



<b>Works approval number</b>	W6642/2022/1	
<b>Works approval holder</b>	Paulsens East Iron Ore Pty Ltd	
<b>ACN</b>	643 291 230	
<b>Registered business address</b>	Suite 1, Level 1 680 Murray Street WEST PERTH WA 6005	
<b>DWER file number</b>	DER2021/000591	
<b>Duration</b>	21/07/2022 to	20/07/2025
<b>Date of issue</b>	<b>20/07/2022</b>	
<b>Premises details</b>	Port of Ashburton Warrida Road ONSLOW WA 6710 Legal description – Part of Lot 569 on Deposited Plan 71345 (as defined by the map and coordinates in Schedule 1 Figure 1)	

<b>Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)</b>	<b>Assessed production capacity</b>
<b>Category 58:</b> Bulk material loading or unloading: premises on which clinker, coal, ore, ore concentrate or any other bulk granular material (other than salt) is loaded onto or unloaded from vessels by an open materials loading system	2 Mtpa of iron ore No more than 10,000 tonnes of iron ore per day

This works approval is granted to the works approval holder, subject to the attached conditions, on 20 July 2022, by:

**Sonya Poor**

**A/MANAGER, RESOURCE INDUSTRIES**

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

## Works approval history

Date	Reference number	Summary of changes
20/07/2022	W6642/2022/1	Works approval granted.

## Interpretation

In this works approval:

- (a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;
- (b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;
- (c) where tables are used in a condition, each row in a table constitutes a separate condition;
- (d) any reference to an Australian or other standard, guideline, or code of practice in this works approval:
  - (i) if dated, refers to that particular version; and
  - (ii) if not dated, refers to the latest version and therefore may be subject to change over time;
- (e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and
- (f) unless specified otherwise, all definitions are in accordance with the EP Act.

**NOTE:** This works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

## Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

### Construction phase

#### Infrastructure and equipment

1. The licence holder must install the infrastructure listed in Table 1, in accordance with;
  - (a) the corresponding design and installation requirement; and
  - (b) at the corresponding infrastructure location; and
  - (c) within the corresponding timeframe,
 as set out in Table 1.

**Table 1: Design and installation requirements**

Infrastructure	Design and installation requirements	Infrastructure location	Timeframe
2 x mobile harbour cranes or All Terrain Cranes fitted with Rotainer attachment	<p>Loading to vessels to occur using Rota-boxes system</p> <p>Rotainer attachment picks up the Rota-boxes and tips directly into the open hold of the vessel</p> <p>Iron ore loaded onto vessels from Rota-boxes from vertical drop heights less than 2 metres within the hold of the vessel</p>	Within premises boundary as per Schedule 1: Maps, Figure 1	Prior to the submittal of the Environmental Compliance Report required by Condition 2.(b)
Rota-boxes	Fitted with lifting rams that automatically retract the lids when tipping to minimise dust emissions	Within premises boundary as per Schedule 1: Maps, Figure 1	
Vessel	<p>On board sump for collection of deck wash down water</p> <p>Water misting curtain installed along the edge of the open hold of the vessel for use during iron ore loading from Rota-boxes operations</p>	Docked at Ashburton Cargo Wharf	
Beta Attenuation Monitors (BAM)	A minimum of 2 Beta Attenuation Monitors installed at the port site adjacent to the loading operations and operated in accordance with AS/NZS 3580.9.11:2016 for PM <sub>10</sub>	As per monitoring locations specified in Schedule 1 Maps, Figure 2	
Ashburton Cargo Wharf	Back sloping wharf hardstand with fenders located on the edge of the wharf to prevent spilt material from discharging into the marine environment	Within premises boundary as per Schedule 1: Maps, Figure 1	
Forklift	Forklift with the ability to be fitted with a bucket and/or sweeper attachment to clean up any spillages on the wharf	Within premises boundary as per Schedule 1: Maps, Figure 1	

## Compliance reporting

2. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being installed:
  - (a) undertake an audit of their compliance with the requirements of condition 1; and
  - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
3. The Environmental Compliance Report required by condition 2(b), must include as a minimum the following:
  - (a) certification by a suitably qualified person that the items of infrastructure or component(s) thereof, as specified in condition 1, have been designed and installed in accordance with the relevant requirements specified in condition 1; and
  - (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and
  - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

## Environmental commissioning phase

### Environmental commissioning requirements and emission limits

4. The works approval holder may only commence environmental commissioning of an item of infrastructure listed in Table 1 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with condition 2(b) of this works approval.
5. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 2 may only be carried out:
  - (a) in accordance with the corresponding commissioning requirements; and
  - (b) for the corresponding authorised commissioning duration.

