Cane WWTP will be a below ground submerged aeration filter (SAF) system with a design capacity of 2.5 $m^3$/day.

From the production area drainage network, the wastewater will gravity flow direct and from the administration area be pumped to the WWTP. The influent will gravity flow through the treatment chambers where it will then enter the disinfection chamber. The treated effluent will then pass through the tablet chlorinator and will flow into a 2,200 L storage tank that will be discharged of via irrigation to a 0.365 ha spray field.

The expected treated effluent target concentrations are shown in Table 4.

**Table 4: Upper Cane WWTP treated effluent target concentrations**

| Parameter | Unit | Target Concentration |
|---|---|---|
| BOD | mg/L | <20 |
| TSS | mg/L | <30 |
| Total Nitrogen | mg/L | <30 |
| Total Phosphorus | mg/L | <8 |
| *E.coli* | cfu/100 mL | <1,000 |
| pH | pH units | 6.5 – 8.5 |

Any sludge produced from the process will be stored within the dedicated tank and will be collected for disposal offsite in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004*.

### 2.2.5 Category 57

The haulage feet is expected to produce approximately 40,000 used tyres per annum. The mine fleet is expected to produce approximately 190 used tyres per annum.

The storage area will be in the open and will be designed to have a maximum storage capacity of up to 11,000 used tyres per annum, allowing for three months of storage prior to the tyres being buried with the landfill.

Used tyre storage within the premises will consist mainly of heavy mobile equipment tyres (approximately 3.89 tonnes each). Light vehicle tyres and support vehicle tyres of various sizing will also be stored in smaller quantities.

### 2.2.6 Category 64

The landfill facility is to be located within the Kens Bore waste rock landform (WRL) with an annual throughput not exceeding 9000 tonnes per annum. There are four, 10 m lifts proposed for the WRL to a maximum height of 43 m above natural land surface.

The applicant originally advised (Onslow Iron 2022) that the landfill would be developed once the Stage 1 area of the first WRL lift became available during construction of the WRL.

The applicant is now proposing to "*construct landfill trenches below the natural ground surface within the WRL footprint prior to the first lift being available. This is required as the first lift of the WRL will not be available for landfilling activities until approximately year 2 of operating*" (Onslow Iron 2023).

The landfill will accept the following waste types in accordance with the *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)* (DWER 2019): putrescible waste; inert waste type 1; inert waste type 2 (tyres); special waste type 2 (biomedical/ clinical waste); and contaminated solid waste (biosolids i.e. sludge cake produced from the Accommodation Resort WWTP; and soil that meets the waste acceptance criteria specified for Class II landfills after treatment at the bioremediation facility).

To note: An existing works approval W5172/2012/1 (expires 31/12/2025) is held for a category 89 putrescible landfill facility with a design capacity of 23,000 tpa. This landfill facility (authorised under W5172/2012/1) is not within the scope of the assessment documented in this decision report.

### 2.2.7 Category 73

Bulk fuel storage facilities will be located at the CPF Bulk Fuel Facility and one at the Upper Cane Non-Process Infrastructure (NPI) area. Heavy Mobile Equipment (HME) Workshop, the Road Train Maintenance and Upper Cane NPI area will have bulk lubrication storage.

The location and infrastructure of fuel and other hydrocarbon storage for the premises is shown in Table 5.

**Table 5: Location and infrastructure for fuel and other hydrocarbon storage**

| Area | Infrastructure |
|---|---|
| **Ken Bore CPF Bulk Fuel Facility** | 1 x 200,000 L master tank<br>4 x 200,000 L slave tanks<br>1 x 12,000 L day tank<br>Total = 1,012,000 L diesel storage |
| Power Station | 1 x 16,000 L diesel tank<br>1 x 1,000 L lube oil Intermediate Bulk Container (IBC)<br>1 x 1,000 L waste oil IBC |
| Kens Bore Heavy Mobile Equipment Lube Storage | 6 x 70,900 L lube oil tanks<br>2 x 70,900 L waste oil tanks |
| Kens Bore Road Train Lube Storage | 4 x 70,900 L lube oil tanks<br>4 x 70,900 L waste oil tanks |
| Upper Cane Bulk Lubrication | 2 x 70,900 L lube oil tanks<br>1 x 70,900 L waste oil tank |
| **Upper Cane Bulk Fuel Farm** | 1 x 200,000 L master tank<br>2 x 200,000 L slave tanks<br>1 x 1,000 L day tank<br>Total = 601,000 L diesel storage |
| Explosives Compound | 1 x 200,000 L master tank<br>2 x 200,000 L slave tanks<br>1 x 1,000 L day tank<br>Total = 601,000 L diesel storage |
| Kens Bore Airport Fuel Storage | 1 x 55,000 L JetA1 storage tank<br>1 x 50,000 L JetA1 storage tank |

### 2.2.8 Category 77

A concrete batching plant with a capacity of up to 100 $m^3$/hr is proposed during construction (estimated facility will be operational for approximately 12 months). The concrete produced will predominately be used within the premises, however concrete may also be provided to areas outside the premises (operated by the applicant or subsidiaries) to support other activities on neighboring areas. The concrete will not be produced for sale or commercial purposes.

Once material has been mined and screened, it will be stockpiled in surge piles adjacent to the concrete batch plant. The material will be transferred into the feed hoppers via enclosed augers. The feed hopper will transfer the material to storage silos within the enclosed circuit.

Required quantities of each material will then be dispatched from each storage silo and the

batch of concrete will be prepared. The concrete will be discharged via transfer values to a truck located under the loading cone.

### 2.2.9 Exclusions

The following infrastructure/activities are not included in the scope of the assessment documented in this decision report:

- Temporary mobile asphalt plant to support construction works (approximately 6 months). *Onslow Iron 2022* states that the "*produced asphalt will only be used on, adjacent to, or in areas connected to the Project and not used for commercial purposes or sale*."

  In accordance with the *Industry Regulation fact sheet: Asphalt manufacturing* (DWER 2018), this asphalt plant does not trigger category 35 under Schedule 1 of the EP Regulations.

- A bioremediation pad is proposed to be constructed within the footprint of the WRL. Any hydrocarbon-contaminated soils will be stored on this pad and undergo active treatment as required until testing of the soil confirms the material meets the threshold for disposal as set out in the *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)* (DWER 2019). *Onslow Iron 2022* states that "*the facility will not process more than 1,000 tonnes of contaminated soil per year*", the facility will also not receive liquid waste from other premises.

  Therefore, the bioremediation facility does not trigger category 61 under the EP Regulations. The applicant should note that the discharge of hydrocarbons to the environment is an unauthorised discharge under the *Environmental Protection (Unauthorised Discharges) Regulations 2004* and the facility should be constructed and operated to comply with the *Assessment and management of contaminated sites* (DWER 2021) and the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (ASC NEPM).

- RO plants are proposed at the Accommodation Resort, CPF administration area and Upper Cane administration area to provide potable water. The RO plants will produce wastewater volumes below the Category 85B threshold of 0.5 gigalitres (GL) per year.

  While the RO plants aren't regulated by the department, the brine pipelines and the disposal of brine via irrigation is (refer to section 2.2.4).

- Gas pipeline that will tie into the power station. The construction of the Gas Pipeline and Environmental Plans will be assessed and approved under the *Petroleum Pipelines Act 1969*.

- A 16 MW (540 W per panel) fixed solar array will be installed and tied into the main power grid to offset the gas engine power demand during the day. This activity is not regulated by the department as it does not trigger category 52 or 84 under Schedule 1 of the EP Regulations.

## 2.3 Other approvals

The West Pilbara Iron Ore Project (the Project) was originally proposed for development by APIM who procured environmental approval including those obtained under the Part IV of the EP Act Ministerial Statement (MS) 1027, the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) EPBC 2009/4706 and the *Mining Act 1978* (Mining Act).

MRL have been "*authorised by the APIJV participants to act on their behalf in respect of statutory approvals and licences pertaining to the APIJV tenements*", "*including corresponding and lodging documents with all Government departments in respect of those statutory approvals and licences.*" (APIM 2022a).

### 2.3.1 EPBC Act (Cth)

Under the EPBC Act, APIM was given approval (Decision Notice 2009/4706) to construct and operate the Project including mining and associated infrastructure, and a rail line to transport the ore to port.

