Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence Number	L8967/2016/1
Licence Holder	Roy Hill Infrastructure Pty Ltd
ACN	130 249 633
Registered business address	28-42 Ventnor Avenue WEST PERTH WA 6005
Duration	19/09/2016 to 19/09/2036
Date of Issue	19/06/2016
Date of Amendment	06/09/2024
Premises	Roy Hill Port Bulk Handling Facility and Screening Plant Legal description – Part of Lot 370 on Deposited Plan 35619 Certificate of Title Volume LR3118 Folio 753 Reserve 50892: Lots 1199, 1200, 1201, 1203, 1279, 1280, 1281, 1301, 1302, 1303 and 1304 on Deposited Plan 70562 Part of Lot 372 on Deposited Plan 35620 Certificate of Title Volume LR3118 Folio 755 As defined by the coordinates in Schedule 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	Assessed production capacity
Category 5: processing or beneficiation of metallic or non-metallic ore	38,000,000 tonnes per annual period
Category 58: bulk material loading or unloading	70,000,000 tonnes per annual period

This amended Licence is granted to the Licence Holder, subject to the following conditions on 6 September 2024, by:

Michael Greenslade

Digitally signed by Michael Greenslade
Date: 2024.09.06 13:29:20 +08'00'

MANAGER, PROCESS INDUSTRIES

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

Licence history

Date	Reference number	Summary of changes
19/06/2016	L8967/2016/1	Operation of the Roy Hill Port Bulk Handling Facility and Screening Plant.
03/12/2018	L8967/2016/1	Increase of volumes of iron products handled at the Premises from 55 Mtpa to 60 Mtpa.
11/12/2020	L8967/2016/1	• Increase throughputs from 60 million tonnes per annum (Mtpa) of iron ore shipped to 70 Mtpa. • Amend existing reporting conditions on the Licence (L8967/2016/1) to increase the reporting trigger for daily iron ore throughputs from 240,000 wet tonnes to 270,000 wet tonnes. • 5 Mtpa increase to authorised throughputs at the screening plant to enable the proposed increase in lump ore loaded onto vessels at the Premises.
22/09/2021	L8967/2016/1	Changes to the washwater circuit at the Premises car dumper, which is infrastructure in support of Category 58 (bulk material loading or unloading) activities authorised under the Existing Licence.
21/10/2022	L8967/2016/1	• Construction of a new sedimentation pond to settle the wash water sediment from the overland conveyor and other sources of non-hydrocarbon contaminated wash water prior to discharge to a storm drain. • Authorisation to allow stormwater, wash down water/ conveyor wash water and any surplus water from ship loading activities to be discharged to any sedimentation pond rather than specific ponds. • Authorisation to allow reclamation of dead ore stockpiles if the wind speed is less than 14 m-s , including where the average wind directions are between 180° and 300°.
06/09/2024	L8967/2016/1	• Bulk handling of up to 5 million tonnes per annum (Mtpa) of iron ore using a front end loader (FEL) to load road trains in a quad configuration at the stockyard. No changes to total approved material loading or unloading capacity is proposed. • Re-direction of untreated wash water from the screenhouse sumps to sedimentation pond (SB1-01); and • Provisions to relocate dust monitors and the weather station to new locations within the prescribed premises.

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.

Conditions

Emissions

1. The Licence Holder must not cause any Emissions from the Primary Activities (described in Schedule 2) on the Premises except for specified Emissions and general Emissions described in Column 1 of Table 1 subject to the exclusions, limitations or requirements specified in Column 2 of Table 1.

Table 1: Authorised Emissions

Column 1	**Column 2**
Emission Type	**Exclusions/Limitations/Requirements**
Specified Emissions	
Fugitive dust	Subject to compliance with: • Conditions 2 to 32. • Rows 1 to 10 of Table 11, Schedule 3.
Discharge wash water and stormwater from the Premises	Subject to compliance with: • Conditions 9 and 33. • Discharge only from the Culvert Drains 1-7 depicted in Figure 4 of Schedule 1. • Rows 11 to 21 of Table 11, Schedule 3.
General Emissions (excluding Specified Emissions)	
Emissions which arise from the activities on the Premises through matters set out in, or incidental to the matters set out in, the General Description in Schedule 2.	Emissions excluded from General Emissions are: • Unreasonable Emissions; or • emissions that result in, or are likely to result in, Pollution, Material Environmental Harm or Serious Environmental Harm; or • Discharges of Waste in circumstances likely to cause Pollution; or • emissions that result, or are likely to result in, the Discharge or abandonment of Waste in water to which the public has access; or • Emissions or Discharges which do not comply with an Approved Policy; or • Emissions or Discharges which do not comply with prescribed standard; or • Emissions or Discharges which do not comply with the conditions in an Implementation Agreement or Decision; or • Emissions or Discharges the subject of offences under regulations prescribed under the EP Act, including materials discharged under the *Environmental Protection (Unauthorised Discharges) Regulations 2004*.

Bulk granular material specifications

2. The Licence Holder is authorised to load up to a maximum:

(a) 60,000,000 tonnes of Iron Ore per Annual Period; or

(b) 65,000,000 tonnes of Iron Ore per Annual Period following final installation/construction of infrastructure specified in row 1 of Table 3; or

(c) 70,000,000 tonnes of Iron Ore per Annual Period following final installation/construction of infrastructure specified in row 2 of Table 3.

3. The Licence Holder must not screen more than 38,000,000 tonnes of Iron Ore per annual period.

4. In the event that more than 240,000 wet tonnes of Iron Ore are loaded into vessels at the Premises within any Day, the Licence Holder must investigate, undertake the actions and report in accordance with Schedule 4.

Moisture content monitoring and management

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

(a) ensure, and be able to demonstrate using the method outlined in ISO3087:2011, 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 prevent dust emissions.

6. The Licence Holder must not re-stockpile a Static Stockpile for the purpose of avoiding requirements of Condition 5.

7. The Licence Holder must ensure that all Iron Ore in-loaded to the Premises and out-loaded from the Premises has a Moisture Content at or above the DEM level derived from application of AS4156.6-2000 and updated on an annual basis through laboratory analysis.

8. The Licence Holder must obtain Moisture Content monitoring data of all Iron Ore at the Premises:

(a) for the parameter specified in Column 1,

(b) at the locations specified in Column 2,

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

(d) during the frequency specified in Column 4,

(e) using 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	**Location**	**Averaging Period**	**Frequency**	**Method**
Moisture Content	Mine site	Averaged for each train load or ore type per train.	Continuous monitoring for every in-load accepted at the Premises	ISO3087:2020; or ATS5621-2012; or alternative method approved by the CEO.
Moisture Content	Canyons A and D, depicted in Figure 7 of Schedule 1	Averaged for each Ultra Quad Configuration Road Train loaded	During out-loading of dead ore[1]	AS1141.1.1:2021; and ISO03087:2020/ATS5621:2012; or alternative method approved by the CEO.
Moisture Content	Automated sample station located at the Overland Conveyor Transfer Station, depicted in Figure 3 of Schedule 1 (out-load circuit)	Averaged for each vessel hold loaded	Continuous monitoring during out-loading at shiploader	ISO3087:2020; or ATS5621-2012; or alternative method approved by the CEO.

Note 1: Samples only required to be obtained whenever the dead ore material being outloaded by front end loaders has been static for greater than 96 hours, measured from the time the ore was stacked into the ore canyon.

Infrastructure and equipment

9. The Licence Holder must ensure that the infrastructure and equipment named and described in column 1 and column 2 of Table 11 in Schedule 3, is adequately maintained in good working order to ensure it can be operated in accordance with the requirements specified in column 3 of Table 11 in Schedule 3.

10. The Licence Holder must maintain an Average Monthly Availability rate of 90% or more for all:

(a) water sprays on stackers, reclaimers and ship loaders;

(b) stockyard water cannons;

(c) transfer station and conveyor dust suppression sprays; and

(d) belt wash stations, unless where belt wash stations are turned off for the purpose of dust control validation in accordance with Condition 17.

11. 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 Table 11 of Schedule 3.

12. 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.

Further Works

13. The Licence Holder must construct and/or install the additional infrastructure and equipment listed in Column 1 of Table 3, in accordance with:

(a) the design and installation requirements (Column 2);

(b) at the infrastructure location (Column 3); and

(c) within the timeframe (Column 4),

specified in Table 3 below.