**Table 2: Environmental commissioning requirements**

Infrastructure	Commissioning requirements	Authorised commissioning duration
Beta Attenuation Monitors (BAM)	<ul style="list-style-type: none"> <li>• Calibrated in accordance with the manufacturer's specifications</li> <li>• Configured to include the following capabilities:               <ul style="list-style-type: none"> <li>- Automated remote warning system that sends alerts when wind speeds exceed 8m/s and when dust concentrations exceed the trigger value of 80 µg/m<sup>3</sup> over a 24 hour average for Particulate Matter less than 10 micron (PM10)</li> <li>- Telemetry system to allow for remote downloading of monitoring data</li> <li>- Solar power or high-capacity battery system to provide continuous power</li> </ul> </li> <li>• Operated continuously during works approval holder loading activities in accordance with AS/NZS 3580.9.11:2016 for PM10</li> </ul>	For a period not exceeding 3 shipments

Infrastructure	Commissioning requirements	Authorised commissioning duration
	<ul style="list-style-type: none"> <li>dust generation at the premises must be managed during loading activities</li> </ul>	
Rota-boxes	<ul style="list-style-type: none"> <li>Lumps loaded to a target product moisture content <math>\geq 2.9\%</math> w/w, as averaged over each shipment of iron ore product, with each shipment details recorded and maintained</li> <li>Fines loaded to a target product moisture content <math>\geq 4.3\%</math> w/w, as averaged over each shipment of iron ore product, with each shipment details recorded and maintained</li> <li>Rota-boxes must remain closed at all times when outside of the vessel's hold, until they are below the level of the deck, unless for the purpose of carrying out product sampling</li> <li>Empty Rota-boxes to be transported off Port land following loading operations</li> </ul>	
2 x mobile harbour cranes or All Terrain Cranes fitted with Rotainer attachment	<ul style="list-style-type: none"> <li>Iron ore product loaded onto vessels from Rota-boxes at Ashburton Cargo Wharf from the eastern or southern berth</li> <li>Iron ore product loaded onto vessels from sealed Rota-boxes that are emptied into the hold of the vessels using a rotating tipping frame</li> <li>Iron ore product loaded from vertical drop heights less than 2m within the hold of the vessel</li> </ul>	
Vessel	<ul style="list-style-type: none"> <li>Water mist curtain used during loading activities as required to manage dust emissions</li> <li>The vessels onboard sump is to be emptied via a vacuum truck as required and wastewater returned to the off-site stockpile site</li> </ul>	
Ashburton Cargo Wharf	<ul style="list-style-type: none"> <li>Following each shipment of iron ore product, areas must be cleaned where iron ore product was loaded including, but not limited to the southern and eastern berths at Ashburton Cargo Wharf</li> <li>Solid iron ore waste material recovered from berth clean-up activities is returned to the off-site stockpile site</li> <li>No vehicle, trailer or Rota-box washdown is to occur at the premises</li> </ul>	

6. The works approval holder must submit to the CEO an environmental commissioning report within 30 calendar days of the completion date of the third shipment authorised under the environmental commissioning phase.
7. The works approval holder must ensure the environmental commissioning report required by condition 6 includes:
  - (a) a summary of throughput for each shipment of iron ore product, including the number of days loading occurred, the tonnes loaded per day, and the final tonnage of each shipment;

- (b) a summary of fugitive dust monitoring conducted during each shipment of iron ore product, including a correlation of the results against dust exceedances recorded at the premises;
- (c) a summary of actions implemented following dust exceedances recorded at the premises, including a summary of the effectiveness of the actions at reducing dust concentrations; and
- (d) moisture content data averaged over each shipment and showing a comparison against the DEM level, where the DEM level can be determined; and
- (e) where environmental performance has not met expectations, measures proposed to meet the requirements of conditions of this works approval, together with timescales for implementing the proposed measures.

## Time limited operations phase

### Commencement and duration

8. The works approval holder may conduct time limited operations for the export of iron ore product;
  - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of conditions 2 and 3 for that item of infrastructure and submits the environmental commissioning report required by condition 6; or
  - (b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 8(a).