Controlling provision relates to listed threatened species and communities including:

- Condition 4 relating to a Fauna Management Plan, which must include:
  a. Measures to minimise mortality of EPBC Act listed threatened fauna species during construction;
  b. Measures to protect EPBC Act listed threatened fauna habitat located adjacent to cleared areas;
  c. Measures to rehabilitate areas disturbed during construction;
  d. Collated baseline data of EPBC Act listed threatened fauna at and adjacent to the project area; and
  e. A fauna monitoring program.
- Condition 5 relating to a Ground Water Report and Monitoring Program which must address, but not be limited to:
  a. Measures to ensure that the water levels in groundwater fed pools within and adjacent to the project area are maintained consistent with pre-mining levels for the life of the mine;
  b. Details including the timing, methodology, infrastructure design, trigger levels and monitoring strategies of a supplementation program designed to maintain water levels of groundwater fed pools located adjacent to disturbance areas for the life of the mine.

### 2.3.2 Aboriginal Heritage Act 1972 (AH Act) and Aboriginal Cultural Heritage Act 2021

*Onslow Iron 2022* states that ethnographic and archaeological surveys have been completed. As a result of ongoing consultation, several s18 applications received Ministerial Consent with the endorsement of the Native Title Groups (NTG) and to disturb previously identified sites and places within and adjacent to the Project. Consultation with Traditional Owner Groups is ongoing to identify any future requirements.

*Onslow Iron 2022* states that the NTG with interests over the Premises area is the Robe River Kuruma (RRK) [WCD2016/006).

### 2.3.3 Mining Act

Three Mining Proposals have been approved by the Department of Mines, Industry Regulation and Safety (DMIRS), for the Project under the Mining Act:

- REG ID 35959 for the Mine Accommodation Facility on L08/68;
- REG ID 99698 for a Communications Facility on L08/181; and
- REG ID 113633 for the Kens Bore Deposit.

The applicant has stated (Onslow Iron 2022) that "*Activities proposed in this WAA are consistent with activities detailed in the MP (REG ID 113633)*."

### 2.3.4 Part IV of the EP Act

The Project – Stage 1 Mine Area was assessed by the Environmental Protection Authority (EPA) and approved under MS 1027.

- Condition 6 Troglofauna – relating to defining the extent of the troglofauna habitat.
- Condition 7 Vegetation and Flora – relating to:
    - Surveys, restricting access and minimising disturbance of the *Triodia* sp. Robe River Assemblages of the mesas of the West Pilbara priority ecological community (PEC).
    - Monitoring impacts due to dust deposition, saline water application for dust control, fire, and feral species on *Triodia* sp. Robe River Assemblages of the mesas of the West Pilbara PEC.
    - Minimise impacts of workforce out of hours recreational activities on the Cane River Conservation Park; and proposed West Hamersley Range Conservation Park.
- Condition 8 Groundwater Drawdown – ensuring that the dewatering of groundwater for the implementation of the proposal does not cause the loss or decline in condition and health of the groundwater dependent vegetation.
- Condition 9 Surface Water and Significant Vegetation – ensuring that changes to surface water flows related to the proposal do not adversely affect any significant vegetation community, including Mulga vegetation.
- Condition 11 Trench Management relating to open trenches associated with construction and the burial of pipelines and/or cables.

The applicant has stated (Onslow Iron 2022) that "*Activities detailed within this WAA are consistent with the Proposal Elements detailed in MS1027 for the WPIOP-Stage 1 Mine Area*."

Requirements of MS 1027 are not re-assessed in this decision report and will not be duplicated as conditions on the works approval/licence.

# 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 6 below. Table 6 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 6: Proposed applicant controls**

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| **Construction** | | | |
| Dust | Works associated with the construction of the following infrastructure:<br>• CPF C&S plant<br>• C&S plant at ROM pad<br>• Mobile C&S plant<br>• Power station<br>• WWTPs<br>• Landfill cells / trenches<br>• Bulk fuel storage facilities<br>• Concrete batch plant<br>Vehicle movement on unsealed roads | Air / windborne | • Earthworks restricted to areas required for construction activities.<br>• Dust suppression will be used as required on running surfaces of mobile machinery.<br>• Vehicle speed limits.<br>• Routine maintenance and housekeeping practices. |
| Noise | | Air / windborne | • All equipment and machinery will be regularly maintained in accordance with manufacturer specifications.<br>• Compliance with the *Environmental Protection (Noise) Regulations 1997*.<br>• Construction activities will be in accordance with the *Australian Standard (AS) 2436-2010 Guide to noise and vibration control on construction, demolition and maintenance sites*. |
| Contaminated stormwater | Overland runoff | Discharges to land | • Surface water diversions/drainage controls will be implemented for construction activities to divert stormwater around the construction areas and into the natural environment.<br>• Earthen sumps and/or other sediment barriers will be constructed as required, to prevent stormwater with high sediment load discharging direct to the natural environment. |
| Hydrocarbon and chemical spills | Operation of heavy machinery associated with construction activities | Discharges to land | • Fuel storage and handling will be in accordance with *AS 1940-2004 The storage and handling of flammable and combustible liquids* and operated in accordance with *Dangerous Goods Safety Act 2004*.<br>• Refuelling restricted to dedicated areas.<br>• Mobile refuelling truck / service truck will be fitted with a spill kit.<br>• Any fuel spills will be cleaned up immediately. |

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| **Category 5 - Commissioning and Operation** | | | |
| Dust | CPF C&S plant<br>Stockyard including conveyors, stackers, reclaimer and truck load-out bin | Air/ windborne | • Dust suppression spray systems (droplets and fogging) located at the ROM bin and transfer points throughout the C&S circuit.<br>• Skirts on conveyors.<br>• Dust suppression water applied to operational areas that have the potential to generate dust.<br>• Automated dust suppression water cannons installed in the stockyard area to wet the stockpiles and surrounding areas.<br>• Water added to the ROM ore to achieve the required DEM content (approximately 7-8%) for product transport. |
| | C&S plant at the ROM pad | | • Hose and spray bars fitted on main and auxiliary conveyors of jaw crusher.<br>• Dust suppression fitted at cone inlet and outlet.<br>• Cone crusher conveyor fitted with hose and spray bars, full length skirting to head drum.<br>• Transfer conveyor of horizontal screener fully skirted.<br>• Dust covers running full conveyor and a head chute with rubber sock on incline conveyor.<br>• Stockpiles located within the ROM area. |
| Noise | CPF C&S plant<br>Stockyard including conveyors, stackers, reclaimer and truck load-out bin<br>C&S plant at the ROM pad | Air / windborne | • All equipment regularly maintained in accordance with manufacturer specifications.<br>• Compliance with the *Environmental Protection (Noise) Regulations 1997*. |
| Sediment laden / hydrocarbon contaminated stormwater | Rainfall ingress | Overland runoff | • Concrete hardstand at the CPF beneath the primary and secondary crushers and conveyor transfer points.<br>• Concrete sumps to collect wash down water from conveyors.<br>• Stormwater diversion designed to ensure uncontaminated stormwater |

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| | | | runoff is directed away from processing and material stockpile areas into earthen sedimentation ponds.<br>• Unlined sedimentation ponds constructed in and around the CPF to capture any sediment laden surface water runoff from the processing and stockyard area.<br>• Sedimentation ponds designed for a 1-year ARI, 1-hour rainfall event.<br>• Diversion drains/bunds established around the location of the C&S plant at the ROM pad to prevent ingress of stormwater and to direct stormwater to sedimentation ponds. |
| **Category 12 - Commissioning and Operation** | | | |
| Dust | Mobile C&S plant | Air / windborne | • Hose and spray bars fitted on main and auxiliary conveyors of jaw crusher.<br>• Dust suppression fitted at cone inlet and outlet.<br>• Cone crusher conveyor fitted with hose and spray bars, full length skirting to head drum.<br>• Transfer conveyor of horizontal screener fully skirted.<br>• Dust covers running full conveyor and a head chute with rubber sock on incline conveyor.<br>• Construction material may be pre-conditioned as required depending on the type of borrow material and location.<br>• Stockpiles located within borrow pits areas.<br>• Dust suppression carts used (as required) on stockpiles around the mobile C&S plant |
| Noise | | | • All equipment regularly maintained in accordance with manufacturer specifications. |
| Hydrocarbons and chemicals | Leaks and spills from the mobile C&S plant | Discharges to land | • Fuel stored in accordance with the *AS 1940-2004 The storage and handling of flammable and combustible liquids* and the *Dangerous Goods Safety Act 2004*.<br>• Fuel for the mobile C&S plant sourced from self-bunded diesel tanks and |