Table 3: Construction and installation requirements

Row	Column 1 **Infrastructure**	Column 2 **Design and construction/ installation requirements**	Column 3 **Infrastructure location, as depicted in Figures 2, 3 and 7 of Schedule 1**	Column 4 **Timeframe**
1	Belt wash stations; or Conveyor shielding	Belt wash stations installed and capable of cleaning conveyor belt for the purpose of minimising ore carry-back along the length of the conveyor; or Conveyor shielding installed for the purpose of minimising dust emissions along the conveyor route and at points of connecting transfer stations.	Conveyor CVR121	Works must be complete prior to 11 December 2025.
2			On a conveyor that does not yet have a belt wash station installed as determined by the Licence Holder, in accordance with satisfying the requirements of Condition 17.	
3			On a conveyor that does not yet have a belt wash station installed as determined by the Licence Holder.	Only if required by and in accordance with Condition 19.
4	Car Dumper washwater circuit	Construction of two sedimentation ponds with a cumulative storage volume of at least 430m^3, for the storage of washwater from the car dumper vault. Washwater and stormwater circuit to be designed such that collection from the Grippers and Indexers Area continues to be managed in accordance with row 13 of Table 10.	Car Dumper Sedimentation Ponds Car Dumper Vault Grippers and Indexers Area	Works must be complete within 5 years from 22 September 2021.

5	Sedimentation pond and closed-circuit water system	Construction of a sedimentation pond/s for the storage of washwater from belt wash stations on conveyors CVR161, CVR162 and CVR164. Sediment pond/s must have a cumulative storage volume of at least 8,000m^3, and capacity to store water from a 6-hour duration, 10-year rain event.	Sedimentation Pond	Works must be complete within 5 years from 21 October 2022.

14. The Licence Holder must not depart from the requirements specified in Table 3 of Condition 13 except where:

(a) such departure does not increase risks to public health, public amenity and the environment; and

(b) all other Conditions in this Licence are still satisfied.

15. The Licence Holder must within 14 calendar days of the infrastructure specified in Table 3 being installed:

(a) notify the CEO in writing of the installation of infrastructure;

(b) undertake an audit of compliance with the requirements of Table 3 of Condition 13; and

(c) prepare and submit to the CEO an Environmental Compliance Report on that compliance for each row in Table 3.

16. The Environmental Compliance Report/s required by Condition 15, must include as a minimum the following:

(a) certification that the infrastructure or component of infrastructure specified in Table 3 has been constructed in accordance with the relevant requirements specified in the table;

(b) where a departure from the requirements specified in Table 3 occurs and is of a type allowed by Condition 14, the Licence Holder must provide to the CEO a description of and explanation for the departure and demonstration of achievement of no increase in risk to public health, public amenity and the environment;

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

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

17. The Licence Holder must undertake a review of dust control infrastructure specified in rows 1 and 2 of Table 3 to demonstrate the equivalent of at least a 70% emission rate reduction from baseline CVR121 emissions (7.94g/s), through the combined installation of that infrastructure.

18. The Licence Holder must submit a Dust Control Validation Report with the information specified in Schedule 5 and within 12 months of the submission of the Environmental Compliance Report for infrastructure installed in accordance with rows 1 and 2 of Table 3.

19. In the event that the emission rate reduction specified in Condition 17 is not demonstrated, the Licence Holder must install a third belt wash station in

accordance with row 3 of Table 3 within 6 months of the date of submission of the Dust Control Validation Report.

Dust monitoring and management

Air quality monitoring

20. The Licence Holder must undertake air quality monitoring:

(a) at the monitoring stations specified in Column 1 and shown in Figure 2 of 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 4.

Table 4: Air quality monitoring

Column 1	Column 2	Column 3	Column 4	Column 5
Monitoring Station (Figure 2[1] of Schedule 1)	**Parameter**	**Averaging Period**	**Frequency**	**Method**
DM1, DM2, DM3, DM4	Particles as PM_{10} ($\mu g/m^3$)	10 minutes	Continuous	AS3580.1.1
DM5 and DM6	Particles as PM_{10} ($\mu g/m^3$)	10 minutes	Continuous	AS3580.1.1
Port AWS	Rainfall (mm)	N/A	Continuous	AS3580.14
	Wind direction (°)	10 minutes		
	Wind speed (m/s)	10 minutes		

Note 1: Upon completion of the works authorised by Condition 25, reference locations are indicated by those marked as "proposed"

Monitoring and management response

21. The Licence Holder must maintain a record of any instances where ambient PM_{10} concentrations at the monitoring locations listed in Column 1 of Table 5 exceed the corresponding management trigger criteria and Reportable Event criteria specified in Columns 2 and 3 of Table 5, when monitored in accordance with Condition 20.

Table 5: Dust management during dust events

Row	Column 1	Column 2	Column 3
	Monitoring location	**Management trigger criteria**	**Reportable Event Criteria**
1.	DM2, DM5 and/or DM6[1, 2]	≥300 µg/m^3 PM_{10} (rolling 1 hour average) when wind direction is averaged between 205° and 250° inclusive for any three or more ten minute periods during the rolling 1-hour period, as measured at the Port AWS. Unless where, BOM or Yule River monitoring stations[1] have recorded ≥100 µg/m^3 PM_{10} (rolling 1 hour average) within 3 hours prior to the trigger event.	120 µg/m^3 PM_{10} (rolling 24-hour average) when wind is direction is between 205° and 250° for 12 or more hours (cumulative) over the rolling 24-hour averaging period.
2.	DM3, DM4, DM5 and/or DM6[1, 2]	≥300 µg/m^3 PM_{10} (rolling 1 hour average) when wind direction is averaged between 295 and 325° inclusive for any three or more ten minute periods during the rolling 1-hour period, as measured at the Port AWS. Unless where, BOM or Yule River monitoring stations[1] have recorded ≥100 µg/m^3 PM_{10} (rolling 1 hour average) within 3 hours prior to the trigger event.	120 µg/m^3 PM_{10} (rolling 24-hour average) when wind is direction is between 295° and 325° for 12 or more hours (cumulative) over the rolling 24-hour averaging period.
3.	SW Creek Berths	Visible dust identified when wind direction is averaged between 180° and 270° for that ten minute period, as measured at the Port AWS.	N/A
4.	Taplin Street[3]	≥100 µg/m^3 PM_{10} (rolling 1 hour average) when wind direction is averaged between 230 and 250° inclusive for any three or more ten minute periods during the rolling 1-hour period, as measured at the Port AWS. Unless where, BOM or Yule River monitoring stations[1] have recorded ≥100 µg/m^3 PM_{10} (rolling 1 hour average) within 3 hours prior to the trigger event.	≥70 µg/m3 (24 hour average measured from midnight to midnight)

Note 1: Upon completion of works specified by condition 25, monitor DM6 is no longer required as a monitoring location for the purposes of management trigger and reportable event criteria of this table.
Note 2: Upon completion of the works specified in condition 25, and in accordance with the specifications of Table 6, monitor DM6 to be re-purposed as a background monitor.
Note 3: Provision of this data to the Licence Holder is from the Port Hedland Ambient Air Quality Network, managed by DWER

22. Immediately upon being notified of management trigger criteria and/or Reportable Event criteria specified in Condition 21 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) activating dust extraction equipment, where applicable; and/or

(iii) stopping all activities resulting in visible dust generation.

23. In the event that no visible dust can be identified within 20 minutes of the management trigger criteria and/or Reportable Event criteria specified in rows 1, 2 and 4 of Table 5 being exceeded, 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.

24. The Licence Holder must continue actions specified in Conditions 22(b) and 23 for the duration of management trigger criteria and/or Reportable Event criteria being exceeded.

Dust monitor relocations

25. The Licence Holder must ensure that the relocation of air quality monitors specified within Table 6, is conducted in accordance with the requirements of Table 6.

