Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L8937/2015/1
Licence holder	Pilbara Ports Authority
ACN	94 987 448 870
Registered business address	Level 5/999 Hay Street PERTH WA 6000
DWER file number	DER2015/002837-2~9
Duration	22/08/2016 to 21/08/2036
Date of amendment	13/09/2023
Premises details	Utah Point multi-user bulk handling facility Portion of LOT 600 on Plan 407880 Utah Point, Finucane Island PORT HEDLAND, WA 6721 Certificate of Title Volume LR3173 Folio 502 As defined by the Premises maps attached to the Revised Licence

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 58: 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.	28,000,000 (cumulative)
Category 58A: Bulk material loading or unloading: premises on which salt is loaded onto or unloaded from vessels by an open materials loading system.	

This licence is granted to the licence holder, subject to the attached conditions, on 13 September 2023, by:

Fiona Roser

Digitally signed by Fiona Roser
Date: 2023.09.13 15:28:28 +08'00'

Fiona Roser
A/MANAGER, PROCESS INDUSTRIES (MAJOR PROJECTS)
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Licence history

Date	Reference number	Summary of changes
18/06/2016	L8937/2015/1	New licence
11/05/2020	L8937/2015/1	Amendment to increase throughputs from 21.35 Mtpa to 24.1 Mtpa
20/06/2022	L8937/2015/1	Amendment to increase throughputs from 24.1 Mtpa to 28 Mtpa
13/09/2023	L8937/2015/1	Amendment to include two additional fixed feed hoppers to service stockyard 1

Interpretation

In this licence:

(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 licence:

  (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 licence requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this licence.

Licence conditions

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

Infrastructure and equipment

1. The Licence Holder must ensure that the site infrastructure and equipment specified and described in Columns 1 and 2 of Table 10 in Schedule 3 is maintained and operated in accordance with the requirements specified in Column 3 of Table 10 in Schedule 3.

2. The Licence Holder must maintain a Dust Control Equipment Inventory, which includes an itemised list for all dust control equipment used at the Premises and includes but is not limited to the equipment specified in rows 1 to 9 of Table of Schedule 3.

3. The Licence Holder must not remove any dust control equipment from the Dust Control Equipment Inventory, without replacing that equipment with equipment that provides the same or greater level of dust mitigation.

4. The Licence Holder must be able to calculate and maintain an Average Monthly Availability rate of 90% or more for all:

(a) water sprays on stackers;

(b) chute sprays at transfer stations and ship loader; and

(c) stockyard water cannons when ore is stockpiled in that stockyard.

Further works

5. The Licence Holder is authorised to construct and/or install the infrastructure and equipment listed in Table 1, in accordance with the design and installation requirements, and at the locations specified in Table 1.

Table 1: Authorised works

Row	infrastructure and equipment	Design and installation requirements	Infrastructure location
1.	Conveyor	Replacement of a portion of conveyor CV04 in SY2 with CV04a and CV04b.	CV04a and CV04b as depicted in Figure 3 of Schedule 1
2.	Transfer station (2)	Install two partially enclosed transfer stations equipped with: 1) internal spray curtains; and 2) dust curtains at conveyor exit points.	TS5 and TS6 as depicted in Figure 3 of Schedule 1
3.	SY2 ore feed hoppers (5)	Install up to five ore feed hoppers along conveyor network (CV04, CV04a or CV04b) with: 1) eco-hopper flaps or screens; and/or 2) dust sprays; and/or 3) dust extraction system with exhaust via bag filter, for the purpose of minimising dust escaping from the top of the hopper. No more than five feed hoppers in the SY2	CV04, CV04a, CV04b as depicted in Figure 3 of Schedule 1

Row	infrastructure and equipment	Design and installation requirements	Infrastructure location
		area.	
4.	Bunker and radial stacker (1)	Install a truck in-loading bunker that feeds to radial stacker for the creation of a new bean stockpile area (stockpile 23). Bunker fitted with a hopper and dust sprays to minimise dust from the point of in-load. Stacker designed such that the boom: 1) can be lowered when stacking commences and the drop height is minimised; and 2) has sprays that are directed to the ore being stacked.	Proposed Bunker and Radial Stacker, as depicted in Figure 3 of Schedule 1
5.	Stockyard cannon	At least two additional stockyard cannons installed for full wetting coverage of stockpile 23, and to ensure compliance with row 1 of Table 10 during operation.	Stockpile 23 in Stockyard 2, as depicted in Figure 3 of Schedule 1
6.	SY1 CV01 and CV02 ore feed hoppers (6)	Equip all six existing ore feed hoppers within SY1 with: 1) eco-hopper flaps or screens; and/or 2) dust sprays; and/or 3) dust extraction system with exhaust via bag filter, for the purpose of minimising dust escaping from the top of the hopper.	Ore feed hoppers (6) on CV01 and CV02 within SY1, as depicted in Figure 1 of Schedule 1
7.	SY1 CV03 ore feed hoppers (2)	Install two fixed ore feed hoppers along conveyor network (CV03), fitted with: 1) High pressure misting spray bars, located on either side of each hopper, including horizontal sheet sprayers and vertical sprayers; or 2) A high-pressure mister mounted outside the hopper with the capability to throw water inside and surrounding the hopper for the purpose of minimising dust escaping from the top of the hopper. 3) A tramming dust suppression system designed to spray FEL wheels to reduce tramming dust adjacent to the hopper.	Ore feed hoppers (2) on CV03 within SY1, as depicted in Figure 3 of Schedule 1

6. In the event that the Licence Holder determines to not construct and/or install, or to not operate any works specified in Table 1, the Licence Holder must give written notice to the CEO within 14 days.

7. For works undertaken in condition 5, the Licence Holder must not depart from the scope of works authorised by Table 1 except where:

(a) such departure is minor in nature and does not materially change or affect the infrastructure or equipment; or

(b) such departure improves the functionality of the infrastructure or equipment and reduces the risk to public health, amenity and/or the environment; or

(c) the Licence Holder determines to not construct, install and/or operate infrastructure in accordance with condition 6,

and all other conditions in this Licence are still satisfied.

8. The Licence Holder must within 30 calendar days of the completion of construction and/or installation of all infrastructure or equipment listed in Rows 1 to 5 of Table 1, Row 6 of Table 1 and Row 7 of Table 1:

(a) undertake an audit of compliance with the requirements in Table 1; and

(b) prepare and submit to the CEO an Environmental Compliance Report/s on that compliance.

9. The Environmental Compliance Report/s required by condition 8, must include as a minimum the following:

(a) certification that the infrastructure or equipment, or component of infrastructure or equipment specified in Table 1 has been constructed or installed in accordance with the relevant requirements specified; or

(b) a description of, and explanation for, any departure from the requirements specified in Table 1 (if applicable) and demonstration of achievement of a reduction to the risk to public health, amenity and the environment; and

(c) the operational start date for the infrastructure installed;

(d) be signed by a person authorised to represent the Licence Holder and contains the printed name and position of that person

Bulk granular material specifications

10. The Licence Holder must only load or unload bulk granular material specified in Column 1 of Table 9 in Schedule 2 at the Premises unless doing so in accordance with the requirements of conditions 13 to 18.

11. The Licence Holder must only load to vessels a maximum total volume of:

(a) 24,100,000 tonnes of bulk granular material and/or salt per annual period, unless in accordance with part (b) to this condition;

(b) 28,000,000 tonnes of bulk granular material and/or salt per annual period upon notification of construction or installation of infrastructure or equipment specified in rows 1 to 3 (inclusive) of Table 1 and/or row 6 of Table 1.

12. The Licence Holder must not develop stockpile 23, as depicted in Figure 3 of Schedule 1, unless the stockyard cannon/s is installed and operational in accordance with row 5 of Table 1 and row 1 of Table 10 of Schedule 3.