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| | | | distributed by a service truck. |
| Sediment laden / hydrocarbon contaminated stormwater | Rainfall ingress | Overland runoff | • Mobile C&S plant operated within the borrow pit area, with temporary diversion drain channels/culverts around the area to divert stormwater away from the borrow pits.<br>• A temporary earthen sump located at a topographic low point within the mobile C&S plant area (borrow pit area) to capture all stormwater and plant run-off within the mobile C&S plant area. |
| **Category 52 – Commissioning and Operation** | | | |
| Natural gas, CO, NOx, $SO_2$, Particulate Matter ($PM_{10}$ and $PM_{2.5}$) | Generator stacks | Emissions to air | • Generators fitted with a 2-stage intercooler and exhausts coupled with a silencer.<br>• Generators are open gensets installed within a purpose-built engine hall and bunded.<br>• Gas generator exhausts directed to 12 individual stacks and a minimum height of 8 m above ground level.<br>• Generators maintained and serviced at regular intervals designated by the manufacturer to ensure efficient operation and optimal consumption. |
| Noise | Generators | Emissions to air | • Generators housed in a dedicated enclosed building.<br>• Each unit includes mufflers and bafflers and external cooling fans.<br>• Compliance with *Environmental Protection (Noise) Regulations* 1997. |
| Hydrocarbons and chemicals | Leaks and spills | Discharges to land | • Power station engine hall erected on concrete pad.<br>• The power station designed with a purpose-built drainage system, which directs potentially contaminated runoff to a local sump and an oily water separator. |
| **Category 54 – Commissioning and Operation** | | | |
| Sewage, partially treated sewage and/or nutrient rich treated effluent | Overtopping of sewage holding tanks | Discharges to land | <u>All WWTPs</u>:<br>• Units enclosed.<br>• Units maintained in accordance with manufacturer's specifications. |

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| | | | • Installed on either concrete or compact ground.<br>• Installed with systems to monitor the tank volume levels, an alarm system will notify the operator of high-risk volumes and reduce the risk of an overflow event occurring.<br>• Flow meters installed.<br><u>Accommodation Resort WWTP</u>:<br>• Aerobic/MBR tank fitted with an emergency overflow which discharges to the screened influent lift station.<br>• Balance tank with contingency storage of up to 1 day of normal flow if discharge is suspended.<br>• Sludge produced collected in the sludge storage tank and disposed of to the Class II landfill facility (once approved for operation).<br><u>CPF and Cane WWTPs</u>:<br>• Sludge produced collected for disposal offsite in accordance with the *Environmental Protection (Controlled Waste) Regulations 2004.* |
| | Rupture of pipes | Discharges to land | • Pipelines visually monitored for leaks.<br>• Treatment chemicals stored in impermeable bunds or stored in self bunded tanks/containers.<br>• Spill kits made available at the fuel/chemical locations and employees trained in their use. |
| Nutrient rich treated effluent | Irrigation to spray fields | Discharges to land | • Effluent treated to target concentrations shown in Tables 1, 2 and 3 (refer to section 2.2.4).<br>• Electrical conductivity recorded at the RO reject tank allowing early indication of quality of reject that will be combined with treated effluent for irrigation.<br>• Operating freeboard maintained on the Accommodation Resort WWTP treated effluent tank to allow TDS correction if required.<br>• All irrigation areas have a perimeter fence, with a lockable gate and safety signage displayed on the fencing.<br>• Use of above ground sprinklers to |

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| | | | discharge the treated effluent onto the ground, positioned away from drainage lines to prevent pooling.<br>• 5 m spray drift buffer.<br>• Inspection of spray field to ensure no visible runoff outside the spray field. |
| **Category 57 – Operation** | | | |
| Fire / black smoke | Storage of used tyres | Air/ windborne | • Storage in accordance with the *Guidance Note: GN02 Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres* (DFES 2020) as a 'large tyre facility', which includes:<br>o Tyre stacks not to exceed 3.7 m in height, 60 $m^2$ in area and / or 12.5 tonnes in weight.<br>o A maximum of four (4) individual stacks grouped, with a clear separation distance of not less than 2.5 m at the base must be maintained between each stack.<br>o A clear separation distance of not less than 18 m maintained between each stack.<br>• Fire suppression system in accordance with *DFES 2020.* |
| Fire debris and wash waters | | Discharges to land | • Graded to create surface water diversion / bunds to ensure all clean stormwater from the surrounding area is diverted.<br>• Stormwater and firefighting runoff discharged to the overall surface water network at the CPF and directed to the sedimentation ponds.<br>• Per-and poly-fluoroalkyl substances (PFAS) not used for fire suppression. |
| **Category 64 – Operation** | | | |
| Dust | Disposal and burial of waste | Air/ windborne | • Dust suppression water applied as required.<br>• Excavated overburden material placed around the edge of the landfill.<br>• Only four trenches will be active at any one time (two putrescible trenches; one inert type 1 trench; and one tyre trench).<br>• Putrescible trenches tipping area no |

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| | | | longer than 30 m.<br>• Putrescible trenches tipping area no greater than 2 m in height. |
| Windblown waste | | Air/ windborne | • Putrescible landfill cells/trenches fenced (or a suitable barrier used) and have an access gate.<br>• Putrescible waste to be covered weekly (or as soon as practical after deposit) with sufficient quantities of clean fill or inert waste type 1.<br>• Special waste type 2 covered immediately after its disposal to a depth of at least 1 m with a dense, inert and incombustible material. |
| Contaminated stormwater | | Overland runoff | • Earthen bunds installed around the trenches for surface water management. |
| Leachate | | Infiltration | • Landfill cells a minimum of 100 m from the planned WRL edge within all WRL lifts.<br>• Landfill cells maintained a minimum separation distance to groundwater of approximately 5-10 m.<br>• Putrescible waste (including special waste type 2 and contaminated solid waste) segregated from inert waste and disposed of in separate trenches.<br>• A minimum 20 m buffer between the putrescible waste trenches and inert waste trenches. |
| Fire / black smoke | | Air/ windborne | • Tyres disposed of in the landfill facility in dedicated trenches as follows:<br>○ In batches separated from each other by at least 100 mm of soil and each consisting of not more than 1,000 used car tyre equivalent.<br>○ Tyres to be covered at regular intervals such that no more than 1,000 used tyre equivalents are left exposed at any one time.<br>○ Once final waste levels in the tyre disposal area are achieved 500 mm of cover is applied. |

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| **Category 73 - Commissioning and Operation** | | | |
| Hydrocarbons | Bulk fuel storage facilities | Discharges to land | • Chemicals and hydrocarbons stored in a manner consistent with Australian Standard (AS) 1940-2004 *The storage and handling of flammable and combustible liquids.*<br>• Operated in accordance with the *Dangerous Goods Safety Act 2004.*<br>• Hydrocarbons stored in impermeable bunds or self-bunded tanks/containers.<br>• Storage tanks shall not be overfilled.<br>• Concrete aprons flowing into sumps to collect potential spillage and into oily water separator systems. |
| **Category 77 – Commissioning and Operation** | | | |
| Dust | Concrete batch plant | Air/ windborne | • Dust suppression applied via water carts as required in all works areas.<br>• Sand and aggregate stored in stockpiles on the ground within the loader operation area.<br>• Augers enclosed.<br>• Enclosed circuit of transfer of material to storage silos.<br>• Overflow protection.<br>• Level indicators fitted to silos.<br>• Silos equipped with venting filters.<br>• Regular inspection of all filters and/or pressure gauges (minimum weekly).<br>• Air cleaning system tested at least weekly and repairs made as necessary. |
| Noise | | Air/ windborne | • All plant maintained in accordance with manufacturer's specifications. |
| Sediment laden stormwater / contaminated wash water | | Discharges to land | • All water used in the concrete batching process or washing of trucks collected and recycled back into the plant.<br>• Water collected in the wedge pit transferred to a storage tank for reuse onsite.<br>• The wedge pit not allowed to dry out except where necessary to remove accumulated material.<br>• Wash-down sump and wedge pit |

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| | | | periodically cleaned to prevent excessive build up and maintain capacity.<br>• Settled material not accumulate higher than 30 cm below the top of the pit/sump walls. |

### 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 7 and Figures 4 and 5 below provide a summary of potential 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)).

To note: Cardo Outstation is not a residential premises, the homestead is abandoned.