Table 6: Air quality monitor relocation

Column 1	**Column 2**
Monitoring Station	**Specifications**
DM2, DM3, DM4 and DM6	(a) Only to be re-located should future expansion activities at the premises require their re-location; (b) To be re-located to the indicative location proposed in Figure 2; (c) Located to ensure compliance with AS3580.1.1; (d) Monitoring Station must not be re-located until it is confirmed that the new locations meets AS3580.1.1; (e) Monitoring Station re-location to be conducted in such a manner that ensures only one monitor is offline at any one time; (f) Ensure that all re-located Monitoring Stations are fully calibrated, functional and operate in accordance with the requirements of condition 20; (g) Deploy temporary dust monitors in the event that a Monitoring Station is offline for longer than 24 hours; and (h) Within 30 calendar days of the re-location of the Monitoring Stations, provide to the CEO a report on the re-location of the Monitoring Station,

	including but not limited to: i. Evidence and certification that the requirements specified in this table have been met; ii. GPS coordinates of the new monitoring locations; and iii. A comparison of the wind vectors specified in Table 5 and the new locations of the Monitoring Stations to ensure wind vectors remain relevant. Where this analysis determines that updates to wind vectors are required, these are to be proposed and relevant for offsite receptors for each Monitoring Station.
Metrological Station	(a) Only to be re-located should future expansion activities at the premises require its relocation; (b) To be re-located to the indicative location proposed in Figure 2; (c) Located to ensure compliance with AS3580.14; (d) Must be planned, coordinated and actioned to minimise disruption to the monitoring of ambient weather conditions as required by Condition 20; (e) During re-location activities, the Licence Holder must ensure that metrological data is obtained from the Port Hedland Ambient Monitoring Network stations BOM or Yule River for the purposes of management triggers and reportable events as per condition 21; and (f) Within 30 calendar days of the re-location of the Metrological Station, provide to the CEO a report on the re-location of the Metrological Station, evidencing and certifying the requirements specified in this table, including GPS coordinates of the new location.

Reporting

26. The Licence Holder must investigate, undertake the actions and report in accordance with Schedule 4, in the event that Reportable Events Criteria (as specified through Condition 21) is exceeded.

27. The Licence Holder must submit to the CEO a Dust Monitoring Report that incorporates the information specified in Schedule 6 within 15 months from the completion of the installation of the infrastructure specified in rows 1 and 2 of Table 3, and if required, the installation of the infrastructure specified in row 3 of Table 3 in Condition 13.

Improvement requirements

28. The Licence Holder must apply and maintain a surface binding treatment to all non-trafficable cleared areas and the Port Loop Stage 2 Area for the purpose of dust suppression, excluding the following areas depicted in Figure 4:

(a) Stage 1 Trial Location;

(b) revegetation trial locations and access roads within the Stage 2 Trial Location; and

(c) sediment ponds.

29. The Licence Holder must conduct monthly visual checks of the surface condition of surface binding treatment at all areas where applied to determine if reapplication is necessary to ensure the minimum possible dust lift-off.

30. Within three months prior to the commencement of each trial rehabilitation program, the Licence Holder must submit to the CEO a Revegetation Plan for the Stage 1 Trial Location and Stage 2 Trial Location, as depicted in Figure 4 of Schedule 1, that includes but is not limited to a description of the proposed:

(a) location and soil preparation;

(b) species of plant/s to be used in the revegetation program;

(c) infill seedling processes during the trial;

(d) monitoring frequencies;

(e) improvements to the Revegetation Plan that would increase its likelihood of successful revegetation;

(f) dust management measures undertaken during soil disturbance activities;

(g) success criteria, including those criteria that are both objective and measurable; and

(h) how the success criteria in part (g) of this Condition will be measured.

31. The Licence Holder must continue trial rehabilitation programs at Stage 1 Trial Location and Stage 2 Trial Location, as depicted in Figure 4 of Schedule 1, until such a time that land is rehabilitated.

32. Where visible dust is generated, the Licence Holder must cease all earthmoving associated with construction works specified in Condition 13 and all topsoil application and scarification in the Stage 1 Trial Location and Stage 2 Trial Location areas, as depicted in Figure 4 of Schedule 1:

(a) during Strong Wind Conditions; and/or

(b) where average wind directions are between 180º and 300º for three or more ten minute periods during the hour.

33. Where visible dust is generated, the Licence Holder must cease all reclamation of Dead Ore Stockpiles during Strong Wind Conditions and/or where average wind directions are between 180º and 300º for three or more ten minute periods during the hour.

Wash water and stormwater monitoring

34. The Licence Holder must monitor the parameters specified in column 1 from the locations specified in column 2 in Table 7. Monitoring results to be reported for the period specified in column 3 and not exceed the limit specified in column 4 in Table 6. Monitoring methods to be undertaken as specified in columns 5 and 6 in Table 7.

Table 7: Wash water and Stormwater Monitoring

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Parameter	**Location**	**Period**	**Limit**	**Sample**	**Method**
Total recoverable hydrocarbons (TRH)	Post treatment wastewater from: Workshop OWS;	Quarterly, unless there is no discharge from the OWS during the quarter or discharge into SB1-01.	15mg/L	Grab sample	AS5667.10:1998

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Parameter	**Location**	**Period**	**Limit**	**Sample**	**Method**
	Car Dumper OWS; Car Dumper Sediment Pond; Screening Plant North OWS; and Screening Plant South OWS, OWS L1, L2, and wastewater from SB1-01 shown in Figure 4.				

Record keeping

35. The Licence Holder must maintain accurate and auditable Books in relation to:

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

(b) all data collected to inform the Dust Control Validation Report required by Condition 18;

(c) monitoring data required by Conditions 8, 20, and 34 of this Licence;

(d) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 9 of this Licence;

(e) a log of management responses during trigger events specified in Condition 21;

(f) quarterly investigations into Reportable Events reported in accordance with Conditions 4, 21 and Schedule 4 of this Licence;

(g) the application of surface binding treatments in accordance with Condition 28;

(h) a log of surface binding treatment inspections in accordance with Condition 29;

(i) inspections undertaken at the wharf;

(j) the frequency and use of the street sweeper;

(k) the frequency of maintenance shutdown and wash down at the wharf;

(l) complaints received under Condition 36 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 7 years from the date the Books were made; and

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

36. The Licence Holder must record the number and details of any complaints received by the Licence Holder relating to Emissions and Discharges from 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.

37. The Licence Holder must submit to the CEO no later than 31 March each year:

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

(i) Condition 8 for Moisture Content and DEM level of Iron Ore received to, and out-loaded from the Premises;

(ii) Condition 20 for ambient air quality monitoring at DM1 to DM6 and meteorological monitoring at Port AWS, depicted in Schedule 1, Figure 2, in the format specified in Schedule 7;

(iii) Condition 21 for ambient air quality monitoring at Taplin Street including a comparison of monitoring results against the Air Guideline Value; and

(iv) Condition 34 for wash water and stormwater monitoring at each OWS as specified in Table 7.

38. The Licence Holder must comply with a CEO Request, within 7 days from the date of the CEO Request or such other period specified in the CEO Request.

Definitions

In this Licence, the following terms have the following meanings:

Air Guideline Value refers to the Government-endorsed 24-hour PM_{10} air guideline value for Port Hedland residential areas of 70µg/m^3.

Anniversary Date means 30 June of each year.

Annual Period means a 12 month period commencing from 1 January until 31 December in each year.

Approved Policy has the same meaning given to that term under the EP Act.

AS1141.3.1:2021 means Australian Standard *AS1141.3.1:2021 Methods for sampling and testing aggregated Method 3.1: Sampling - Aggregates*

AS3580.1.1 means the Australian Standard *AS3580.1.1 Methods for sampling and analysis of ambient air - Guide to siting air monitoring equipment.*

AS3580.14 means the Australian Standard AS 3580.14 *Methods for sampling and analysis of ambient air – Meteorological monitoring for ambient air quality monitoring applications*.

AS4156.6-2000 means the Australian Standard AS4156.6-2000 Coal preparation, Part 6: Determination of Dust/moisture Relationship for Coal.

AS5667.10 means the Australian Standard AS5667.10:1998 *Water quality - Sampling - Guidance on sampling of waste waters.*

ATS5621-2012 means Australian Technical Specification ATS5621-2013 Iron Ores – rapid moisture determination.

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.

Books has the same meaning given to that term under the EP Act.

Compliance Report means a report in a format approved by the CEO as presented by the Licence Holder or as specified by the CEO from time to time.