Trial shipments

Notification of a Trial shipment

13. The Licence Holder must notify the CEO of a Trial and such notification (which the CEO will make publicly available) must:

(a) be in writing;

(b) be made 30 calendar days or more prior to that Trial commencing;

(c) include details of the extent of the Trial, including:

(i) the duration and frequency of any loading or unloading activities;

(ii) method for materials storage and handling including any changes to infrastructure and equipment used at the Premises; and

(iii) all controls to be implemented for the management of emissions and discharges;

(d) include details of the nature of bulk granular material, including:

(i) all public health and ecosystem hazards;

(ii) the chemical and geochemical composition;

(iii) particle size distribution of bulk granular material including inhalable and respirable fractions;

(iv) the representative DEM level, where determination of DEM is possible for that material; and

(v) leachate testing conducted on materials that may present a toxicological or ecotoxicological risk;

(e) include an analysis of risks to the environment, public health and amenity from potential discharges, dust, odour and noise emissions associated with the Trial;

(f) include a monitoring plan that includes, but is not limited to:

(i) the indicator parameter/s to be monitored;

(ii) monitoring locations, equipment used and proximity to sensitive receptors;

(iii) monitoring frequencies;

(iv) monitoring averaging periods; and

(v) any meteorological monitoring to be undertaken; and

(g) only when a CEO notification to cease a Trial has been issued in accordance with condition 14, and in the event that the Licence Holder is submitting a Trial amendment notification, then the Licence Holder must:

(i) resubmit the requirements of conditions 13(a) – (f);

(ii) address the issues that resulted in the notification to cease the Trial on the initial (or any subsequent) Trial for the same product; and

(iii) include a new Trial end date calculated 12 months from the commencement of the first shipment of the ceased Trial, not including time elapsed between the CEO notification to cease that Trial and the Trial amendment notification.

CEO notification to cease a Trial (prior to commencement or during)

14. The Licence Holder must cease a Trial in the manner and at the time, when:

(a) the CEO forms the view, acting reasonably:

(i) that following an assessment of the information provided as part of condition 13, it is determined that the proposed Trial will result in unacceptable impact on public health, amenity or the environment; or

(ii) that following a review of any data received in accordance with condition 17, it is determined that the Trial is having an unacceptable impact on public health, amenity or the environment; or

(iii) that the Trial being undertaken is different in any manner from that described in the notification provided by the Licence Holder through condition 13, when that difference is resulting in, or is likely to result in, an unacceptable impact on public health, amenity or the environment; and

(b) the CEO has provided written notice to cease the Trial (which the CEO will make publicly available) to the Licence Holder specifying the grounds for the CEO's views.

Nothing in this condition prevents the Licence Holder subsequently submitting an amendment in relation to the Trial. Any Trial amendment proposed by the Licence Holder must follow the notification requirements as per condition 13(g).

Trial restrictions

15. The duration of any Trial must cease:

(a) 12 months from the date of the commencement of the first shipment; or

(b) immediately after the shipment where the cumulative throughput amounts of Trial material exceed 10% of total annual authorised throughputs, as specified in condition 11; or

(c) immediately upon receipt of a CEO notification to cease a Trial in accordance with condition 14,

whichever occurs first.

A Trial may only recommence upon notification of a Trial amendment, in accordance with condition 13(g).

16. The Licence Holder must not Trial the bulk handling of materials that:

(a) Contain asbestos in concentrations equal to or greater than 0.01% w/w for non-friable asbestos or 0.01% w/w for fibrous asbestos;

(b) Contain respirable silica equal to or greater than 1% w/w;

(c) Exceed the radiation transport limit of 10 Bq/g for Uranium-238 and Thorium-232 combined;

(d) Exceed Rubidium-87 concentrations of 30 Bq/g;

(e) Are a waste or waste-derived byproduct (except Clean fill); or

(f) Chemically Treated Materials that may present a toxicological or ecotoxicological risk.

Reporting

17. The Licence Holder must submit a report to the CEO which includes the results of monitoring required by condition 13(f), and includes:

(a) the 15-minute averaged, raw data in tabulated format;

(b) a graphical representation of the monitoring results for each Trial shipment with a comparison against 15-minute averaged meteorological (wind speed and direction) monitoring data;

(c) Moisture Content data averaged over each Trial shipment and showing a comparison against the representative DEM level, where the DEM level can be determined; and

(d) a summary of the effectiveness of the controls implemented for the management of emissions and discharges,

within 30 days of the completion of the first Trial shipment; at four, seven and 10 months from the first Trial shipment; and a final closeout report within 30 days following the cessation of the Trial.

Ongoing shipments

18. In the event that approval for the ongoing shipments of the Trial material is sought, the Licence Holder must provide an application for Licence amendment, along with a report fulfilling the requirements of condition 17, at least three months prior to the completion of the Trial period.

Moisture Content monitoring and reporting

19. Where the DEM level can be determined for Distinct Bulk Granular Material specified in Table 9 of Schedule 2, the Licence Holder must achieve a compliance rate of at least 95% of that material having, with a Moisture Content at or above the DEM Level.

20. For the purpose of demonstrating that the DEM level of a Distinct Bulk Granular Material cannot be determined, the Licence Holder must obtain a declaration from a third-party laboratory stating that the determination of DEM is not possible for that Distinct Bulk Granular Material.

21. The Licence Holder must receive and maintain accurate and auditable records from each Premises User in relation to all bulk granular material where DEM level can be determined:

(a) the Moisture Content for all bulk granular materials sampled at the mine site by the Premises User and received at the Premises on a weekly basis; and

(b) documentation of the DEM Level for all bulk granular materials of each Premises User determined by a laboratory on at least an annual basis.

22. The Licence Holder must ensure monitoring of bulk granular material is undertaken:

(a) for the parameter specified in Column 1,

(b) from the material specified in Column 2,

(c) at the sample frequency specified in Column 3 and calculated as an average per 10,000 tonnes of bulk granular material,

(d) be at or above the limit specified in Column 4, and

(e) be undertaken in accordance with the method specified in Column 5,

of Table 2.

Table 2: Moisture Content monitoring

Column 1	Column 2	Column 3	Column 4	Column 5
Parameter	**Bulk granular material**	**Sample frequency**	**Limit**	**Method**
Moisture Content	Bulk granular material listed in Table 9 of Schedule 2, out-loaded and sampled at Sample Station* during out-loading	At least one sample per cargo hold, or at least one sample per 10,000 tonnes of material, obtained through automated Sample Station* or manual sampling at the same or greater frequency.	Weighted Average DEM Level based on DEM Level for each material required through condition 21	ISO3087: 2011; or AS5621-2013; or ISO4299: 1989; or alternative method approved by the CEO.

*The Sample Station, as depicted in Schedule 1: Premises Map, takes regular cuts of material for composite sample during out-loading.

23. The Licence Holder must provide a report to the CEO specifying the data provided through condition 21 and from the monitoring undertaken in condition 22 on a quarterly basis, on the last day of:

(a) April (for January to March),

(b) July (for April to June),

(c) October (for July to September); and

(d) January (for October to December) in any year.

24. The Licence Holder must provide the report referred to in condition 23 in the format approved by the CEO as presented by the Licence Holder or as specified by the CEO from time to time.