### Time limited operations requirements

9. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 3 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirements set out Table 3:

**Table 3:Operational requirements during time limited operations**

Activity	Operational Requirements	Infrastructure location
Export of iron ore product	<ul style="list-style-type: none"> <li>• Iron ore product loaded onto vessels from Rota-boxes at Ashburton Cargo Wharf from the eastern or southern berth</li> <li>• Iron ore product loaded onto vessels from sealed Rota-boxes that are emptied into the hold of the vessels using a rotating tipping frame. Rota-boxes must remain closed at all times when outside of the vessel's hold, until they are below the level of the deck, unless for the purpose of carrying out product sampling</li> <li>• Iron ore product loaded from vertical drop heights less than 2m within the hold of the vessel</li> <li>• Water mist curtain used during loading activities as required to manage dust emissions</li> <li>• Lumps loaded to a target product moisture content <math>\geq 2.9\%</math> w/w, as averaged over each shipment of iron ore product, with each shipment details recorded and maintained</li> <li>• Fines loaded to a target product moisture content <math>\geq 4.3\%</math> w/w, as</li> </ul>	As depicted in Figures 1 and 2, Schedule 1

Activity	Operational Requirements	Infrastructure location
	<p>averaged over each shipment of iron ore product, with each shipment details recorded and maintained</p> <ul style="list-style-type: none"> <li>• Beta Attenuation Monitors installed at the locations depicted in Figure 2 with automated remote warning system that can send alerts when wind speed exceeds 8m/s and a trigger value of 80 µg/m<sup>3</sup> over a 24 hour average for Particulate Matter less than 10 micron (PM<sub>10</sub>)</li> <li>• Beta Attenuation Monitors to be operated continuously during works approval holder loading operations in accordance with AS/NZS 3580.9.11:2016 for PM<sub>10</sub></li> <li>• The works approval holder must manage dust generation at the premises during loading operations</li> <li>• Following each shipment of iron ore product, areas must be cleaned where iron ore product was loaded including, but not limited to the southern and eastern berths at Ashburton Cargo Wharf</li> <li>• Solid iron ore waste material recovered from berth clean-up operations is returned to the off-site stockpile site</li> <li>• The vessels onboard sump is to be emptied via a vacuum truck as required and wastewater returned to the off-site stockpile site</li> <li>• Empty Rota-boxes to be transported off Port land following loading operations</li> <li>• No vehicle, trailer or Rota-box washdown is to occur at the premises</li> </ul>	

### Compliance reporting during time limited operations

10. The works approval holder must submit to the CEO a report on the time limited operations within 30 calendar days of the completion date of time limited operations or 120 calendar days before the expiration date of the works approval, whichever is the sooner.
11. The works approval holder must ensure the report required by condition 10 includes the following:
  - (a) a summary of the time limited operations, including timeframes and amount of iron ore product loaded per day and per shipment; and
  - (b) a summary of fugitive dust monitoring conducted during time limited operations, including a correlation of the results against dust exceedances recorded at the premises; and
  - (c) moisture content data averaged over each shipment and showing a comparison against the DEM level, where the DEM level can be determined; and
  - (d) a review of performance and compliance against the conditions of the works approval; and
  - (e) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

## Records and reporting

12. The works approval holder must obtain and maintain accurate records of the moisture content for each shipment of iron ore during the time limited operational phase.
13. The works approval holder must record the following information in relation to complaints received by the works approval holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the Premises:
  - (a) the name and contact details of the complainant, (if provided);
  - (b) the time and date of the complaint;
  - (c) the complete details of the complaint and any other concerns or other issues raised; and
  - (d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint.
14. The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:
  - (a) the time limited operations conducted in accordance with conditions 8 and 9 inclusive; and
  - (b) complaints received under condition 13.
15. The books specified under condition 14 must:
  - (a) be legible;
  - (b) if amended, be amended in such a way that the original version(s) and any
  - (c) subsequent amendments remain legible and are capable of retrieval;
  - (d) be retained by the works approval holder for the duration of the works approval; and
  - (e) be available to be produced to an inspector or the CEO as required.



## Definitions

In this works approval, the terms in Table 4 have the meanings defined.