CEO for the purposes of notification means:

Director General
Department of Water and Environmental Regulation
Locked Bag 10
JOONDALUP DC WA 6919
info@dwer.wa.gov.au

CEO Request means a request made by the CEO to the Licence Holder in writing, sent to the Licence Holder's address for notifications, as described at the front of this Licence, in relation to:

(a) information, records or reports in relation to specific matters in connection with this Licence including in relation to compliance with any Conditions and the calculation of fees (whether or not a breach of Condition or the EP Act is suspected); or

(b) reporting, records or administrative matters:

(i) which apply to all Licences granted under the EP Act; or

(ii) which apply to specified categories of Licences within which this Licence falls.

Condition means a condition to which this Licence is subject under s 62 of the EP Act.

Continuous means a data recovery rate of above 90% averaged annually.

Dead ore stockpiles refers to any stockpile that is not reclaimed by the bucketwheel reclaimer REC1, as depicted in Figure 3 and Figure 7 of Schedule 1.

Deluge Cycle means the targeted operation of water cannons to stockpiles for no less than two minutes out of every 15 minutes.

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.

Discharge has the same meaning given to that term under the EP Act.

Dust Control Equipment Inventory means an itemized list for all dust control equipment used at the Premises including but not limited to the equipment described in Column 2 of Table 11 in Schedule 3.

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 means the *Environmental Protection Act 1986* (WA).

EP Regulations means the *Environmental Protection Regulations 1987* (WA).

General Description means the description of activities and operations carried out on the Premises as set out in Schedule 2 of this Licence.

General Emission has the meaning set out in Condition 1 of this Licence.

Grab sample has the same meaning given in AS5667.10:1998.

Implementation Agreement or Decision has the same meaning given to that term under the EP Act.

Iron Ore *means a type of Iron Ore produced from the Roy Hill Mine.*

ISO3087:2020 means the International Standardization Organization standard ISO3087:2020 *Iron Ores – Determination of the moisture content of a lot*.

Licence refers to this document, which evidences the grant of Licence by the CEO under s 57 of the EP Act, subject to the Conditions.

Licence Holder refers to the occupier of the premises being the person to whom this Licence has been granted, as specified at the front of this Licence.

Material Environmental Harm has the same meaning given to that term under the EP Act.

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 the sample;

m_1 = initial mass, in grams, of the sample; and

m_2 = mass, in grams, of the sample after drying.

OWS means oily water separator.

PM_{10} refers to particulate matter that is 10µm in diameter or smaller and includes $PM_{2.5}$.

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.

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.

Serious Environmental Harm has the same meaning given to that term under the EP Act.

Specified Emission has the meaning set out in Condition 1 of this Licence.

Static Stockpile refers to any ore stockpile greater than 50,000m^3 and/or 12m in height above ground level that has been stacked and not reclaimed for a period of six weeks or more.

Strong Wind Conditions means wind speeds of 14 metres per second or greater.

Trigger Investigation means an investigation which includes but is not limited to a review of monitoring stations for wind speed, direction and PM_{10} concentrations and a visual observation of activities being undertaken within the vicinity of the monitoring station which recorded the trigger exceedance.

Unreasonable Emission has the same meaning given to that term under the EP Act.

Vessel hold refers to the internal compartment on a vessel where cargo, prescribed goods or otherwise, can be stowed and carried.

Waste has the same meaning given to that term under the EP Act.

Schedule 1: Coordinates and maps

Table 8: Premises boundary coordinates

Point_ID	Easting	Northing	Point_ID	Easting	Northing	Point_ID	Easting	Northing
1	663262	7751221	49	658433	7749023	97	660661	7749497
2	662824	7750638	50	658500	7749079	98	660674	7749457
3	662836	7750629	51	658544	7749114	99	660690	7749386
4	662813	7750599	52	658625	7749166	100	660693	7749343
5	662772	7750587	53	658685	7749196	101	660693	7749301
6	662767	7750606	54	658812	7749250	102	660690	7749261
7	662415	7750509	55	658927	7749303	103	660682	7749218
8	662416	7750506	56	659022	7749345	104	660672	7749177
9	662335	7750483	57	659021	7749355	105	660653	7749128
10	662334	7750487	58	659037	7749362	106	660629	7749081
11	662177	7750443	59	659044	7749354	107	660607	7749045
12	662178	7750438	60	659740	7749656	108	660581	7749012
13	662152	7750431	61	659752	7749676	109	660552	7748981
14	662167	7750383	62	659765	7749682	110	660521	7748952
15	661922	7750315	63	659788	7749677	111	660488	7748927
16	661860	7750318	64	659804	7749684	112	660475	7748910
17	661870	7750359	65	659823	7749701	113	660418	7748879
18	661786	7750336	66	659852	7749788	114	660364	7748857
19	661793	7750359	67	659817	7749839	115	660315	7748845
20	661877	7750382	68	659828	7749850	116	660247	7748830
21	661889	7750429	69	659876	7749864	117	660144	7748818
22	662143	7750462	70	660186	7749945	118	659993	7748786
23	662145	7750456	71	660225	7749928	119	659935	7748772
24	662777	7750630	72	661725	7750341	120	659820	7748746
25	662776	7750636	73	661719	7750317	121	659703	7748720
26	662796	7750641	74	661632	7750293	122	659644	7748709
27	662821	7750674	75	661633	7750291	123	659528	7748684
28	662823	7750672	76	661608	7750284	124	659502	7748678
29	663245	7751234	77	661607	7750286	125	659417	7748662
30	663238	7751240	78	660384	7749950	126	659358	7748651
31	663268	7751280	79	660385	7749948	127	659332	7748645
32	663309	7751249	80	660239	7749908	128	659182	7748614
33	663743	7751826	81	660227	7749888	129	659048	7748584
34	663780	7751799	82	660233	7749863	130	658978	7748577
35	663315	7751181	83	660251	7749847	131	658932	7748576
36	663262	7751221	84	660255	7749814	132	658826	7748586
37	658110	7748440	85	660297	7749809	133	658678	7748622
38	658118	7748479	86	660342	7749796	134	658572	7748634
39	658092	7748503	87	660368	7749782	135	658533	7748629
40	658109	7748547	88	660416	7749761	136	658497	7748622

Point_ID	Easting	Northing	Point_ID	Easting	Northing	Point_ID	Easting	Northing
41	658142	7748558	89	660453	7749742	137	658456	7748608
42	658161	7748607	90	660490	7749720	138	658510	7748548
43	658185	7748663	91	660523	7749695	139	658486	7748546
44	658213	7748716	92	660555	7749666	140	658427	7748582
45	658255	7748783	93	660583	7749634	141	658276	7748454
46	658299	7748853	94	660608	7749600	142	658272	7748451
47	658337	7748907	95	660630	7749565	143	658248	7748398
48	658388	7748974	96	660645	7749536			