**Table 7: Sensitive environmental receptors and distance from prescribed activity**

| Environmental receptors | Distance from prescribed activity |
|---|---|
| *Rights in Water and Irrigation Act 1914* | The proposed premises is located within the Proclaimed Pilbara Groundwater Area and Surface Water Area. |
| Groundwater | Across the Kens Bore Deposit water supply area, groundwater quality within the fractured Channel Iron Deposit and alluvial aquifers is fresh with pH ranging from neutral to slightly alkaline.<br>Depth to groundwater is approximately 15 to 45 m below ground level (mbgl). |
| Groundwater Dependent Ecosystems (GDEs) | *Onslow Iron 2022* states that GDEs have been identified in two areas proximal to the Kens Bore Deposit. "*Studies conducted by Astron Environmental (2010b; 2011 and 2012) determined that vegetation in these areas have a moderate to high dependence on groundwater, comprising of mainly Melaleuca and Eucalyptus species.* " |
| Surface water bodies | *Onslow Iron 2022* states the following:<br>• The project is intersected by the ephemeral Red Hill Creek and Cane River, tributaries to the Red Hill Sub-Catchment (of the larger Robe River Catchment) and Cane River Catchments respectively that flow from the Hamersley Ranges.<br>• The majority of the project infrastructure is located within the Red Hill Creek Sub- |

| Environmental receptors | Distance from prescribed activity |
|---|---|
| | Catchment, with the southern end of the Kens Bore Pit and Infrastructure Area on the fringe of the Red Hill Creek Floodplain. The Airport, Accommodation Resort and Upper Cane NPI are located within northern Cane River Catchment.<br>• Three surface water pools (semi-permanent and permanent) have been identified in the wider project area that experience ephemeral flows, typically during summer rainfall events. These pools align with the area of GDEs associated with rainfall events from the Hamersley Ranges.<br>• Within the proposed project area there are no known beneficial users of surface water.<br>• Red Hill Creek is approximately 1 km to the south of the nearest fuel storage facility. |
| Priority Ecological Communities (PEC) | *Triodia pisoliticola* (previously *Triodia* sp. Robe River) assemblages of mesa of the West Pilbara located within proposed premises boundary.<br>CPF to the nearest PEC is approximately 2.6 km. |
| Priority Flora | Priority 3 – *Solanum sp*. Red Hill within proposed premises boundary.<br>Priority 3 – *Indigofera rivularis* within proposed premises boundary.<br>Priority 3 - *Triodia pisoliticola* found within the proposed premises boundary. |
| Threatened / Priority Fauna | The following have been found within the proposed premises boundary:<br>• Northern Quoll (*Dasyurus hallucatus*) – Endangered;<br>• Pilbara Olive Python (*Liasis olivaceaus barroni*) – Vulnerable;<br>• Pilbara Leaf-nosed Bat (*Rhinonicteris aurantia*) – Vulnerable;<br>• Ghost Bat (*Macroderma gigas*) – Vulnerable; and<br>• Western Pebble-mound Mouse (*Pseudomys chapmani*) – Priority 4. |
| Aboriginal Sites and Heritage Places | Numerous heritage sites and places have been identified within and in close proximity to the Kens Bore Deposit and supporting infrastructure areas.<br>"*A number of sites recorded have been lodged under the AH Act. Identified heritage sites/places identified to date have been the subject of numerous high-level investigations and on-country consultation surveys/meetings with the RRK NTG to enable the collaborative development of appropriate management* |

| Environmental receptors | Distance from prescribed activity |
|---|---|
| | *strategies*".<br>"*Three of these sites are currently the subject of ongoing research (archaeological excavations are completed) and analysis under the provisions of Ministerial s16 Consents (DPLH S16 Permit #541 and DPLH S16 Permit #621)"* (Onslow Iron 2022). |
| Red Hill Pastoral Lease | The project occurs on the Red Hill Pastoral Lease. Land in this area is used for cattle grazing. |