Air quality monitoring and Reportable Events

Air quality monitoring

25. The Licence Holder must undertake boundary air quality monitoring:

(a) at the locations specified in Column 1 and shown in Schedule 1,

(b) for the parameters specified in Column 2,

(c) calculated as an average over the period specified in Column 3,

(d) at the frequency specified in Column 4,

(e) in accordance with the method specified in Column 5,

of Table 3

Table 3: Boundary air quality monitoring

Column 1	Column 2	Column 3	Column 4
Monitoring Station (refer Figure 2, Schedule 1)	**Parameter**	**Frequency (averaging interval)**	**Method[1]**
M5 and M7	Particles as PM_{10} ($\mu g/m^3$)	Continuous (10 min)	AS3580.9.11
M10	Particles as PM_{10} ($\mu g/m^3$)	Continuous (10 min)	AS3580.9.11
M8 and M9	Particles as PM_{10} ($\mu g/m^3$)	24 hours	AS3580.9.6
M8 and M9	Chromium (III and VI) as PM_{10} ($\mu g/m^3$)	One 24 hour sample every sixth day from the date of chromite being received at the Premises, plus at least one 24 hour sample during the ship loading of chromite.	AS3580.9.6 USEPA IO-3.4
	Manganese as PM_{10} ($\mu g/m^3$)	One 24 hour sample every sixth day, plus at least one 24 hour sample during the ship loading of manganese/ spodumene.	
	Lithium as PM_{10} ($\mu g/m^3$)		
M5	Wind direction (°) Wind speed (m/s)	Continuous as a 10 minute average	AS3580.14-2014
M7			N/A
M10	Wind direction (°) Wind speed (m/s)	Continuous as a 10 minute average	N/A
M5	Rainfall (mm)	Hourly	AS3580.14-2014

Note 1: The Licence Holder must take into consideration AS3580.1.1 for all monitoring equipment when actively working around the Premises.

Monitoring and management response

26. The Licence Holder must maintain a record of any instances where PM10 concentrations at the monitoring locations listed in Table 4 exceed the corresponding Management Trigger criteria and Reportable Event criteria specified of Table 4, when monitored in accordance with condition 22.

Table 4: Management Triggers and Reportable Event criteria

Monitoring Station	Management Trigger criteria	Reportable Event criteria
M10	≥250 $\mu g/m^3$ PM_{10} (rolling 1 hour average): (i) when wind direction is between 247 and 267° for any three or more ten minute periods during the hour, as measured at M5; and (ii) unless where, BOM or Yule River monitoring stations have recorded ≥100 $\mu g/m^3$ PM_{10} (rolling 1 hour	≥230 $\mu g/m^3$ PM_{10} (rolling 24 hour average) when wind direction is averaged between wind arc 247 and 267° inclusive, for any 12 or more hours (cumulative) over the rolling 24 hour averaging period.

Monitoring Station	Management Trigger criteria	Reportable Event criteria
	average) within 3 hours prior to the trigger event.	
M10	≥342 µg/m^3 PM_{10} (10-minute average) when wind direction is between 247 and 267° for that ten minute period, as measured at M5.	As above.
Taplin Street	≥100 µg/m^3 PM_{10} (rolling 1 hour average): (i) when wind direction is between 247 and 267° for any three or more ten minute periods during the hour, as measured at Taplin Street; and (ii) unless where, BOM or Yule River monitoring stations have recorded ≥100 µg/m^3 PM_{10} (rolling 1 hour average) within 3 hours prior to the trigger event.	≥70 µg/m^3 over 24 hour average (midnight to midnight).
M8 and M9	N/A	Chromium (III and VI) as PM_{10} (µg/m^3) ≥3.5 µg/m^3 as an annual average
		Manganese as PM_{10} (µg/m^3) ≥10 µg/m^3 as a 24 hour average
		Manganese as PM_{10} (µg/m^3) ≥3 µg/m^3 as an annual average

Note 1: Provision of this data to Pilbara Ports Authority is via the Department of Water and Environmental Regulation

27. Immediately upon being notified of Management Trigger criteria specified in condition 26 being exceeded, the Licence Holder must:

(a) conduct a site investigation to identify any visible dust generation at the Premises; and

(b) upon identification of visible dust generation during the site investigation conducted in accordance with part (a) of this condition, immediately control visible dust emissions by:

(i) applying additional dust suppression; and/or

(ii) ceasing or changing ore handling activities for the purpose of eliminating that dust source.

28. Where the Management Trigger criteria is exceeded from the same monitor on multiple occasions within a three-hour period, the source of the exceedance may be considered as one event, requiring one site Investigation in that period.

29. In the event that no visible dust can be identified within 20 minutes of the Management Trigger criteria exceedance notification, the Licence Holder must undertake the following management actions:

(a) operate all stockyard water cannons on Deluge Cycle;

(b) apply water to all unsealed trafficable areas where vehicle movement has occurred in the previous hour; and

(c) operate transfer station and conveyor dust suppression sprays on all operating equipment where the material being outloaded has been determined to have Moisture Content below the DEM level for that ore, as measured in accordance with condition 21.

30. The Licence Holder must continue actions specified in conditions 27 and 29 for the duration of Management Trigger criteria being exceeded.

31. The Licence Holder must provide a report to the CEO containing the information, in the format, and for the periods, specified in Schedule 4 for Reportable Events which have occurred, as specified in Column 3 of Table 4.

Static Stockpile management

32. The Licence Holder must undertake the following actions in the event that an ore stockpile has become a Static Stockpile:

(a) ensure, and be able to demonstrate using the method outlined in ISO3087:2011 or alternative method as approved by the CEO, that the stockpile contains a moisture content at or above the corresponding DEM Level for that stockpile; or

(b) apply a physical barrier or chemical stabiliser to stabilise the surface of the stockpile to minimise potential dust emissions.

33. The Licence Holder must not re-stockpile a Static Stockpile for the purpose of avoiding requirements of condition 32.

Stormwater and industrial wash water

34. The Licence Holder must capture all stormwater and wash water on the berth during chromite ore loading operations and wash down events for removal by a licensed controlled waste carrier.

35. Within 24 hours of chromite ore loading operations the Licence Holder must wash down the berth for the purpose of removing residual chromite ore.

Stormwater and industrial wash water monitoring

36. The Licence Holder must undertake stormwater and industrial wash water monitoring:

(a) at the locations specified in Column 1;

(b) the parameters specified in Column 2;

(c) for the averaging period specified in Column 3;

(d) at the frequencies specified in Column 4; and

(e) in accordance with the methods specified in Column 5,

of Table 5.

Table 5: Stormwater and wash water discharge monitoring table

Column 1	Column 2	Column 3	Column 4	Column 5
Locations	**Parameters**	**Averaging Period**	**Frequency**	**Method**
Stormwater Recirculation Pond depicted in	pH[1] TRH (mg/L)	Spot sample	Monthly when water levels are within 300mm of	AS 5667.1-1998 and

Column 1	Column 2	Column 3	Column 4	Column 5
Locations	**Parameters**	**Averaging Period**	**Frequency**	**Method**
Figure 1	TSS (mg/L) Chromium (III) (mg/L) Chromium (VI) (mg/L) Iron (mg/L) Lithium (mg/L) Manganese (mg/L) Volume (m^3)[2]		the overflow sump at W13 and/or W14.	AS 5667.10- 1998 Spot sample to be taken from the top layer of the water column.

Note 1: In-field testing is permitted.
Note 2: As determined based on rainfall amount and Stormwater Recirculation Pond surface area at the time of discharge.

Record-keeping

37. The Licence Holder must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:

(a) the calculation of fees payable in respect of this Licence;

(b) Minor Spillages;

(c) dust control equipment inventory as required by condition 2 of this Licence;

(d) any changes to the equipment detailed in the dust control equipment inventory including the rationale for the change and estimated reduction in emissions in accordance with condition 3 of this Licence;

(e) the amount and types of bulk granular material (in wet tonnes) out-loaded from the Premises to verify compliance with condition 10 of this Licence;

(f) records of Moisture Content and DEM Level data obtained as required by conditions 19 and 20 of this Licence;

(g) dates where chromite ore is loaded into vessels, dates of chromite ore washdown events and volumes and dates of chromite ore washwater removal in accordance with conditions 34 and 35;

(h) monitoring undertaken in accordance with conditions 22, 25 and 36 of this Licence;

(i) Reportable Events reported in accordance with condition 26 and 31 of this Licence;

(j) Management Trigger events undertaken in accordance with conditions 27, and 29;

(k) Moisture Content of Static Stockpiles that have not had a physical barrier or chemical stabiliser applied in accordance with condition 32;

(l) complaints received under condition 38 of this Licence; and

In addition, the Books must:

(a) be legible;

(b) if amended, be amended in such a way that the original and subsequent amendments remain legible and are capable of retrieval;

(c) be retained for at least 3 years from the date the Books were made; and

(d) be available to be produced to an Inspector or the CEO.