Premises Map

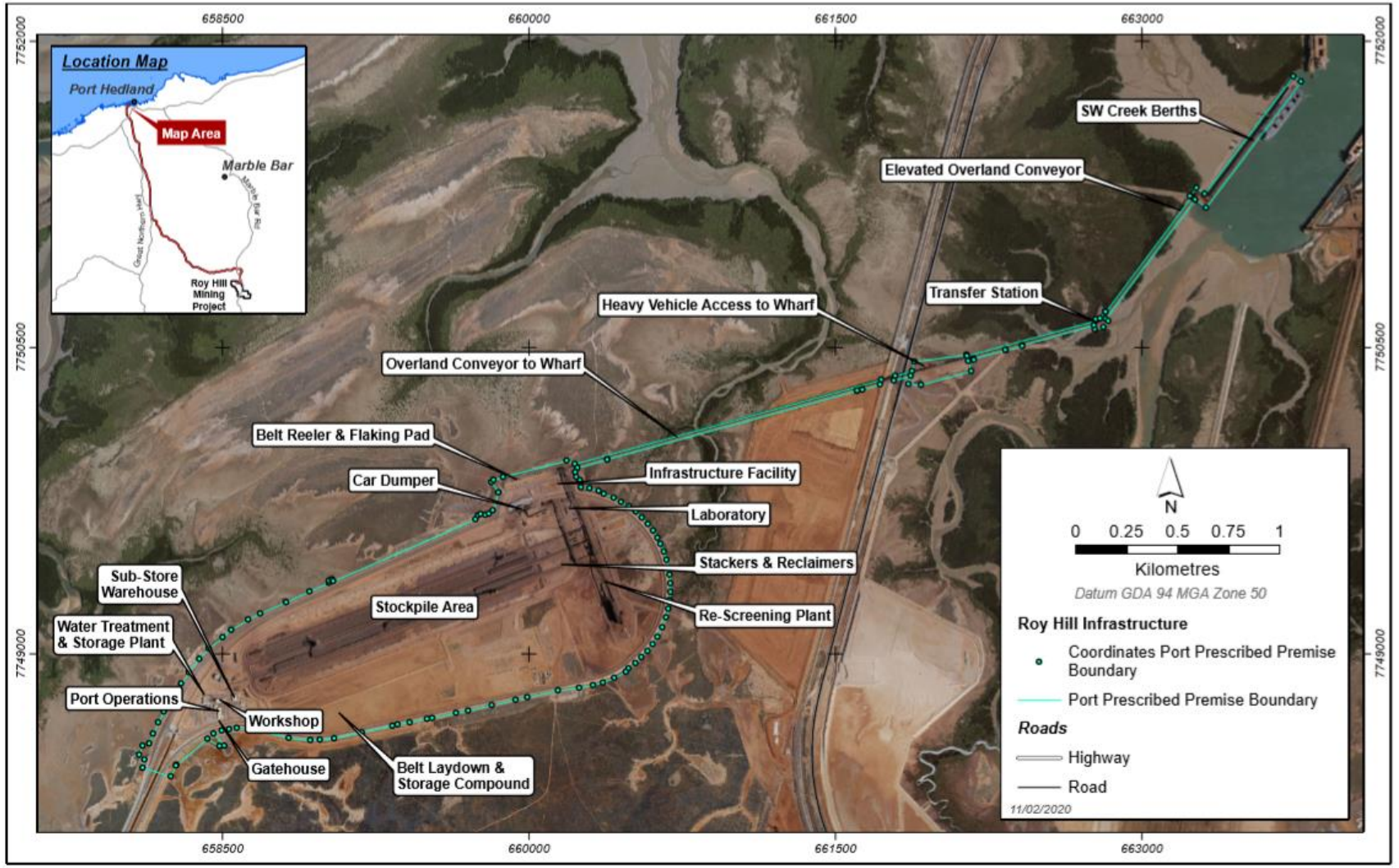

Figure 1: Premises map with premises boundary shown in green

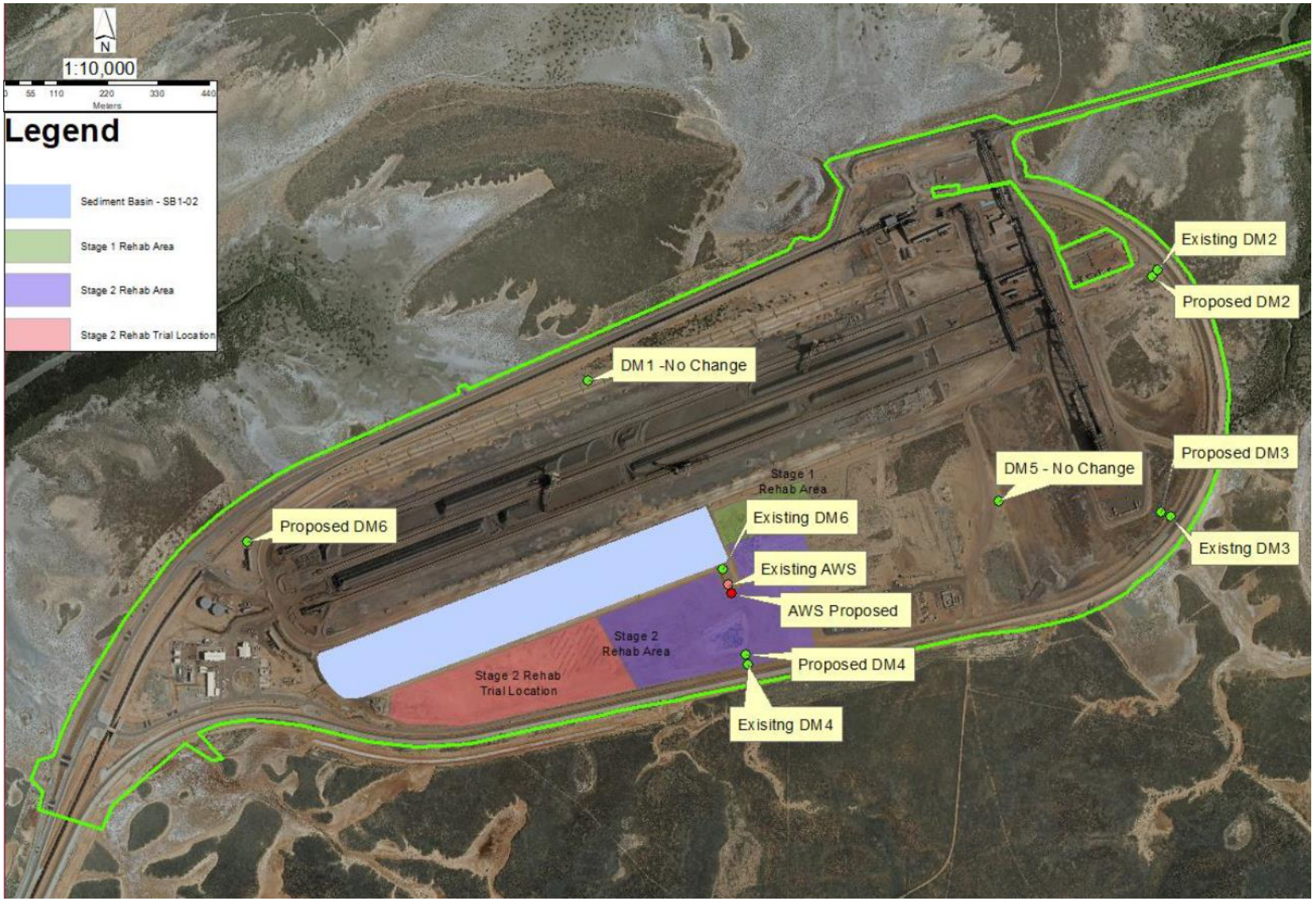

Figure 2: Existing and indicative proposed location of dust monitors and weather station