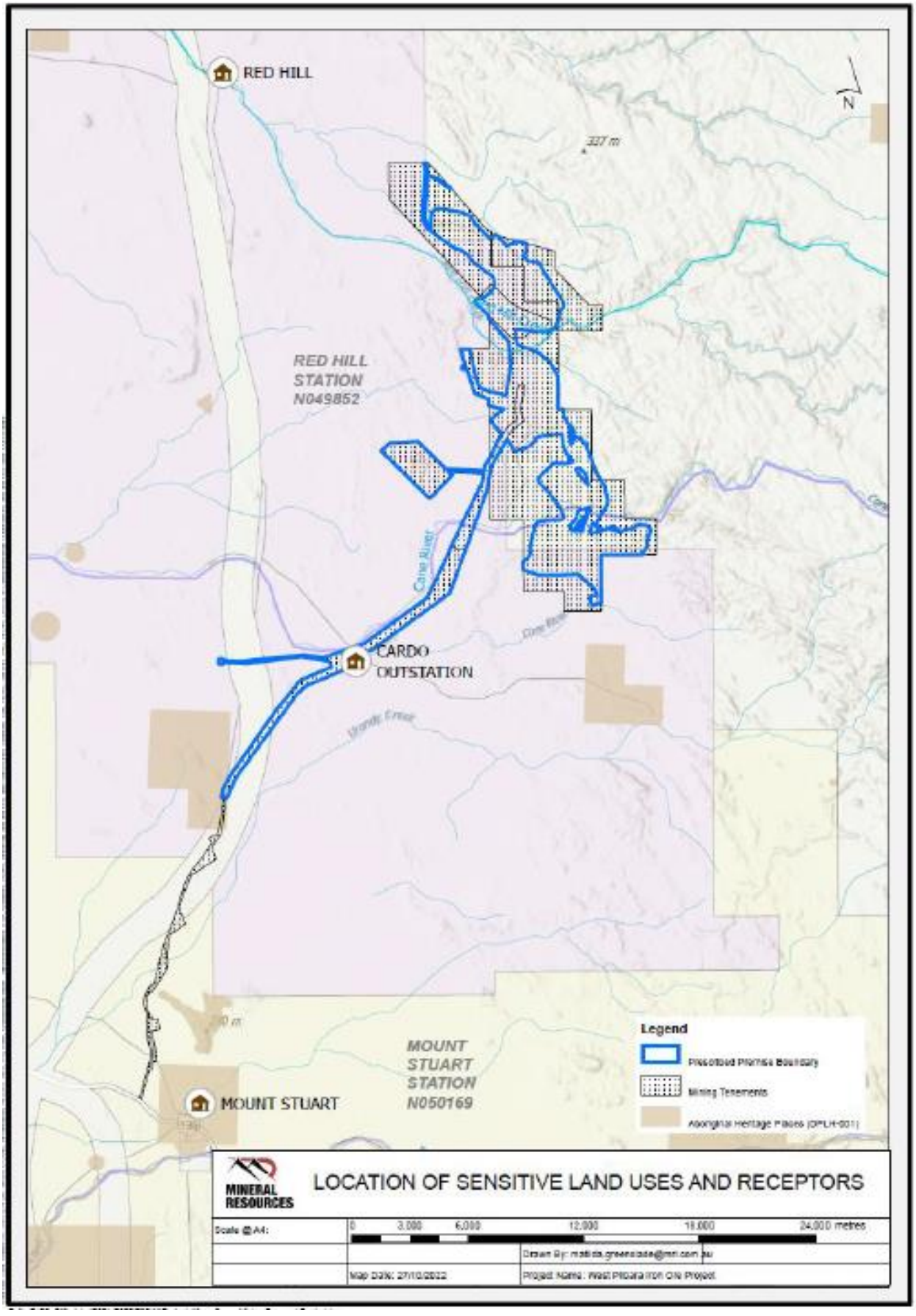


**Figure 4: Distance to sensitive receptors**

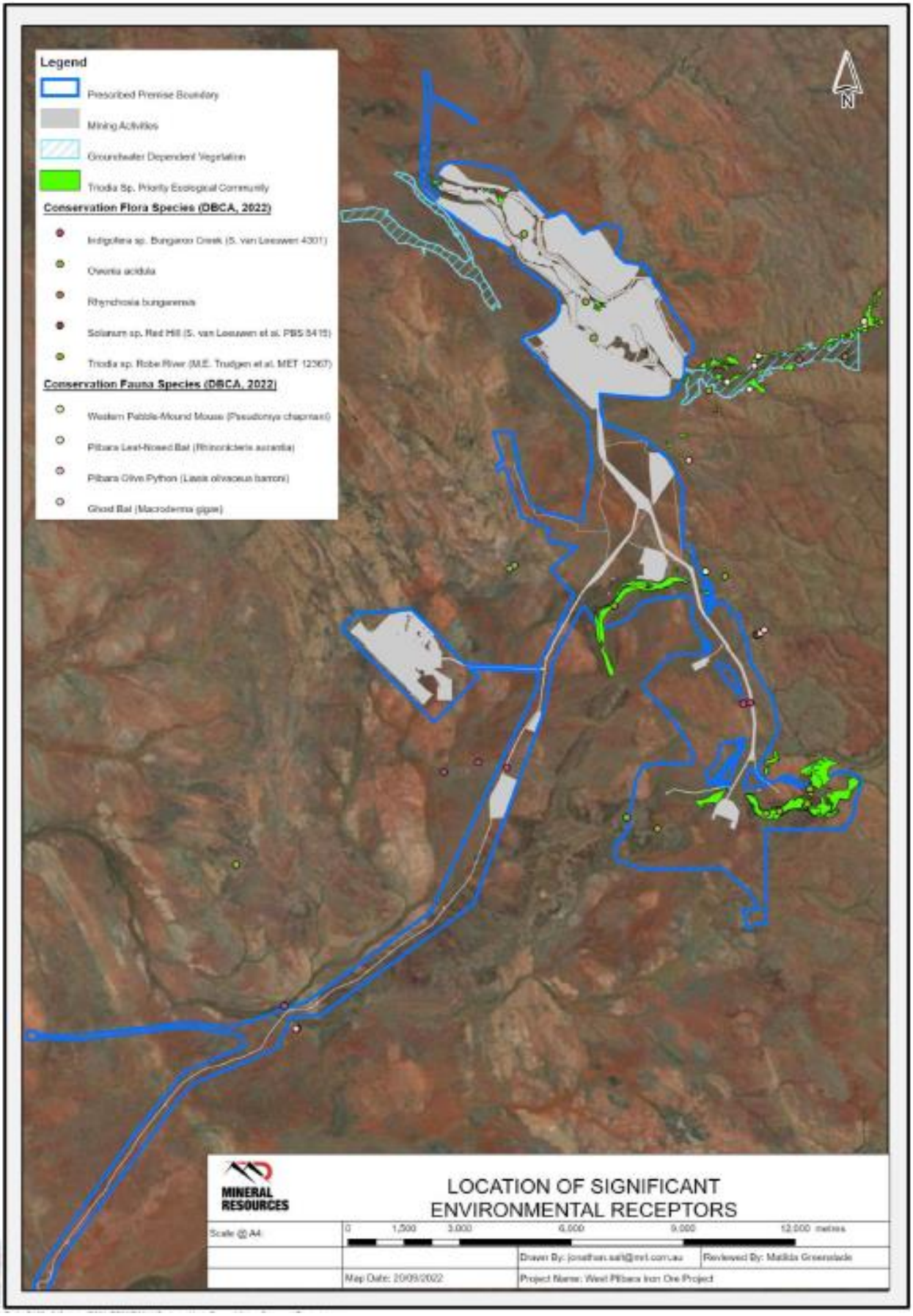


**Figure 5: Distance to environmental receptors**

## 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 8.

Works approval W6769/2023/1 that accompanies this decision report authorises construction, commissioning, and time-limited operations. The conditions in the issued works approval, as outlined in Table 8Table 8 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 operation of the premises. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence application.

## Table 8: Risk assessment of potential emissions and discharges from the premises during construction, commissioning and operation

| Risk events | | | | | Risk rating [1]<br>C = consequence<br>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** | | | | | | | | |
| Works associated with the construction of the following infrastructure:<br>• CPF C&S plant<br>• C&S plant at the ROM pad<br>• Mobile C&S plant<br>• Power station<br>• WWTPs<br>• Landfill cells / trenches<br>• Bulk fuel storage facilities<br>• Concrete batch plant<br>Vehicle movement on unsealed roads | Dust | Air / windborne pathway causing impacts to amenity<br>Smothering vegetation impacting photosynthesis | PECs<br>Flora<br>Native fauna<br>Aboriginal Sites and Heritage Places | Refer to Section 3.1 | C = Slight<br>L = Possible<br>**Low Risk** | Y | The general provisions of the EP Act with respect to the causing of pollution and environmental harm applies.<br>The applicant also has obligations under the EPBC Act - Decision Notice 2009/4706; and Part IV of the EP Act - MS 1027 (refer to sections 2.3.1 and 2.3.4). | N/A. |
| | Noise | Noise and vibration impacts on fauna habitats | Native fauna | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | Y | *Environmental Protection (Noise) Regulations 1997* applies.<br>The applicant also has obligations under EPBC Act - Decision Notice 2009/4706 and associated Fauna Management Plan (refer to section 2.3.1). | N/A. |
| Rainfall ingress | Contaminated stormwater (hydrocarbon and sediment) | Overland runoff causing contamination of soils due to the presence of hydrocarbons and chemicals in the stormwater<br>Increased sedimentation of drainage channels | Soil and vegetation along flow path of the contaminated stormwater<br>Drainage channels | Refer to Section 3.1 | C = Minor<br>L = Possible<br>**Medium Risk** | Y | *Environmental Protection (Unauthorised Discharges) Regulations 2004* also apply. | N/A. |

| Risk events | | | | | Risk rating [1]<br>C = consequence<br>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** | | | | |
| Operation of heavy machinery associated with construction activities | Hydrocarbons and chemicals | Discharges to land from leaks and spills contaminating soils and vegetation in vicinity of spill inhibiting vegetation growth and survival<br>Contamination of surface water bodies and localised groundwater | Soil and vegetation adjacent to area of spill or breach<br>Surface water bodies<br>Groundwater | Refer to Section 3.1 | C = Minor<br>L = Unlikely<br>**Medium Risk** | Y | *Environmental Protection (Unauthorised Discharges) Regulations 2004* and *Dangerous Goods Safety Act 2004* apply. | N/A. |
| **Commissioning (if applicable) and Operation (including time limited operation)** | | | | | | | | |
| **Category 5 – Commissioning and Operation** | | | | | | | | |
| CPF infrastructure<br>C&S plant at the ROM pad<br>Crushing and screening, material loading and unloading and stockpiles<br>Vehicle movements | Dust | Air/windborne pathway causing impacts to amenity<br>Smothering vegetation impacting photosynthesis | PECs<br>Flora<br>Native fauna<br>Aboriginal Sites and Heritage Places | Refer to Section 3.1 | C = Moderate<br>L = Possible<br>**Medium Risk** | Y | Condition 1 – Design / construction requirements.<br>Condition 5 – Commissioning requirements.<br>Condition 16 – Time limited operation requirements.<br>The applicant also has obligations under MS 1027 (Condition 7). | N/A |
| | Noise | Noise and vibration impacts on fauna habitats | Native fauna | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | Y | *Environmental Protection (Noise) Regulations 1997* apply.<br>The applicant has obligations under EPBC Act - Decision Notice 2009/4706 and associated Fauna Management Plan (refer to section 2.3.1). | N/A |

| Risk events | | | | | Risk rating [1]<br>C = consequence<br>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** | | | | |
| Rainfall ingress | Sediment laden / hydrocarbon contaminated stormwater | Overland runoff causing contamination of soils and vegetation due to the presence of hydrocarbons and chemicals in the stormwater<br>Increased sedimentation of drainage channels | Soil and vegetation along flow path of the contaminated stormwater<br>Surface water bodies | Refer to Section 3.1 | C = Minor<br>L = Possible<br>**Medium Risk** | Y | Condition 1 - Design / construction requirements.<br>*Environmental Protection (Unauthorised Discharges) Regulations 2004* also apply. | N/A. |
| **Category 12 – Commissioning and Operation** | | | | | | | | |
| Mobile crushing and screening plant | Dust | Air/windborne pathway causing impacts amenity<br>Smothering vegetation impacting photosynthesis | PECs<br>Flora<br>Native fauna<br>Aboriginal Sites and Heritage Places | Refer to Section 3.1 | C = Minor<br>L = Possible<br>**Medium Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 5 – Commissioning requirements.<br>Condition 16 – Time limited operation requirements.<br>The general provisions of the EP Act with respect to the causing of pollution and environmental harm applies. | N/A. |
| | Noise | Noise and vibration impacts on fauna habitats | Native fauna | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | Y | *Environmental Protection (Noise) Regulations 1997* apply.<br>The applicant also has obligations under EPBC Act - Decision Notice 2009/4706 and associated Fauna Management Plan (refer to section 2.3.1). | N/A. |