38. The Licence Holder must record the number and details of any complaints received by the Licence Holder relating to its obligations under this Licence and its compliance with Part V of the EP Act at the Premises, and any action taken by the Licence Holder in response to the complaint. Details of complaints must include:

(a) an accurate record of the concerns or issues raised, for example a copy of any written complaint or a written note of any verbal complaints made;

(b) the name and contact details of the complainant, if provided by the complainant;

(c) the date of the complaint; and

(d) the details and dates of the actions taken by the Licence Holder in response to the complaints.

39. The Licence Holder must submit to the CEO, no later than 30 September,

(a) An Annual Audit Compliance Report indicating the extent to which the Licence Holder has complied with the conditions in this Licence for the preceding Annual Period; and

(b) a monitoring report presenting the results of monitoring and any supporting records, information, reports and data as required by:

(i) condition 19 and 20 for Moisture Content and DEM Level monitoring undertaken;

(ii) condition 23 for boundary air quality monitoring undertaken at all operating BAM monitors depicted in Schedule 1, Figure 2, in the format specified in Schedule 5; and

(iii) condition 36 for stormwater and wash water discharges, where applicable.

40. The Licence Holder must comply with a Department Request, within 7 days from the date of the Department Request or such other period as agreed to by the Inspector or the CEO.

Definitions

In this licence, the terms in Table 6 have the meanings defined.

Table 6: Definitions

Term	Definition
ACN	Australian Company Number
air guideline value	means PM10 concentrations greater than or equal to 70 µg/m^3 over 24 hour average (midnight to midnight).
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12 month period commencing from 1 July until 30 June of the immediately following year.
approved policy	has the same meaning given to that term under the EP Act.
AS3580.1.1	means the Australian Standard AS3580.1.1 *Methods for sampling and analysis of ambient air - Guide to siting air monitoring equipment.*
AS3580.9.6	means the Australian Standard AS3580.9.6 *Methods for sampling and analysis of ambient air – Determination of suspended particular matter – PM10 high volume sampler with size selective inlet – Gravimetric method.*
AS3580.9.11	means the Australian Standard AS3580.9.11 *Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 beta attenuation monitors.*
AS3580.14-2014	means the Australian Standard AS3580.14-2014 *Methods for sampling and analysis of ambient air – Meteorological monitoring for ambient air quality monitoring applications as amended from time to time.*
AS4156.6-2000	means the Australian Standard AS4156.6-2000 *Coal preparation, Part 6: Determination of Dust/moisture Relationship for Coal as amended from time to time.*
AS5667.1-1998	means the Australian Standard AS 5667.1 *Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples as amended from time to time.*
AS5667.10-1998	means the Australian Standard AS 5667.10 *Water Quality – Sampling – Guidance on sampling of waste waters as amended from time to time.*
AS5621-2013	means Australian Technical Specification AS5621-2013 *Iron ores – rapid moisture determination as amended from time to time.*

Term	Definition
average monthly availability	means the combined average percentage availability of equipment, calculated for each calendar month by dividing the time that the equipment is operating, by the time the equipment is required to be operating. Equipment is considered 'unavailable' when it is not operating, despite being required to operate in accordance with conditions of this Licence.
BAM	means Beta Attenuation Monitor.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
chemically treated material	means a material that has changed in composition from its original state through chemical treatment that may include flocculation, leaching, cyanidation or other chemical reaction.
clean fill	As defined by the Landfill Waste Classification and Waste Definitions 1996 (as amended April 2018).
condition	means a condition to which this Licence is subject under s 62 of the EP Act.
continuous	means a data recovery rate of at least 90% per financial year quarter.
DEM level	means the dust extinction moisture number. It is the Moisture Content of the product at which the Dust Number is 10 derived from the Australian Standard AS4156.6-2000 or alternative standard as approved by the CEO.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
Department request	means a request for Books or other sources of information to be produced, made by an Inspector or the CEO to the Licence Holder in writing and sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to: a) compliance with the EP Act or this Licence; b) the Books or other sources of information maintained in

Term	Definition
	accordance with this Licence; or c) the Books or other sources of information relating to Emissions from the Premises.
discharge	has the same meaning given to that term under the EP Act.
distinct bulk granular material	refers to any ore with consistent characteristics and from the same source. This excludes ores that may be of the same type (e.g. manganese lump) but are from different mines.
dust control equipment inventory	means an itemised list for all dust control equipment used at the Premises including but not limited to the equipment described in Column 2 of Table 10 in Schedule 3.
DWER	Department of Water and Environmental Regulation.
emission	has the same meaning given to that term under the EP Act.
environmental harm	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
implementation agreement or decision	has the same meaning given to that term under the EP Act.
inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
ISO3087:2011	means International Standardization Organization ISO3087:2011 *Iron ores – Determination of the moisture content of a lot.*
ISO4299:1989	means International Standardization Organization ISO4299:1989 *Manganese ores – Determination of the moisture content of a lot.*
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
Management Trigger	means a threshold level of PM_{10} concentration, which, when exceeded, initiates a set of actions to be undertaken by the licence holder to manage and mitigate dust emissions at the premises.
material environmental harm	has the same meaning given to that term under the EP Act.
minor spillage	means a spillage of material or substances that: a) can be reasonably expected to not contain chromite and/or

Term	Definition
	hydrocarbons; b) does not enter the marine environment or native vegetation; and c) does not result in an Unreasonable Emission, Pollution, Material Environmental Harm or Serious Environmental Harm.
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 equation form: $$w = \frac{m_1 - m_2}{m_1} \times 100$$ Where: w = moisture content of sample; m_1 = initial mass, in grams, of the test portion; and m_2 = mass, in grams, of the test portion after drying.
PM_{10}	refers to particulate matter with a diameter of 10 micrometres or less.
pollution	has the same meaning given to that term under the EP Act.
premises	refers to the premises to which this Licence applies, as specified at the front of this Licence and as shown on the map in Schedule 1 to this Licence.
premises user	means the bulk granular material owner who uses the Utah facility for the export of their material.
prescribed premises	has the same meaning given to that term under the EP Act.
prescribed standard	has the same meaning as applies for that term under s.51 of the EP Act.
primary activities	refers to the Prescribed Premises activities listed on the front of this Licence as described in Schedule 2, at the locations shown in Schedule 1.
Reportable Event	means an exceedance to a criteria specified requiring certain actions to be undertaken by the Licence Holder, including but not limited, to reporting to the CEO.
routinely operated	for the purposes of stockyard water cannons, described in Schedule 2, means to be operated at a minimum frequency of at least: a) every 3 hours during the day; b) every 6 hours during the night; or c) until small puddles just start to form around each stockpile as a result of rainfall or use of stockyard water cannons.

Term	Definition
serious environmental harm	has the same meaning given to that term under the EP Act.
static stockpile	refers to any ore stockpile greater than 5,000m^3 that has been stacked and not reclaimed for a period of six weeks or more.
SY1	refers to Stockyard 1, as depicted in Figure 1 of Schedule 1
SY2	refers to Stockyard 2, as depicted in Figure 1 of Schedule 1
trial	means a test period during which the Licence Holder loads or unloads a new bulk granular material, not specified in Table 9 Schedule 2 of this Licence, at the Premises, in accordance with conditions 13 to 18 inclusive.
unreasonable emission	has the same meaning given to that term under the EP Act.
US EPA IO-3.4	refers to US EPA IO [Inorganic] Compendium Method IO-3.4: Determination of Metals in Ambient Particulate Matter Using Inductively Coupled Plasma (ICP) Spectroscopy
waste	has the same meaning given to that term under the EP Act.
weighted average DEM level	means the DEM Level derived through the following equation: $\bar{x} = \frac{w_1 x_1 + w_2 x_2 + \cdots + w_n x_n}{w_1 + w_2 + \cdots + w_n}$; with w representing tonnage of each of material and x representing DEM Level for that material.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).