**Table 4: Definitions**

Term	Definition
ACN	Australian Company Number
AS/NZS 3580.9.11:2016	Methods for sampling and analysis of ambient air - Determination of suspended particulate matter – PM 10 beta attenuation monitors
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means:  Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919  <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
condition	means a condition to which this works approval is subject under s.62 of the EP Act
DEM Level	means the dust extinction moisture number. It is the Moisture Content of the iron ore at which the Dust Number is 10 derived from the Australian Standard AS4156.6-2000 or a standard approved by the CEO.
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
Discharge	has the same meaning given to that term under the EP Act.
Emission	has the same meaning given to that term under the EP Act.
environmental commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other environmental factors.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been designed and installed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986 (WA)</i> .
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i> .
Moisture content	moisture content means the ratio of the mass of water in a sample to the mass of solids in the sample, expressed as a percentage. In

Term	Definition
	equation form: $w = \frac{m_1 - m_2}{m_1} \times 100$ where: w = moisture content of sample; m <sub>1</sub> = initial mass, in grams, of the test portion; and m <sub>2</sub> = mass, in grams, of the test portion after drying
Mtpa	means million tonnes per Annual Period
off-site stockpile site	means the off-site stockpile site located within mining tenement L08/271 associated with the Paulsens East Iron Ore Project
PM <sub>10</sub>	refers to particulate matter with a diameter of 10 micrometres or less.
Port	means the Port of Ashburton
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
shipment	The export of iron ore product via an Ocean-Going Vessel with a load of no more than 60,000 tonnes of iron ore product
suitably qualified person	means a person who: <ul style="list-style-type: none"> <li>(a) holds a relevant tertiary academic qualification; and</li> <li>(b) has a minimum of at least three years of experience working in the area of expertise.</li> </ul>
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
vessel	means a special purpose transshipment vessel
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

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**END OF CONDITIONS**

# Schedule 1: Maps

## Premises map

The Premises is shown in the map below (Figure 1). The pink line depicts the Prescribed Premises boundary