| Risk events | | | | | Risk rating [1]<br>C = consequence<br>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 and chemicals | Discharges to land from leaks and spills contaminating soils and vegetation in vicinity of spill inhibiting vegetation growth and survival<br>Contamination of surface water bodies and localised groundwater | Soil and vegetation<br>Surface water bodies<br>Groundwater | Refer to Section 3.1 | C = Minor<br>L = Unlikely<br>**Medium Risk** | Y | *Environmental Protection (Unauthorised Discharges) Regulations 2004* and *Dangerous Goods Safety Act 2004* apply. | N/A |
| | Sediment laden / hydrocarbon contaminated stormwater | Overland runoff causing contamination of soils and vegetation due to the presence of hydrocarbons and chemicals in the stormwater<br>Increased sedimentation of drainage channels | Soil and vegetation along flow path of the contaminated stormwater | Refer to Section 3.1 | C = Minor<br>L = Unlikely<br>**Medium Risk** | Y | *Environmental Protection (Unauthorised Discharges) Regulations 2004* apply. | N/A |
| **Category 52 - Commissioning and Operation** | | | | | | | | |
| Power station generators | Natural gas, CO, $NO_x$, $SO_2$, Particulate Matter ($PM_{10}$ and $PM_{2.5}$) | Emissions to air from generator exhausts and directed to the stacks | Aboriginal Sites and Heritage Places | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | N | Condition 1 - Design / construction requirements.<br>Condition 5 – Commissioning requirements.<br>Conditions 6 and 17 – Authorised discharge point.<br>**Condition 8 – Monitoring during environmental commissioning**.<br>Condition 16 – Time limited operation | Applicant is required to undertake monitoring at least once during commissioning to allow a comparison against expected output emissions. |

| Risk events | | | | | Risk rating [1]<br>C = consequence<br>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** | | | | |
| | | | | | | | requirements. | |
| | Noise | Noise and vibration impacts on fauna habitats | Native fauna | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | Y | *Environmental Protection (Noise) Regulations 1997* applies.<br>The applicant also has obligations under EPBC Act - Decision Notice 2009/4706 and associated Fauna Management Plan (refer to section 2.3.1). | N/A. |
| | Hydrocarbons and chemicals | Spillage of hydrocarbons and oils causing contamination of soil and vegetation | Soil and vegetation adjacent to area of spill | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | Y | *Environmental Protection (Unauthorised Discharges) Regulations 2004* and *Dangerous Goods Safety Act 2004* apply. | N/A. |
| **Category 54 – Commissioning and Operation** | | | | | | | | |
| WWTPs | Sewage, partially treated sewage and/or nutrient rich treated effluent | Overtopping of sewage holding tanks resulting in sewage discharge<br>Soil contamination, inhibiting vegetation growth and survival | Soil and vegetation adjacent to area of spill | Refer to Section 3.1 | C = Minor<br>L = Unlikely<br>**Medium Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 5 – Commissioning requirements.<br>Condition 16 – Time limited operation requirements. | N/A. |
| | | Rupture of pipes resulting in sewage discharge<br>Soil contamination, inhibiting vegetation growth and survival | Soil and vegetation at area of rupture | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | Y | *Environmental Protection (Unauthorised Discharges) Regulations 2004* apply. | N/A. |

| Risk events | | | | | Risk rating [1]<br>C = consequence<br>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** | | | | |
| | Nutrient rich treated effluent | Direct planned discharges to spray fields<br>Soil contamination and impacts to groundwater quality | Soil and native vegetation<br>Groundwater quality | Refer to Section 3.1 | C = Minor<br>L = Possible<br>**Medium Risk** | N | Condition 1 - Design / construction requirements.<br>Condition 5 – Commissioning requirements.<br>Conditions 6 and 17 – Authorised discharge points.<br>**Conditions 7 and 18 – Emission limit for TDS**<br>Conditions 8 and 19 – WWTPs monitoring.<br>Condition 16 – Time limited operation requirements. | Onslow Iron 2022 states to allow for fluctuations in the raw water TDS level, approval is sought for a maximum TDS concentration of up to 3,500 mg/L.<br>The department has placed a limit of 3,500 mg/L TDS on blended water to the Accommodation Resort Irrigation Spray Field during commissioning and time limited operations. |
| **Category 57 – Operation only** | | | | | | | | |
| Storage of used tyres | Fire / black smoke | Air emissions associated with potential combustion of tyres may include VOCs, PAHs, dioxins, ash, NOx and $CO_2$ | Aboriginal Sites and Heritage Places | Refer to Section 3.1 | C = Major<br>L = Rare<br>**Medium Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 16 – Time limited operation requirements. | N/A. |
| | Fire debris and wash waters | Discharges to land from fire control activities which may include liquid emissions containing hydrocarbon, metals and PM | Soil<br>Vegetation<br>Surface water bodies<br>Groundwater | Refer to Section 3.1 | C = Minor<br>L = Unlikely<br>**Medium Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 16 – Time limited operation requirements.<br>*Environmental Protection (Unauthorised Discharges) Regulations 2004* apply. | N/A. |

| Risk events | | | | | Risk rating [1]<br>C = consequence<br>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** | | | | |
| **Category 64 – Operation only** | | | | | | | | |
| Disposal and burial of putrescible waste, inert waste type 1, inert waste type 2, special waste type 2 and contaminated solid waste | Dust | Air/windborne pathway causing impacts amenity<br>Smothering vegetation impacting photosynthesis | PECs<br>Flora<br>Native fauna<br>Aboriginal Sites and Heritage Places | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | Y | The general provisions of the EP Act with respect to the causing of pollution and environmental harm also apply.<br>The applicant also has obligations under MS 1027 (Condition 7). | N/A. |
| | Windblown waste | Air/windborne pathway causing impacts to health and amenity | PECs<br>Flora and Fauna<br>Aboriginal Sites and Heritage Places | Refer to Section 3.1 | C = Slight<br>L = Possible<br>**Low Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 16 – Time limited operation requirements. | N/A. |
| | Contaminated stormwater | Direct discharges to land from rainfall ingress to landfill areas | Soils Vegetation<br>Surface water bodies | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 16 – Time limited operation requirements. | N/A. |
| | Leachate | Infiltration through the base of the landfill | Groundwater | Refer to Section 3.1 | C = Minor<br>L = Possible<br>**Medium Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 16 – Time limited operation requirements. | N/A. |
| | Fire / black smoke | Air emissions associated with potential combustion of tyres may include VOCs, PAHs, dioxins, | Vegetation and fauna within the vicinity of the landfill facility | Refer to Section 3.1 | C = Major<br>L = Unlikely<br>**Medium Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 16 – Time limited operation | N/A. |

| Risk events | | | | | Risk rating [1]<br>C = consequence<br>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** | | | | |
| | | ash, NOx and $CO_2$ | | | | | requirements. | |
| **Category 73 – Commissioning and Operation** | | | | | | | | |
| Bulk fuel storage facilities | Hydrocarbon spill or discharge | Direct discharge and path of flow causing contamination of soils and vegetation | Soil and vegetation at site of spill<br>Surface water bodies with Red Hill Creek approximately 1 km to the south<br>PEC<br>Groundwater | Refer to Section 3.1 | C = Moderate<br>L = Unlikely<br>**Medium Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 16 – Time limited operation requirements.<br>The Dangerous *Goods Safety Act 2004* and associated Regulations will apply during all operations, and are administered by the Department of Mines, Industry Regulation and Safety.<br>The *Environmental Protection (Unauthorised Discharges) Regulations 2004* also apply. | N/A. |
| **Category 77 – Commissioning and Operation** | | | | | | | | |
| Concrete batch plant | Dust | Air/windborne pathway causing impacts to health and amenity<br>Smothering vegetation impacting photosynthesis | PECs<br>Flora and Fauna<br>Aboriginal Sites and Heritage Places | Refer to Section 3.1 | C = Slight<br>L = Possible<br>**Low Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 5 – Commissioning requirements.<br>Condition 16 – Time limited operation requirements.<br>The applicant also has obligations under MS 1027 (Condition 7). | N/A. |

| Risk events | | | | | Risk rating [1]<br>C = consequence<br>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** | | | | |
| | Noise | Noise and vibration impacts on fauna habitats | Native fauna | Refer to Section 3.1 | C = Slight<br>L = Unlikely<br>**Low Risk** | Y | The *Environmental Protection (Noise) Regulations 1997* and *Environmental Protection* (*Concrete Batching and Cement Product Manufacturing) Regulations 1998* apply. | N/A. |
| | Sediment laden stormwater / contaminated wash water | Discharges to land causing contamination of soils and vegetation due to the presence of hydrocarbons and chemicals in the stormwater<br>Increased sedimentation of drainage channels<br>Contamination of surface water bodies | Soil and vegetation<br>Surface water bodies | Refer to Section 3.1 | C = Slight<br>L = Possible<br>**Low Risk** | Y | Condition 1 - Design / construction requirements.<br>Condition 5 – Commissioning requirements.<br>Condition 16 – Time limited operation requirements.<br>The *Environmental Protection (Unauthorised Discharges) Regulations 2004* also apply. | 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 9 provides a summary of the consultation undertaken by the department.