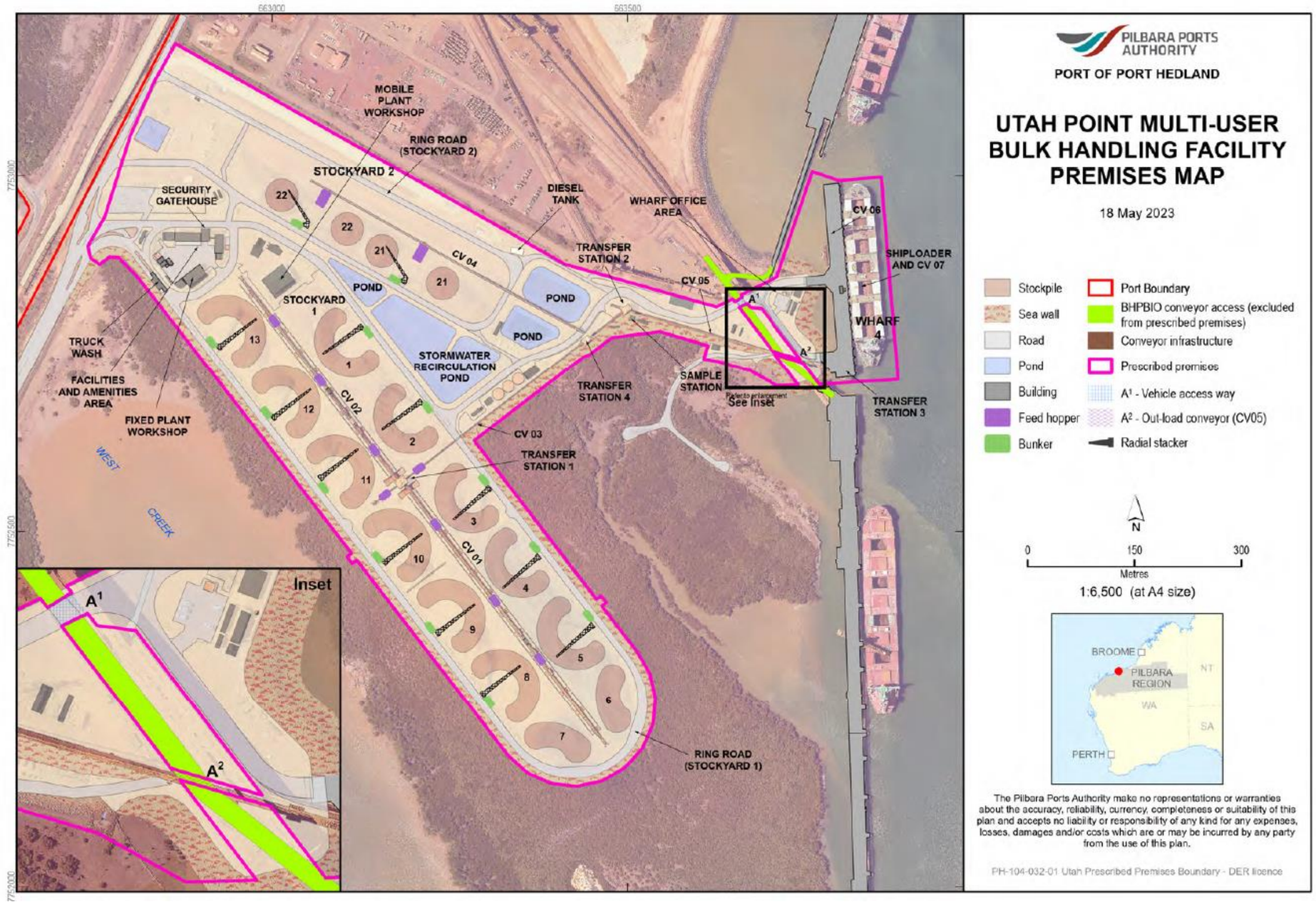


Figure 1: Map of the boundary of the prescribed premises

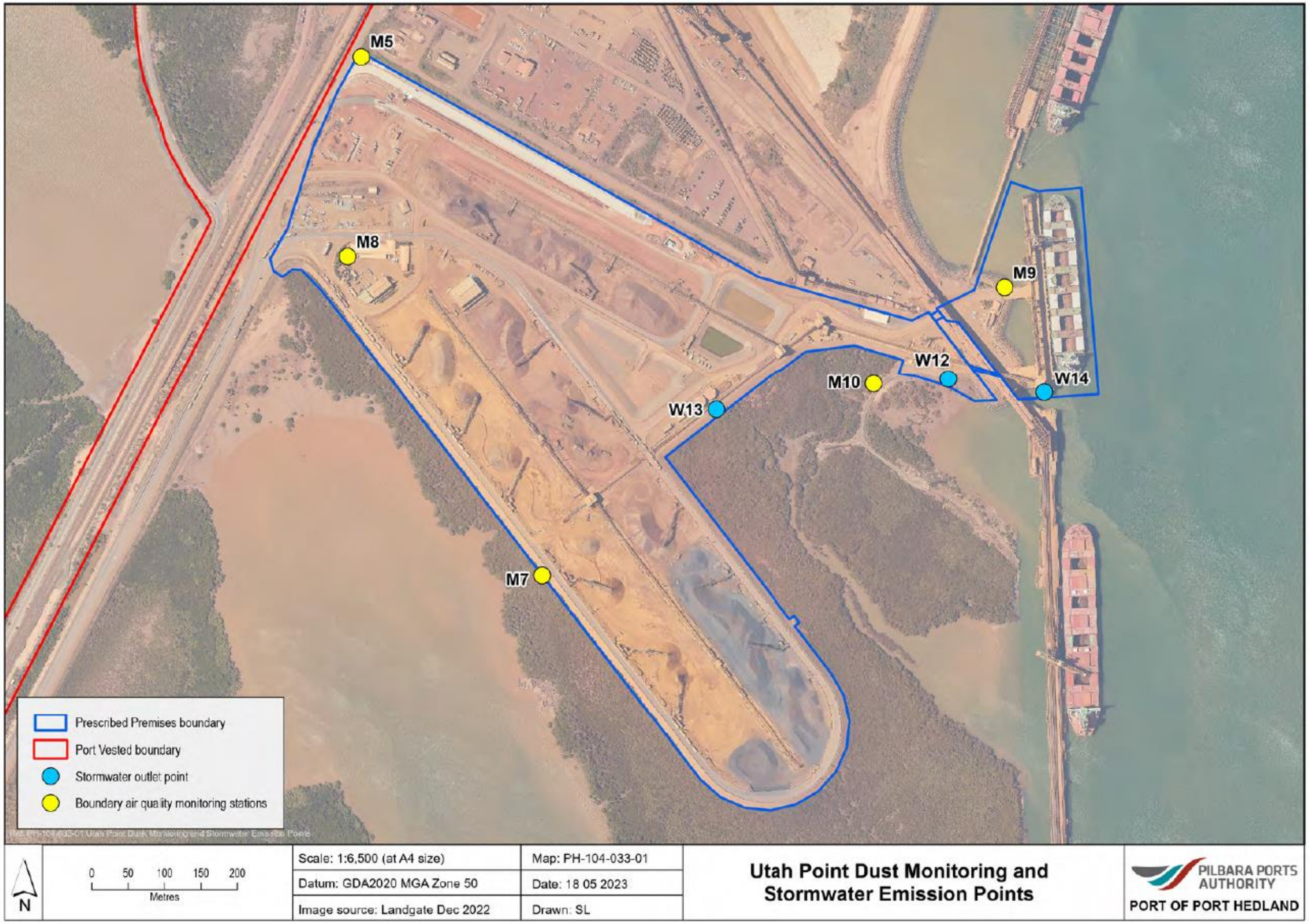


Figure 2: Monitoring Locations and Stormwater Discharge Map

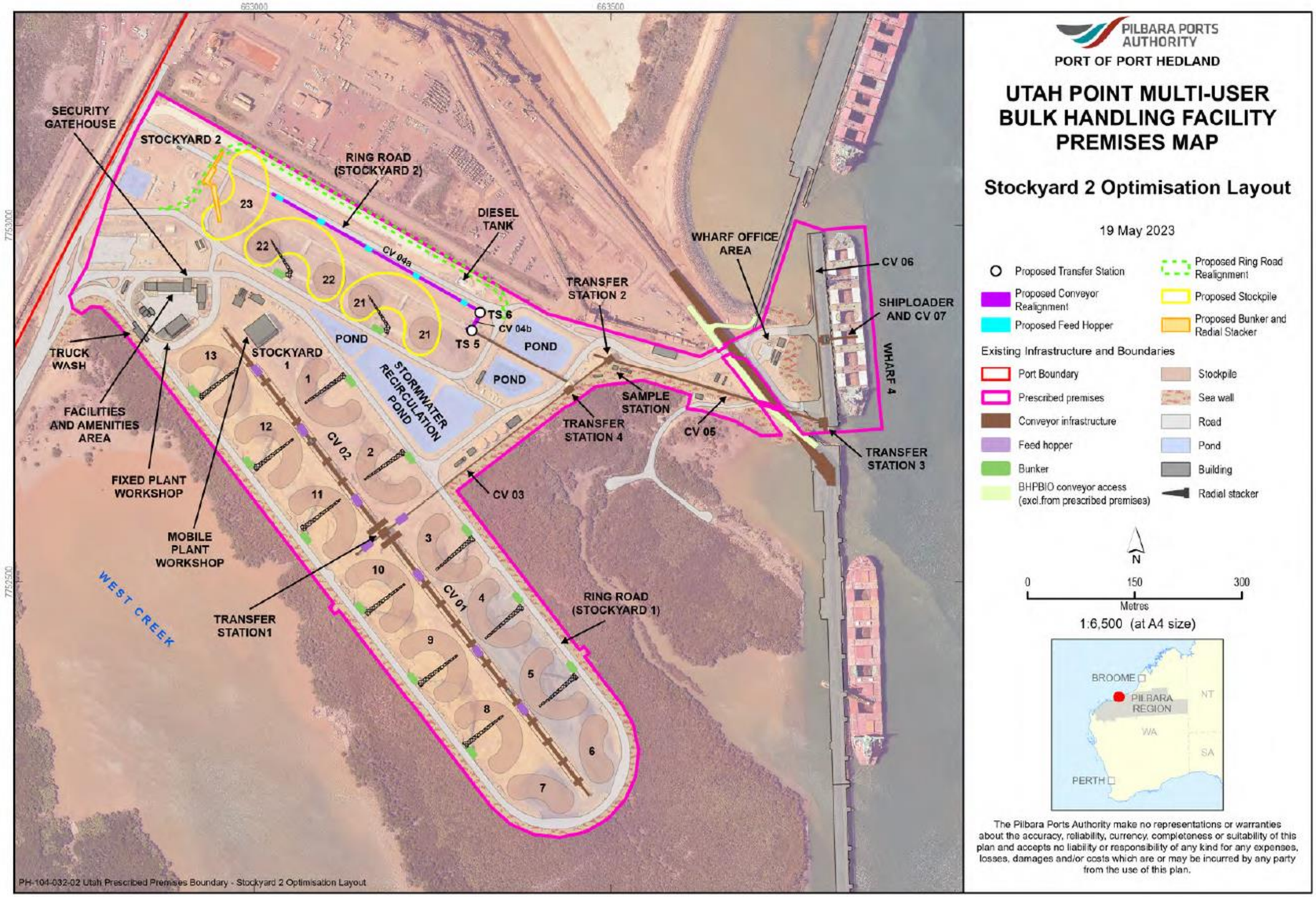


Figure 3: Proposed works

Schedule 2: Primary Activities

At the time of assessment, Emissions and Discharges from the following Primary Activities were considered in the determination of the risk and related conditions for the Premises. The Primary Activities are listed in Table 7.

Table 7: Primary Activities

Primary Activity	Premises production or design capacity
Category 58 – 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.	Up to 28 Million tonnes per annum (Mtpa) combined, in accordance with condition 11.
Category 58A – Bulk material loading or unloading: premises on which salt is loaded onto or unloaded from vessels by an open materials loading system.	

Infrastructure and equipment

The Primary Activity infrastructure and equipment situated on the Premises is listed in Table 8.

Table 8: Infrastructure and equipment

	Infrastructure	Schedule 1: Maps, Premises Map
1.	Sealed ring road stockyard 1 and stockyard 2 (elevated for ring road to stockyard 1)	Ring road (Stockyard 1) Ring Road (Stockyard 2).
2.	Bunkers	Bunker 1-13, 21, 22
3.	Radial stackers	Radial stacker 1-5, 8-13, 21, 22, 23
4.	Stockpiles	Stockpile 1-13, 21, 22 and 23
5.	Feed hoppers	Stockyard 1 – 6 mobile feed hopper trains and 2 fixed feed hoppers when installed in accordance with condition 5. Stockyard 2 – up to 5 fixed feed hoppers