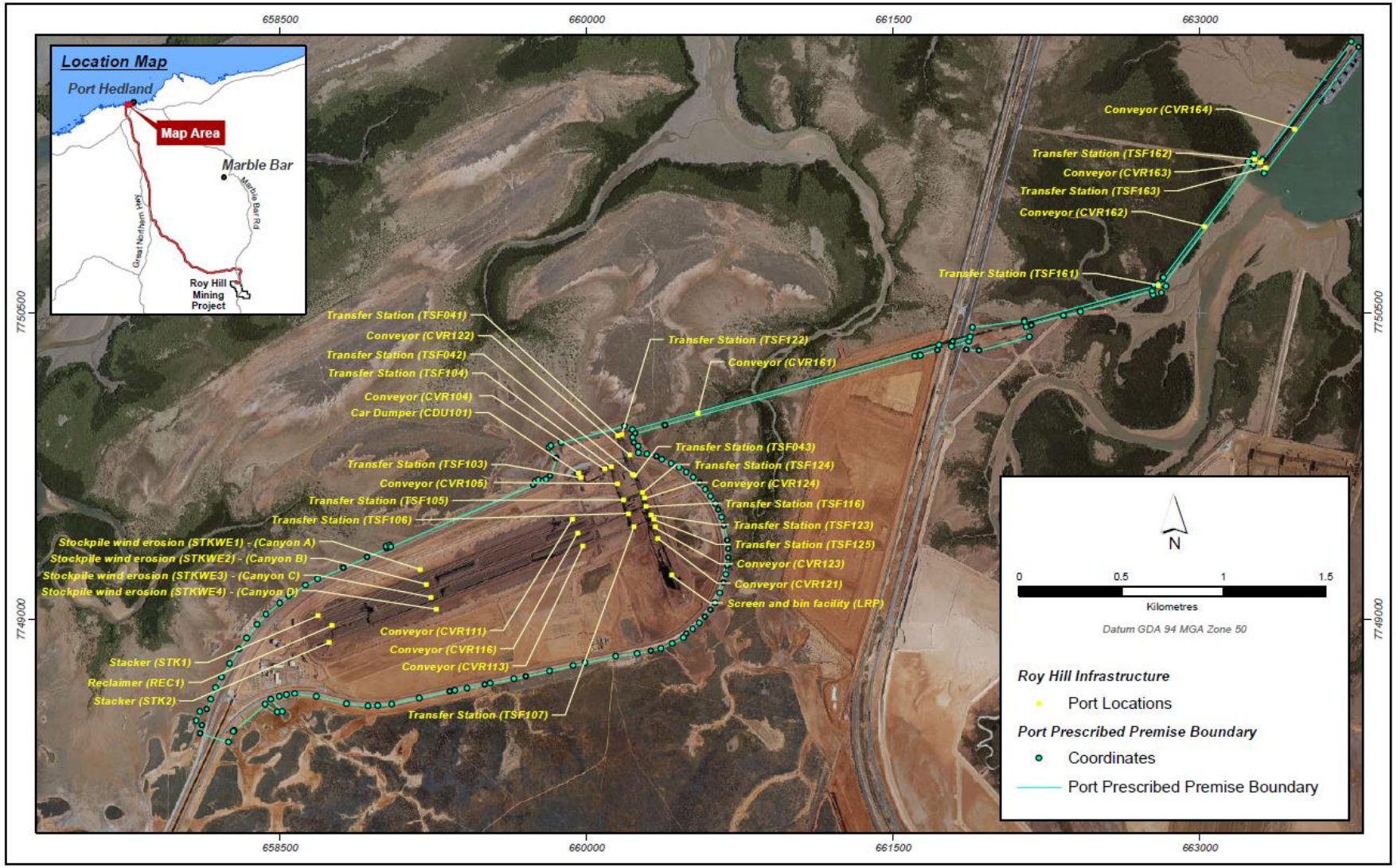

Figure 3: Stockyard area and overland conveyor layout

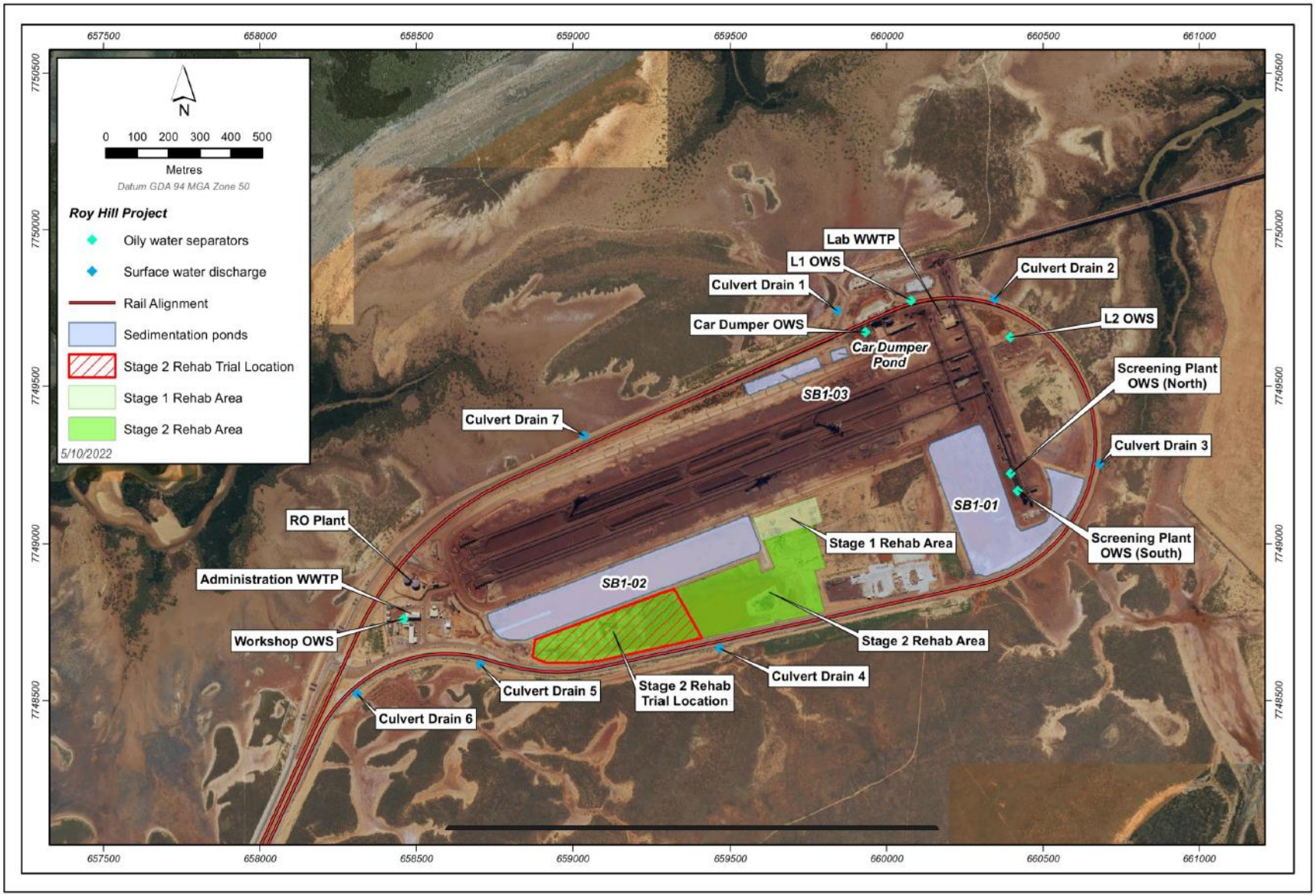

Figure 4: Areas for surface binding treatment and revegetation trials

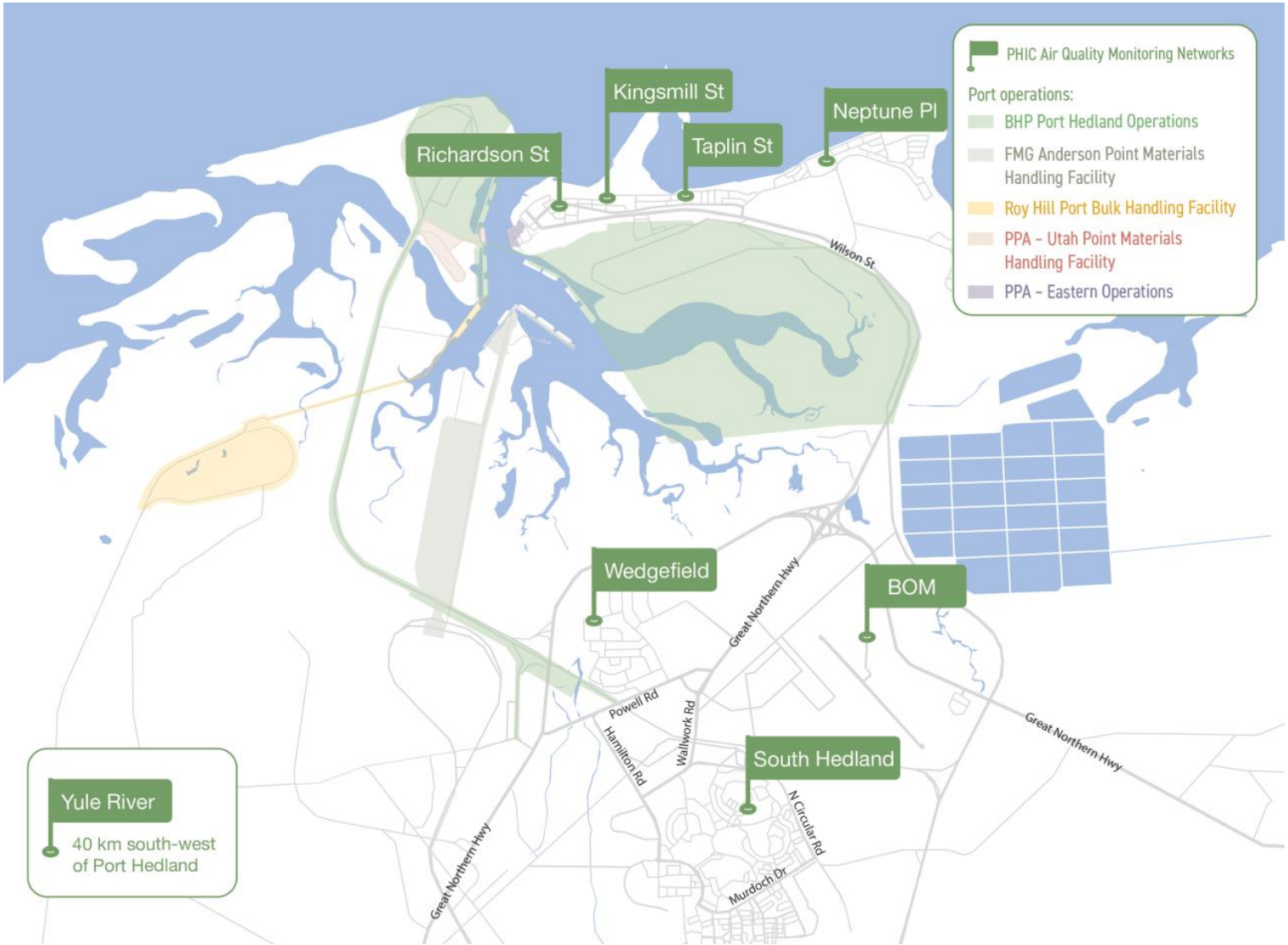

Figure 5: Ambient monitoring network

Figure 6: Car dumper sedimentation ponds

Figure 7 - Dead ore canyon locations

Schedule 2: General Description

At the time of assessment, the following activities and operations were considered in the determination of the risk and related Conditions for the Premises.

The Prescribed Activities are listed in Table 9.

Table 9: Prescribed Activities

Prescribed Activity	Premises production or design capacity
Category 5 – Processing or beneficiation of metallic or non-metallic ore: Premises on which — (a) metallic or non-metallic ore is crushed, ground, milled or otherwise processed; or (b) tailings from metallic or non-metallic ore are reprocessed; or tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	38 million tonnes per annual period
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 70 million tonnes per annual period, in accordance with Condition 2.

Infrastructure and equipment associated with Primary Activities

The following infrastructure and equipment are situated on the Premises:

Table 10: Infrastructure and equipment

	Infrastructure	Plan reference
1.	Raised rail loop	Figure 2: Rail Alignment
2.	Car Dumper	Figure 2: CDU101
3.	Stockyard including up to 14 stockpiles, 2 live stockyard canyons (Canyon A and B) and 2 dead stockyard canyons (Canyon C and D).	Figure 3: STKWE1, STKWE2, STKWE3, STKWE4
4.	Rail mounted stackers	Figure 3: STK1, STK2
5.	Reclaimer	Figure 3: REC1
6.	Rescreening plant and bin facility	Figure 3: LRP
7.	Conveyor system	Figure 3: CVR104, CVR105, CVR111, CVR113, CVR116, CVR121, CVR122, CVR123, CVR124, CVR161, CVR162, CVR163, CVR164
8.	Transfer stations	Figure 3: TSF041, TSF042, TSF043, TSF104, TSF103, TSF105, TSF106, TSF107, TSF122, TSF123, TSF124, TSF125, TSF161, TSF162, TSF163, TSF164
9.	Ship loader	Figure 1: SW Creek Berths
10.	Berths at Stanley Point Wharf	Figure 1: SW Creek Berths
11.	Sedimentation ponds 1 and 2	Figure 4: SB1-01; SB1-02

	Infrastructure	Plan reference
12.	Oily water separators	Figure 4: Car Dumper OWS, Screening Plant OWS (North & South), Workshop OWS, OWS L1 and OWS L2
13.	Car Dumper Sedimentation Ponds	Figure 6: Sedimentation Pond Area
14.	Sedimentation pond 3	Figure 4: SB1-03

Site layout

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

Bulk materials processed and loaded

The Licence Holder owns and operates an Iron Ore export operation at Boodarie and Stanley Point. Materials are received by train and unloaded using a car dumper system and transferred to stockpiles using conveyors and stackers. A reclaimer delivers ore to the screening facility prior to transfer via an overland conveyor to the wharf where ship loaders load bulk ore carriers at the berths at Stanley Point.

Iron ore is also outloaded from the premises via reclaiming ore form dead ore canyons using front end loaders. This material is loaded onto Ultra Quad Configuration Road Trains for export via the Pilbara Ports Authority Utah port facility.

Schedule 3: Infrastructure and equipment

Table 11: Infrastructure Controls Table

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation details**	**Reference to map**
	Dust control infrastructure			
1.	Stackers	Water sprays fitted to the conveyor boom of the stackers	Sprays operated when stacking Iron Ore lump stockpiles in accordance with Condition 10.	Figure 3: STK1 and STK2