**Table 9: Consultation**

| Consultation method | Comments received | Department response |
|---|---|---|
| Application advertised on the department's website on 06/02/2023 | No comments were received | N/A |
| Local Government Authority advised of proposal on 02/02/2023 | No comments were received | N/A |
| DMIRS advised of proposal 02/02/2023 | No comments were received | N/A |
| Department of Health (DoH) advised of proposal 02/02/2023 | DoH responded on 24/02/2023 providing the following comments:<br><u>Potable Water</u><br>Potable water must be of the quality as specified under the *Australian Drinking Water Quality Guidelines 2011*.<br>For non-scheme water connected areas, the development is to have access to a sufficient supply of potable water that is of the quality specified under the *Australian Drinking Water Quality Guidelines 2011*.<br><u>On-Site Wastewater Disposal</u><br>In relation to the management of wastewater, the DoH has no objection to the proposal subject to clarifying and providing the following:<br>1. A specific Site and Soil Evaluation (SSE) report undertaken by a qualified consultant that is conducted during the wettest seasonal time of the year (Jan/Feb), as per AS/NZS 1547:2012 requirements.<br>2. To consider all aspects of the Government Sewerage Policy requirements and the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Wastes) Regulations 1974*, to ensure a minimum setbacks are met from natural water bodies such as creeks and streams and public drinking water catchment areas.<br>3. The wastewater treatment plant should be engineer certified detailing the requirements as specified on the DoH website.<br>4. Clarification is sought for the source of fire storage water. The drawings appear to show | The department notes the comments.<br>The department has undertaken a source, pathway and impact to receptors risk assessment for the WWTPs.<br>Any comments outside the department's risk assessment documented in this decision report (i.e. Potable Water; and Comments 1; 3, 4 and 6 under On-Site Wastewater Disposal), must be addressed by the applicant and provided to the DoH. |

| Consultation method | Comments received | Department response |
|---|---|---|
| | fire water is extracted from the raw wastewater tanks. Only treated wastewater intended to be recycled for beneficial purposes such as land scaping, garden bed irrigation, dust suppression and fire water storage can be used. If applicable, a separate Recycled Water Quality Management Plan (RWQMP) will need to be submitted to the DoH in accordance with the application process for approval of a recycling water scheme.<br>5. Consideration of nuisances such as odours, noise and vibration in relation to the location of the wastewater treatment plant and disposal areas to accommodation or sensitive land users<br>6. Separate formal applications for each onsite wastewater treatment system/disposal area will be required to be submitted to the DoH. | |
| Robe River Kuruma Aboriginal Corporation advised of proposal 02/02/2023 | No comments were received | N/A |
| Applicant was provided with draft documents on 19/05/2023 | The Applicant provided comments on 24/05/2023 and are presented in Appendix 1. | The department's response is provided in 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. API Management Pty Limited (APIM) 2022a, *Red Hill Iron Ore Joint Venture – Change of Manager and Authority to Act*, dated 16 February 2022 (A2148934).
2. APIM 2022b, *West Pilbara Iron Ore Project – Works Approval Application*, dated 2 September 2022 (A2148933).
3. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Department of Fire and Emergency Services (DFES) 2020, *Guidance Note: GN02 Bulk Storage of Rubber Tyres Including Shredded and Crumbed Tyres,* Perth, Western Australia.
5. Department of Water and Environmental Regulation (DWER) 2021, *Assessment and management of contaminated sites*, Joondalup, Western Australia.
6. DWER 2020, *Guideline: Environmental Siting*, Perth, Western Australia.

7. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
8. DWER 2018, *Industry Regulation fact sheet: Asphalt manufacturing*, Perth, Western Australia.
9. DWER 2019, *Landfill Waste Classification and Waste Definitions 1996 (as amended 2019)*, Joondalup, Western Australia.
10. *National Environment Protection (Assessment of Site Contamination) Measure 1999* (ASC NEPM).
11. Onslow Iron Pty Ltd (Onslow Iron) 2022, *West Pilbara Iron Ore Project – Kens Bore Categories: 5, 12, 52, 54, 57, 64, 73 and 77 Supporting Document Works Approval Application Part V Environmental Protection Act 1986 (Report Reference: ENV-TS-RP-0433 Rev 0),* 11 November 2022 (A2148955).
12. Onslow Iron 2023, *RE: W6769/2023/1 Request for Further Information*, dated 10 May 2023 (A2175145).

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

| Condition / Section | Department's comment | Summary of applicant's comment | Department's response |
|---|---|---|---|
| **Works Approval** | | | |
| Condition 1 – Table 1: Design and construction / installation requirements | - | Three Metso C160 jaw crusher or equivalent with apron feeder,scalping / grizzly screen and rockbreaker, not exceeding 45,000,000tpa in total design capacity<br><br>45,000,000 tpa in total design capacity' for all processing circuits (Primary, Secondary and Tertiary). | Department has amended the following dot point and included a separate point for the total design capacity:<br><br>*"Total design capacity to not exceed 45,000,000 tpa for all processing circuits, consisting of:*<br><br>*Primary processing:*<br><br>• *Three Metso C160 jaw crusher or equivalent with apron feeder, scalping / grizzly screen and rock breaker"* |
| | - | 7 mtpa – amend to 7,000,000 tpa (consistent with format for CPF) | Amended. Also amended 1.7 mtpa to 1,700,000 tpa for the mobile and crushing and screening plant for consistency with the format. |
| | - | Sized to 14.45 ha – amend to sized up to 14.45 ha | Amended and throughout instrument for consistent formatting. |
| | - | Sized to 2.19 ha – amend to include "*plus 5 m spray drift buffer"* | Amended. |
| | - | System is a below ground system. Please remove reference to 'installed on either concrete or compact ground. | Requirement has been removed. |
| | - | Sized to 0.0365 ha – amend to include "*plus 5 m spray drift buffer"* | Amended. |
| | - | Directed into sedimentation ponds to prevent uncontrolled discharge. | Amended the following design requirement:<br><br>"*Designed so that stormwater and firefighting runoff are directed into sedimentation ponds to prevent uncontrolled dischargef"* |

| Condition / Section | Department's comment | Summary of applicant's comment | Department's response |
|---|---|---|---|
| | - | All landfill cells / trenches that are within the WRL to be 100 m from the planned WRL edge | Amended. |
| Condition 2 – Compliance Reporting | MRL please advise is 9 months adequate for all circuits to come online and be commissioned. | The Applicant would like to increase to 12 months commissioning period for all circuits to come online. This allows some contingency in the event of delays. | Amended under condition 5, Table 2. |
| Condition 5 – Table 2: Environmental commissioning requirement | CPF Infrastructure – Authorised commissioning duration. | The Applicant would like to amend to:<br>*For a period not exceeding 365 calendar days from the commencement of commissioning activities for the CPF Infrastructure.*<br>The Applicant seeks to remove environmental commissioning requirements and hence environmental commissioning reports for the following Infrastructure:<br>Category 5 - CPF Infrastructure<br>Category 12 - Mobile Crushing and Screening Plant<br>Category 73 - Bulk Fuel Facilities<br>Category 77 - Concrete batch plant<br>Given that the above facilitates/infrastructure do not have emission targets as such that require environmental commissioning. Typical manufacturing checks and tests will largely be covered in Compliance Reports for that specific infrastructure, inclusive of checking dust suppression systems and leaks/integrity testing for fuel storage. | Authorised commissioning period has been amended under condition 5, Table 2.<br>The department has not removed the environmental commissioning requirements and commissioning reports for the specified infrastructure as removal would require a review of the proposed controls and risk assessment. The department sought clarification and the applicant rescinded the request to ensure the prompt issuing of the works approval. |
| Condition 5 – Table 2: Environmental commissioning requirement | Bulk Fuel Facilities – Commissioning Requirements.<br>Applicant to advise what testing needs to be done at the fuel facility under commissioning | • Performance in accordance with manufacturer requirements<br>• Leak and integrity testing in accordance with manufacturer requirements | Commissioning requirements have been incorporated into the table. |
| Condition 5 – Table 2: Environmental commissioning requirement | - | For a period not exceeding 90 calendar days for each WWTP. | Amended. |