6.	Conveyor system	CV01, CV02, CV03, CV04, CV05, CV06, CV07 CV04a and CV04b when installed in accordance with condition 5
7.	Transfer stations	Transfer Station 1, Transfer Station 2, Transfer Station 3, Transfer Station 4, TS5 and TS6
8.	Shiploader	Shiploader

9.	Wharf 4	Wharf 4 (272 metre to accommodate Panamax and small Cape Size vessels, including Cavotec system (vacuum-based mooring system) and other associated facilities and services.)
10.	Stockyard 1 truck wash	SY1 truck wash
11.	Stockyard 2 dry sweep	SY2 dry sweep area
12.	Stormwater containment ponds	Stormwater recirculation pond, SY2 north pond, SY2 south pond.
13.	Water cart	N/A (mobile)
14.	Sample station	Sample station

Site layout

The infrastructure and equipment are set out on the Premises in accordance with the site layout specified on the Premises Map in Schedule 1.

Bulk materials loaded and unloaded

Bulk materials (listed in Table 9) arrive at the facility via quad road trains. The material is side tipped over bunker walls along the ring roads. Material is then stacked via radial stacker at bunkers 1-5, 8-13, 21, 22 and 23, at bunkers 6 and 7 material is built into a stockpile via front end loader. Material is then reclaimed via a front-end loader and placed via a feed hopper onto a conveyor. The conveyors and transfer stations move material along the outload circuit to the ship loader, where it is loaded into a ships hold via dribbler chute for export.