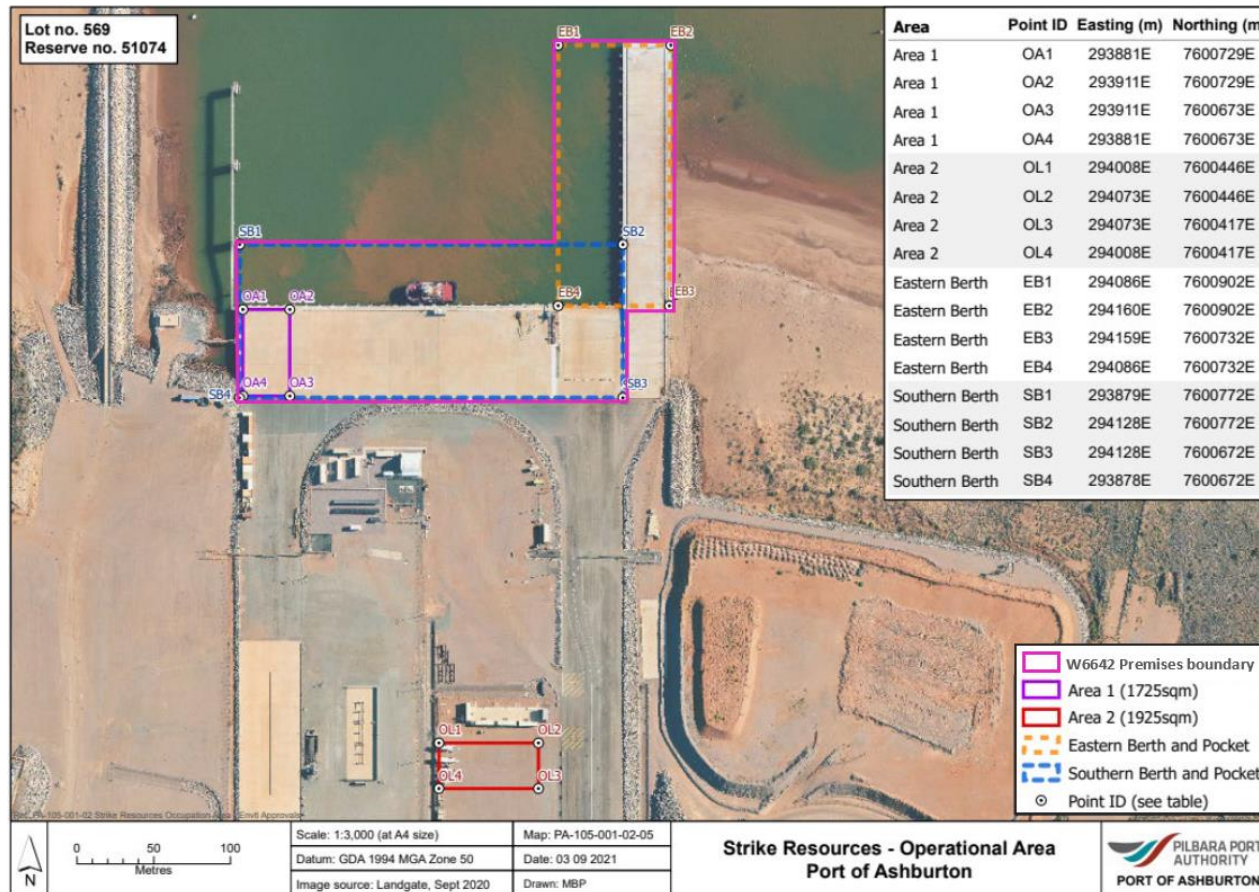
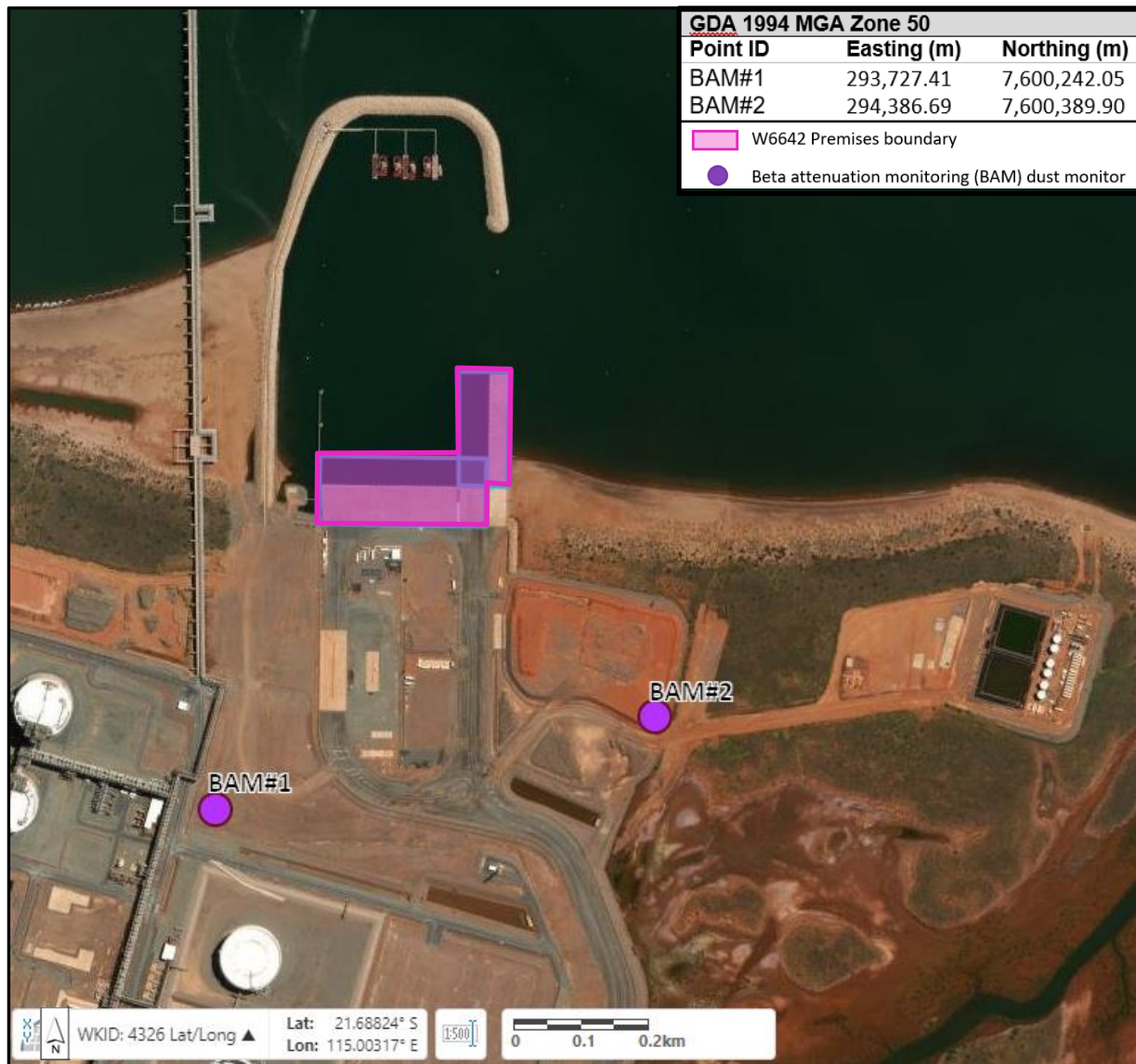


Figure 1: Map of the boundary of the prescribed premises

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**Figure 2: Map showing dust monitoring locations**

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