| Condition / Section | Department's comment | Summary of applicant's comment | Department's response |
|---|---|---|---|
| Condition 16 – Table 6: Infrastructure and equipment requirements during time limited operations | - | Not more than 11,000 used tyres | Amended. |
| | - | Not more than 9,000 tonnes per annum | Amended. |
| Schedule 1: Maps – Figure 8 | - | Updated Figure provided to DWER on 10 May with the RFI Response (provided as Attachment B with the RFI Response). Showing the revised location of the WWTP at the Accommodate Report. | Updated figure added. |
| **Decision Report** | | | |
| Section 2.2.4 - Category 54 | The Applicant to provide the design capacity of the 3x WWTPs. It stated throughput of 220 $m^3$/day but adding the 3x WWTPs up (200+15+2.5=217.5 $m^3$/day) | The Applicant confirms the total exact design capacity of the combined three WWTPs is 217.5 $m^3$/day. | Amended. |
| Section 2.2.6 – Category 64 | Applicant to confirm this deviation is in accordance with Mining Proposal Reg ID 113633. | The deviation is consistent with REG ID 113633 as the landfill cells are defined spatially within the WRL footprint. | Noted. |
| Section 3.1.1 Emissions and controls – Table 6: Proposed applicant controls | Category 12 – Commissioning and Operation. Any spray cannons or additional measures for dust management. | Dust suppression carts will be used as required on stockpiles around the mobile crushing and screening plant. | The department has included the following control:<br>"*Dust suppression carts used (as required) on stockpiles around the mobile C&S plant."* |
| | Category 57 – Operation. Please advise if fire suppression contains PFAS. | Fire suppression will not contain PFAS. | Noted. |

# Appendix 2: Application validation summary

| SECTION 1: APPLICATION SUMMARY | | |
|---|---|---|
| **Application type** | | |
| Works approval | ☒ | |
| Date application received | | Original application submitted 14/11/2022. Revised application and supporting documentation received 20/12/2022 (A2148930) |
| **Applicant and Premises details** | | |
| Applicant name/s (full legal name/s) | | Onslow Iron Pty Ltd (ACN 649 012 395) |
| Premises name | | West Pilbara Iron Ore Project |
| Premises location | | M08/480-1, M08/484-1, G08/88, L08/67, L08/68, L08/69 and L08/181 CANE WA 6710 |
| Local Government Authority | | Shire of Ashburton |
| **Application documents** | | |
| HPCM file reference number: | | DER2022/000623 |
| Key application documents (additional to application form): | | • WAA Supporting Document – West Pilbara Iron Ore Project_Rev 0<br>• Attachment 1A(i) – MinRes – APIM authority to access tenements<br>• Attachment 1A(ii) – RHIOJV Change of Manager Letter<br>• Attachment 1A (iii) – Kens Bore Tenement Summary Reports<br>• Attachment 1B – ASIC extract<br>• Attachment 3A – WWTP Commissioning Plan<br>• Attachment 5(i) – EPBC 20094706 Decision<br>• Attachment 5(ii) – MS 1027<br>• Attachment 5(iii) – W5064/2011/1<br>• Attachment 5(iv) – W65712/2012/1<br>• Attachment 5(v) – W6667/2022/1<br>• Attachment 5(vi) – MP REG ID 35959<br>• Attachment 8A – Newland (2021) WPIOP Veg Geospatial Dataset Amalgamation<br>• Attachment 8B – PSM (2022a) West Pilbara Surface Water Assessment |
| **Scope of application/assessment** | | |
| Summary of proposed activities or changes to existing operations. | | Works approval for the construction of the following items of infrastructure to support mining operations at the Kens Bore Deposit:<br>• Central Processing Facility (CPF) – 3 x crushing and screening trains; plus mobile crushing and screening plant at the ROM pad (Category 5);<br>• 1 x mobile crushing and screening plants (Category 12);<br>• Gas fired power station consisting of 12 x 3.3 MW generators (Category 52);<br>• 3 x wastewater treatment plants (WWTPs) and associated treated effluent irrigation spray fields (Category 54);<br>• Used tyre storage facility (Category 57);<br>• Class II putrescible landfill facility (Category 64);<br>• Bulk Fuel and Chemical Storage (Category 73); and<br>• Mobile concrete batch plant (Category 77). |

**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 | 45,000,000 tonnes per year | N/A |
| Category 12: Screening, etc. of material | 8,700,000 tonnes per year | N/A |
| Category 52: Electric power generation | 40 MW | N/A |
| Category 54: Sewage facility | 220 $m^3$/day including:<br>• Accommodation Resort WWTP of 200 $m^3$/day plus 130 $m^3$/day of RO reject wastewater (brine);<br>• CPF WWTP of 15 $m^3$/day; and<br>• Upper Cane NPI area WWTP of 2.5 $m^3$/day | N/A |
| Category 57: Used tyre storage | 11,000 tyres | N/A |
| Category 64: Class II putrescible landfill site | 9,000 tonnes per year | N/A |
| Category 73: Bulk storage of chemicals, etc. | 3,700 $m^3$ in aggregate | N/A |
| Category 77: Concrete batching or cement products manufacturing | 650,000 tonnes per year | 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:<br>Managed under Part V ☐<br>Assessed under Part IV ☐ |
| Does the applicant hold any existing Part IV Ministerial Statements relevant to the application? | Yes ☒ No ☐ | Ministerial statement No: MS 1027<br>EPA Report No: 1563 |
| Has the proposal been referred and/or assessed under the EPBC Act? | Yes ☒ No ☐ | Proposal deemed a Controlled Action approved under Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* – Referral No 2009/4706 |
| Has the applicant demonstrated occupancy (proof of occupier status)? | Yes ☒ No ☐ | Certificate of title ☐<br>General lease ☐ Expiry:<br>Mining lease / tenement ☒ Expiry:<br>Other evidence ☒ Expiry: |
| Has the applicant obtained all relevant planning approvals? | Yes ☐ No ☐ N/A ☒ | Approval:<br>Expiry date:<br>If N/A explain why? Mining tenure |
| Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal? | Yes ☒ No ☐ | Clearing will be done in the implementation of the Proposal, in accordance with MS 1027.<br>Additionally, clearing will be implemented as part of a Controlled Action approved under Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* – Referral No 2009/4706 |
| Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal? | Yes ☐ No ☒ | Refer to above. |
| Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal? | Yes ☒ No ☐ | Application reference No: GWL174888(2) |

| | | |
|---|---|---|
| Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)? | Yes ☐ No ☒ | Name: Pilbara<br>Type: Proclaimed Groundwater Area and Surface Water Area<br>Has Regulatory Services (Water) been consulted?<br>Yes ☐ No ☒ N/A ☐<br>Regional office: North West |
| Is the Premises situated in a Public Drinking Water Source Area (PDWSA)? | Yes ☐ No ☒ | Name: N/A<br>Priority: N/A<br>Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)?<br>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 ☐ | *Mining Act 1978*:<br>• REG ID 35959 for the Mine Accommodation Facility;<br>• REG ID 99698 for a Communications Facility; and<br>• REG ID 113633 for the West Pilbara Iron Ore Project – Kens Bore Deposit - Mining Proposal.<br>*Environmental Protection (Unauthorised Discharges) Regulations 2004.*<br>*Environmental Protection (Controlled Waste) Regulations 2004.*<br>*Dangerous Goods Safety Act 2004.*<br>*Aboriginal Heritage Act 1972.*<br>*Health Act 1911.*<br>*Petroleum Pipelines Act 1969.*<br>*Civil Aviation Regulations 1988.* |
| 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: N/A<br>Date of classification: N/A |