2.	Reclaimer	Water sprays fitted to the reclaimer wheel bucket	Sprays operated when reclaiming Iron Ore lump stockpiles in accordance with Condition 10.	Figure 3: REC1
3.	Stockyard	Water cannons adjacent to stockpiles	Water cannons activated by Condition 23 and operated as required following identification of visible dust from stockpiles or Management trigger criteria are met under conditions specified in Column 2 of Table 5, in accordance with Condition 10. Water cannons operated on Dead Ore Stockpiles prior to reclaiming. Up to 5Mtpa of ore is authorised to be outloaded via front end loaders to Ultra Quad Configuration Road Trains from Dead Ore Stockpiles as depicted in Figure 7.	Figure 3: STKWE1, STKWE2, STKWE3, STKWE4 Figure 7: Dead Ore Stockpiles.
4.	Car dumper	In-loading Iron Ore from trains and onto conveyors	Partially enclosed within a negative pressure shed. Baghouse collector operated during in-load to remove dust.	Figure 2: CDU101
5.	Rescreening Plant	Removal of fines from lump ore using vibrating feeders and screens	Baghouse operated during Iron Ore rescreening to remove dust. Fitted with dust covers when operating.	Figure 3: Screen and bin facility (LRP)
6.	Conveyors	Transport of ore from the car dumper to the stockyard and then to the ship loading facility	Elevated overland conveyors 161 and 162 (approximately 8.5m) are covered to reduce exposure to winds. Fitted with belt scrapers on return belts at transfer stations and at the head end of the stackers and shiploading boom conveyor. Conveyor belt wash stations operated	Figure 3: CVR104, CVR105, CVR111, CVR113, CVR116, CVR121, CVR122, CVR123, CVR124, CVR161, CVR162, CVR163, CVR164

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation details**	**Reference to map**
			whenever Iron Ore is transported to reduce carry-back in accordance with Condition 10.	
7.	Transfer stations	Transport of ore from one conveyor to another	Fully enclosed with seals on chutes and inspection doors. Water sprays fitted to the transfer chute exit and operated as required following identification of visible dust from transfer stations and in accordance with Condition 10.	Figure 3: TSF041, TSF042, TSF043, TSF104, TSF103, TSF105, TSF106, TSF107, TSF122, TSF123, TSF124, TSF125, TSF161, TSF162, TSF163, TSF164
8.	Ship loading	Transfer of ore from stockpiles to the vessel via surge bins	Ore is transported to the ship via surge bins to reduce inconsistencies in flow at the ship loader. Head chute deflector plate must be in place during ship loading.	Figure 3: SW Creek Berths
9.	Unsealed roads and trafficable areas	Watercarts and dust suppressants	Use of watercarts on all unsealed roads and/or maintenance of dust suppressant chemicals (e.g. hydro-mulch) on all unsealed roads and trafficable areas. Operation of watercarts on all surfaces where mobile reclaiming equipment operates prior to reclaiming Dead Ore Stockpiles, including the loading of ore onto road trains. Use of chemical dust suppressants on unsealed sections of road within the premises utilised by road trains for 5Mtpa bulking off premises activities.	Not shown
10.	Boundary monitoring equipment	Dust monitoring stations	Operated and maintained in accordance with manufacturer's specifications.	Figure 2: DM1, DM2, DM3, DM4, DM5 and DM6
	Stormwater and wash down water control infrastructure			
11.	Sedimentation pond 1 (SB1-01)	Sedimentation ponds	Wash water with <15mg/L TRH and stormwater runoff within the stockyard is directed to sedimentation pond 1. Wash water from conveyor belt wash stations is discharged to sedimentation pond 1. A 300 mm freeboard is maintained at all times, unless during a 6-hour, 10-	Figure 4: SB1-01, SB1-02 and SB1-03