Table 9: Annual bulk material tonnages assessed

Column 1	**Column 2**
Bulk material	**Tonnages (annual)**
Iron ore	up to 28,000,000 tonnes (exported)
Manganese ore	up to 3,500,000 tonnes (exported)
Chromite ore	up to 350,000 tonnes (exported)
Spodumene ore	up to 3,000,000 tonnes (exported)
Total tonnes (aggregate of all ores)	**28,000,000 tonnes**

Schedule 3: Infrastructure and equipment

Table 10: Infrastructure and equipment controls

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation requirements**	**Reference to Map**
Controls for dust				
1.	Stockyard	Sealed ring roads around stockyard 1 and 2	Vehicular travel speed not to exceed 20 km per hour.	Schedule 1: Premises Map
		Sprays on all radial stackers and at bunkers (excluding bunker 6 and 7)	Bunker sprays operated whenever visible dust is being generated while tipping ore into hoppers. Stacker sprays operated at all times when ore is being stacked. The radial stacker is lowered as low as possible when stacking commences and the drop height is minimised to as low as reasonably practicable at all other times. Chevron or cone pattern used for stacking.	Schedule 1: Premises Map
		In-loading at Bunker 6 and 7	Bunker sprayers operated at Bunker 6 and 7 when a truck is side tipping.	Schedule 1: Premises Map
		Four water cannons per stockpile	Stockyard water cannons Routinely Operated to prevent dust lift off. Additional operation of stockyard water cannons during in-loading. Additional operation of stockyard water cannons for pre-vessel wet down of material that has a Moisture Content below the DEM level for that ore, prior to it being out-loaded and as measured at the point of inload. Dust forecast tool is utilised for planning of additional stockyard water cannon operation.	Schedule 1: Premises Map
2.	Conveyors	Under-belt sprays and	Belt scrapers automatically operate when the conveyor is	Schedule 1:

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation requirements**	**Reference to Map**
Controls for dust				
		belt scrapers. Wind barrier on raised CV06 (above wharf 4). Under-belt sprays and belt scrapers clean material carry back.	running. Operation of the under-belt sprays at all times when manganese is being transported. Operation of the under-belt sprays to minimise the carry back of ore for the purpose of reducing dust.	Premises Map CV01, CV02, CV03, CV04, CV04a, CV05, CV06 CV01, CV03 and CV05 for manganese requirements)
3.	Outload feed hoppers	Hoppers receiving ore from front end loaders in SY1 (except hoppers along conveyor network (CV03)) and SY2 equipped with either: 1) eco-hopper flaps or screens; and/or 2) dust sprays; and/or 3) dust extraction system with exhaust via bag filter. Hoppers receiving ore from front end loaders along conveyor network (CV03) with: 1) High pressure misting spray bars, located on either side of each hopper, including horizontal sheet sprayers and vertical sprayers; or 2) A high-pressure mister mounted outside the hopper with the capability to throw water inside and surrounding the hopper; 3) A tramming dust suppression system designed to spray FEL wheels to reduce tramming dust adjacent to the	Dust control in place/operational once installed in accordance with condition 5, for the purpose of minimising dust escaping from the top of the hopper.	Schedule 1: Proposed works (Figure 3)

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation requirements**	**Reference to Map**
Controls for dust				
		hopper.		
4.	Transfer Stations	Partially enclosed with chute spray	Transfer stations partially enclosed (within shed). Chute sprays operated at all times when: a) manganese is being transported; b) iron ore that has a Moisture Content below the DEM level for that ore is being transported; and/or c) visible dust is being generated through use.	Schedule 1: Premises Map TS1, TS2, TS3, TS4
5.	Shiploader	Shiploader and transfer chute	Enclosed dribbler chute.	Schedule 1: Premises Map CV07/Shiploader
6.	Dust Management Tool	Dust Management Tool that incorporates a forecast of local weather conditions and operational plans for each 12 hour shift	Dust management ongoing, records of dust management tool kept for each 12 hour shift.	N/A
7.	Truck wash/ dry sweep	Truck wash/dry sweep located at the exit points of the Premises to remove built up material from undercarriage and wheel guards	Fully contained truck wash facility (including sumps) at Stockyard 1 exit. Manual dry sweep area at Stockyard 2 exit. Every truck exiting the premises pass through truck wash/dry sweep	Schedule 1: Premises Map
8.	Water carts	Used for dust suppression on stockyard floors 1 and 2	Operated at Stockyard 1 and Stockyard 2 areas, depicted in Figure 1 of Schedule 1, to supplement dust suppression from stockyard water cannons when dust is observed from reclaiming activities. Operated to achieve compliance with condition 27(ii). Operated proactively subject to Dust Management Tool,	Schedule 1: Premises Map

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation requirements**	**Reference to Map**
Controls for dust				
			referred to in Row 5, over 24 hour forecasting period.	
9.	Road sweeper	Operate on sealed areas including ring roads and wharf. Used to minimise material build-up on roads and wharf.	Used regularly with a minimum frequency of at least five (5) hours per day during periods where: a) no more than 2 mm of rain measured at the Port Hedland Bureau of Meteorology site, or M(5) once a rainfall gauge is installed in the preceding 12 hour period; and/or b) wind speed is above 6 m/s.	Schedule 1: Premises Map
Controls for stormwater				
10.	Stormwater infrastructure for Stockyard 1	Stormwater from Stockyard 1 to be captured on land directed to a stormwater recirculation pond.	High density polyethylene lined stormwater recirculated pond with 50,000m^3 capacity.	Schedule 1: Premises Map
11.	Stormwater infrastructure for Stockyard 2	Stormwater from Stockyard 2 captured on land directed to stormwater settlement sump and ponds.	The stormwater settlement pond designed to contain 1 in 10 year 24 hour rainfall event. Stormwater pond connects to the recirculation pond.	Schedule 1: Premises Map
12.	Stormwater infrastructure for berth	The wharf is designed to prevent direct drainage of stormwater into the marine environment. The wharf deck is sloped from the front fender line to the back, which is bunded and connected to a contained drainage system.	All stormwater is pumped to the recirculation pond except where chromite ore has been handled at the berth. Where chromite ore has been handled at the berth, the Licence Holder must manage wash water and stormwater in accordance with conditions 34 and 35.	Schedule 1: Premises Map
13.	Stormwater discharge	Stormwater discharge points: • W12 – Stormwater outlet • W13 – Emergency overflow discharge point from	Stormwater and washwater discharge points to be maintained in good repair.	Schedule 1: Monitoring Locations and Stormwater Discharge Map

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation requirements**	**Reference to Map**
Controls for dust				
		recirculation pond • W14 – Controlled discharge point from recirculation pond, activated in the event of rainfall greater than the ponds capacity		

Schedule 4: Quarterly Reporting

The following schedule outlines the investigation and reporting requirements triggered as a result of conditions 26 and 31.

Reporting Frequency

Reports for the above mentioned must be submitted to the CEO on a quarterly basis, by the last day of the following months in each year:

- April (for January to March),
- July (for April to June),
- October (for July to September); and
- January (for October to December) in any year.

Contents of Report

The quarterly report must contain:

- ore moisture monitoring data as a comparison against the DEM Level for each respective ore, in accordance with condition 20; and
- the following details for the period(s) after Reportable Events have occurred, as specified in condition 26:
    - date(s), time and duration of event;
    - type(s) and total amount (in wet tonnes) of bulk material in-loaded and out loaded at the Premises for the 24-hour periods before, during and after the Reportable Event;
    - the raw monitoring data, in tabulated form, recorded at those Monitoring Stations, listed in Column 1 of Table 3 as specified in condition 23, in the format specified in Schedule 5;
    - time series graphical plots for the Monitoring Stations referred to above on the day/s on which the event occurred (excluding M8 and M9);
    - a summary of how each monitor is, or is not compliant with Australian Standard AS3580.1.1;
    - details and findings of an investigation into the throughput exceedance and/or Reportable Event including, but not limited to the following:
        a) confirmation that data received is correct (no instrument fault);
        b) determination of the source of the Reportable Event through:
            – review of PM10 concentrations at the Yule and BoM background monitors;
            – review of meteorological data (including temperature, wind speed, rainfall and direction);
            – review of the dust scatter plots to determine dust concentrations recorded as coming from the offsite sector;
            – review of background dust levels recorded at an upwind boundary monitor;
            – Moisture Content of materials received at the time of the exceedance with a comparison against the DEM Level;

- comparison of boundary dust levels against dust levels recorded at Taplin Street ambient dust monitoring station (24 hour average);
- availability rates for all dust control equipment.

c) a description of all Ore Handling Activities which had occurred at the Premises during the Reportable Event and the 24 hours preceding the Reportable Event;

d) a description of actions taken by site personnel as a response to the any high level alarms;

- for Reportable Events at the Taplin Street monitor, a comparison of PM10 concentrations against boundary monitor peaks (including peak times) and 24-hour averaged levels recorded during the 24-hour period; and
- all corrective and management actions undertaken for Reportable Events.

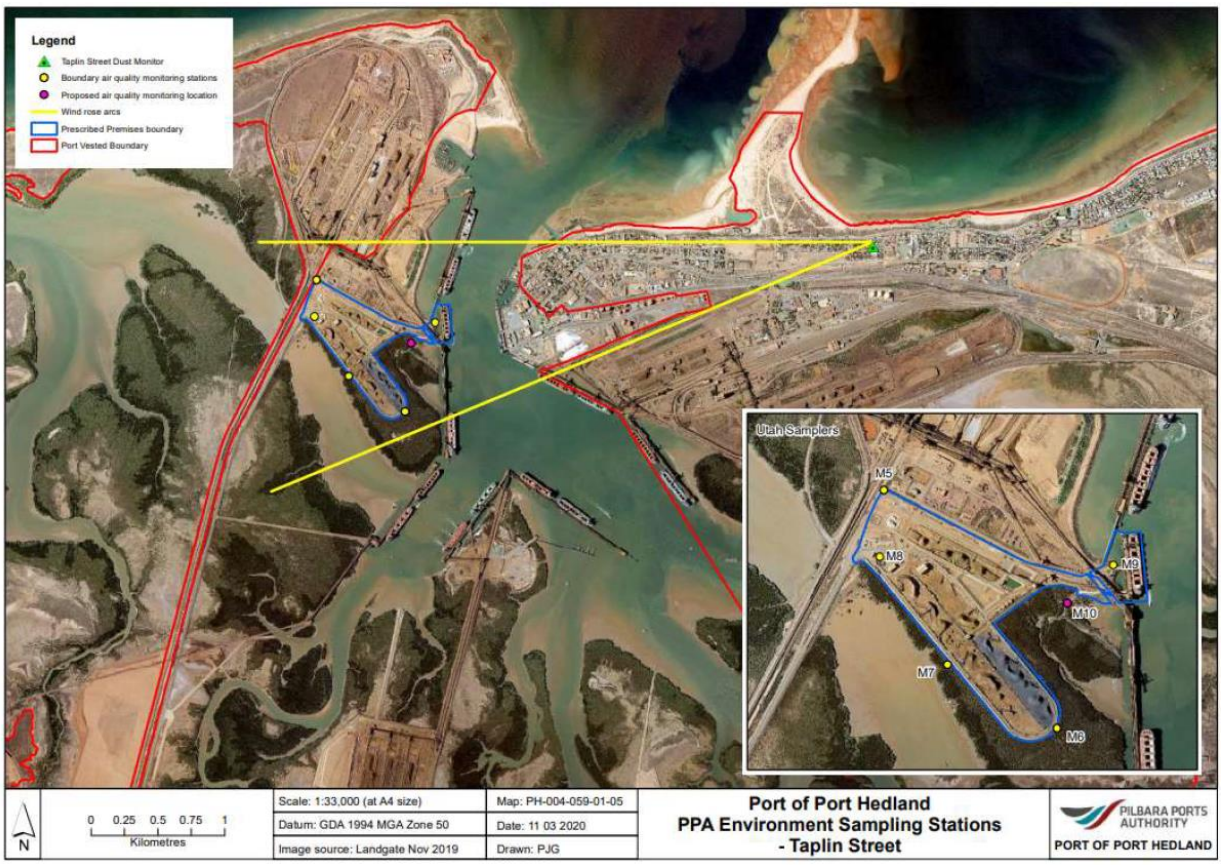
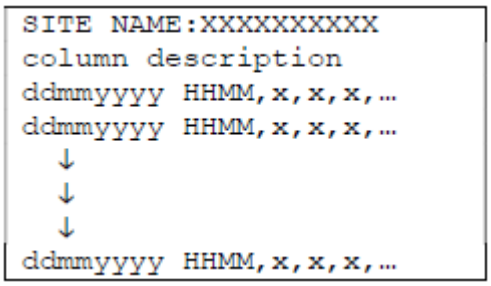


Figure 4: Premises wind vector to Taplin Street

Schedule 5: Boundary monitoring data format

The Licence Holder must ensure that validated (particle, gas and meteorological instrument data) results of ambient air monitoring are provided as a comma delimited time series listing on a suitable computer readable medium in the following format:



where: **dd** is the two digit day of the month i.e. 01, 02,…,31

mm is the two digit month of the year i.e. 01, 02,…,12

yyyy is the four digit year i.e. 2009, 2010, …

HH is the two digit hour code i.e. 00, 01,…,23

MM is the two digit minute code i.e. 00, 10, 15,…,55

x,x,x is the comma delimited decimal data.

The time period for comma delimited time series listing must represent the end of the data period. Hence the first time stamp for any day must be 0005 hours and the data associated with this time stamp must be the averaged data for the period up to this time i.e. from midnight to 0005 hours. The last time for any day must be 2400 and the data associated with this time stamp must be the averaged data for the period up to this time i.e. from 2355 hours to midnight.

If the above method of timestamping is not achievable by your system, then the time series listing can be timestamped at the start of the period with the first timestamp of each day being 0000 hours which represents data from midnight to 00:05 and ends at 2355 hours which represents data from 23:55 to midnight on the same day.

Erroneous or invalid data must be denoted as a blank (not a space) or a numeric error code such as -99.0 within the data set. There should be no spaces in the data lines other than that between the date and time.

The covering documentation will indicate if the data timestamp is at the start of the data averaging period or the end of the data averaging period.

An example five-minute averaged data set comprising eight parameters is provided below.

SITE NAME:- GENERIC AQMS
Date_Time,CO_ppm,NO_ppb,NO2_ppb,NOx_ppb,SO2_ppb,O3_ppb,PM10_ug_m3,PM2.5_ug_m3
26/04/2013 2325,0.2,31.4,11.4,42.8,,0.2,10.0,5.3
26/04/2013 2330,0.2,26.6,12.6,39.3,,0.1,8.6,4.7
26/04/2013 2335,0.1,14.8,14.6,29.4,,0.1,8.2,5.1
26/04/2013 2340,,,,,,,,
26/04/2013 2345,,,,,,,,
26/04/2013 2350,0.2,25.7,16.2,42,,0.5,14.6,13.4
26/04/2013 2355,0.2,,15.8,36,,0.6,14.2,11.3
26/04/2013 2400,0.2,,15.1,35,,0.5,14.3,9.7
27/04/2013 0005,0.2,24.8,15.3,40.1,,0.5,12.8,9
27/04/2013 0010,0.3,27.1,14.6,41.8,,0.4,12.7,9.2
27/04/2013 0015,0.4,33.2,14.5,47.7,,0.4,13.0,8.9
27/04/2013 0020,0.5,26.5,12.6,39.1,,0.2,12.0,7.9

The following units must be used for ambient data submitted as a comma delimited time series listing:

Pollutant	Units	Minimum precision
Carbon monoxide	parts per million	X.X (tenth of a ppm)
all other gases	parts per billion	X (tenth of a ppb)
particles	micrograms per cubic metre	X.X (tenth of a $\mu g/m^3$)
wind speed	metres per second	X.X (tenth of a m/s)
wind direction	degrees from north	X.X (tenth of a degree)
sigma	degrees	X.X (tenth of a degree)
air temperature	degrees Celsius	X.X (tenth of a degree)
relative humidity	%	X.X (tenth of a %)
pressure	hectopascals	X.X (tenth of a hPa)
solar radiation	watts per square metre	X.X (tenth of a $watt/m^2$)

These units must be used unless approval has been obtained from the Senior Manager, Air Quality Services to use alternative units.

The Licence Holder must provide:

- Data as five or 10 minute averages. If these are not available, then at shortest available averaging period;
- Site name, instrument manufacturer and model number;
- Site location (Latitude/Longitude GPS coordinates);
- Data validation procedure used to validate data; and
- all reported data must be time-stamped with the actual time to which the measurement refers. This means that the 1 hour offset inherent in BAMs must be corrected so that both the 1-hour and 10-minute data presented in reports represent the conditions existing at the time of the measurement.