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation details**	**Reference to map**
			year rain event. Overflow from SB1-01 sedimentation ponds' spillways discharges to land via one way culvert discharge points (Culvert Drain 3) Sediment pond cleaned out regularly and as required to avoid build-up of dried sediment.	
12.	Sedimentation ponds 2 (SB1-02)		Non-hydrocarbon contaminated washwater and stormwater runoff within the stockyard is directed to sedimentation ponds. A 300 mm freeboard is maintained at all times, unless during a 6-hour, 10-year rain event. Overflow from SB1-02 sedimentation ponds' spillways discharges to land via one way culvert discharge points (Culvert Drain 5) Overflow from SB1-03 sedimentation ponds' spillways discharges to land via one way discharge points (Culvert Drain 7) Wash water from conveyor belt wash stations is discharged to sedimentation ponds SB1-02 and SB1-03 with sediment cleaned out regularly and as required to avoid build-up of dried sediment.	
13.	Sedimentation pond 3 (SB1-03)			
14.	Car Dumper Sedimentation Ponds and Car Dumper Vault		Washwater from the car dumper vault must be directed to the sedimentation ponds prior to discharge via Culvert 7. All hydrocarbon spills in the car dumper vault to be contained and recovered prior to continuing washdown. Sediment within ponds to be periodically removed to maintain storage capacity and allow sediment to settle prior to discharge.	Figure: 6 Car Dumper Vault Sedimentation Pond Area
15.	Car dumper sump and OWS	Containment bund (permeability less than 10^{-9} metres/second) which is	Catchment areas for Grippers and Indexers of car dumper facility graded to drain into a containment bund. Wastewater within the containment bund pumped directly to a sump and	Figure 4: Car Dumper OWS Figure 6: OWS; Grippers and

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation details**	**Reference to map**
		designed to minimise flood water entry. Concrete sump (permeability less than 10^{-9} metres/second) OWS	OWS for treatment. Discharge to the drainage network following treatment. Subsequent discharge to land immediately outside the rail loop embankment via one way culvert discharge points (Culvert Drain 1 – Culvert Drain 7).	Indexers Area (2)
16.	Screening plant sump and OWS	Containment bund (permeability less than 10^{-9} metres/second) which is designed to minimise flood water entry. Lined sump (permeability less than 10^{-9} metres/second) Two OWS	Area of screening plant graded to drain into containment bunds. Wastewater within containment bunds will be fed directly to sumps and OWS for treatment. Discharge to the drainage network following treatment. Subsequent discharge to land immediately outside the rail loop embankment via one way culverts (Culvert Drain 1 – Culvert Drain 7).	Figure 4: Screening Plant OWS (North & South)
17.	Workshop and maintenance area OWS	OWS	Wastewater will be directed to and treated via an OWS. Discharge to the drainage network following treatment. Subsequent discharge to land immediately outside the rail loop embankment via seven one way culverts (Culvert Drain 1 – Culvert Drain 7).	Figure 4: Workshop OWS
18.	OWS L1 and L2	OWS	Stormwater, vehicle and equipment wash water will be directed to and treated via OWS. L1 to discharge to drainage network following treatment. Subsequent discharge to land via Culvert drain 1. L2 to discharge to drainage network following treatment. Subsequent discharge to land via Culvert drain 2.	Figure 4: OWS L1 and L2

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation details**	**Reference to map**
19.	Transfer station drive in sumps	Drive in sumps	Wash down water or slurry runoff from the transfer stations is contained within sumps or concrete curbed areas. Hydrocarbon spills from transfer stations will be cleaned using spill kits. Potentially contaminated water will be directed through an OWS or removed from site by a licensed contractor. Discharge to land via one way culvert discharge points (Culvert Drain 1 – Culvert Drain 7) following treatment.	Not shown
20.	Wharf	Concrete flooring	For every shift (twice daily) and during ship loading, inspections are undertaken to identify spills and verify spill clean-up. Spills are cleaned up and removed within 72 hours following identification through inspections. Ongoing regular clean-up undertaken on the wharf using a street sweeper/sucker truck, to remove any spills and built up material. During maintenance shutdown and wash down of ship loading equipment on the wharf, a street sweeper/sucker truck must be present at all times to immediately collect all wash down water to prevent it entering the marine environment.	Figure 1: SW Creek Berths
	Spill control infrastructure			
21.	Conveyor belts	Conveyor belts have 15% surge capacity	Adequate distance maintained between Iron Ore and belt edge.	Figure 3: CVR104, CVR105, CVR111, CVR113, CVR116, CVR121, CVR122, CVR123, CVR124, CVR161, CVR162, CVR163, CVR164
22.	Spill kits	Equipped with hydrocarbon spill kit equipment.	Equipment deployed in the event of hydrocarbon spills and leaks.	N/A

Schedule 4: Quarterly reporting

The following schedule outlines the boundary monitoring investigation and reporting requirements of the Licence.

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).

Contents of report

All quarterly monitoring reports must contain:

- all validated boundary air quality and meteorological monitoring data for the quarterly period as recorded at those Monitoring Stations specified in Table 4 of Condition 20 and provided in the format specified in Schedule 7;
- the following details for the period(s) in which Reportable Events occurred, as specified in Condition 21 or where throughput amounts exceed Condition 4 amounts:
    - date(s), time and duration of event;
    - the air quality monitoring data, in tabulated form and presented in time series graphical plots of PM_{10}, recorded at those monitoring stations, listed in Column 1 of Table 4 as specified in Condition 20, in the format specified in Schedule 7;
    - a comparison of ambient air quality monitoring data with meteorological data, including wind speed and direction, as measured at the meteorological monitoring stations depicted in Figure 2;
    - time series graphical plots for the monitoring stations referred to above on the day/s on which the event occurred;
    - the Moisture Content for all Iron Ore out-loaded from the Premises against the corresponding DEM Level for the period of the event and the following 48 hours;
    - total amount (in wet tonnes) and type of Iron Ore product in-loaded and out-loaded at the Premises for the 24-hour periods before, during and after the Reportable Event;
    - 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; and
    - dust control infrastructure availability during the 24 hour period during and leading up to the Reportable Event.

The following additional content is only required for events relating to the exceedance to Reportable Event criteria listed in Condition 21:

- determination of the Premises' contribution to the exceedance through a review of:
    - PM_{10} concentrations at the Yule and BoM background monitors;

- comparison of boundary dust levels against dust levels recorded at the ambient monitoring locations depicted in Figure 5;
- review of boundary dust data to identify premises dust sources that may have contributed to the exceedance;
- review of the dust scatter plots to determine dust concentrations recorded as coming from the offsite sector;
- all corrective and mitigation measures undertaken during the Reportable Event;
- all corrective and mitigation measures proposed for the avoidance of future Reportable Events.

- where there is a Reportable Event at Taplin Street, the report must contain the ambient air quality monitoring data, in tabulated form and presented in time series graphical plots of PM_{10}, recorded at those monitoring stations, listed in Column 1 of Table 4 as specified in Condition 20 20for the 24 hour periods before and during the Reportable Event.

Schedule 5: Dust Control Validation Report

The following schedule specifies the design parameters for validating dust control effectiveness and contents for the Dust Control Validation Report required by Condition 18.

The experimental design of the validation study should consider but not be limited to the following aspects:

- Monitoring setup appropriate for the type of emission source and pollutant type, for example linear (conveyor), averaging period, meteorological monitoring.
- Controlled conditions to observe effects of control status (on/off).
- Data evaluation to include dust data, materials data (eg ore type and moisture levels), meteorological data and operational data (equipment and infrastructure status).
- Evaluation of uncertainty and significance of results using a statistically sound approach.

Contents of Report

The report must contain at a minimum, but not be limited to:

Dust control equipment monitoring

- A detailed description of the methodology used to validate the effectiveness of the belt wash stations on conveyor CVR121 and additional conveyor with belt wash station install in accordance with Condition 13. For example, at the time of measurements provide:
    - frequency of measurements;
    - product characteristics (namely moisture and dust extinction moisture);
    - meteorological data at each measurement;
    - boundary data; and
    - other upwind sources and the controls in place/not in place for these sources.
- All data recorded during the validation study, including those not used to estimate site specific emission rates.
- All data that are used to estimate site specific emission rates and control efficiencies, plus supporting information. This includes:
    - instrument data (e.g. DustTrak, boundary monitor, wind sensor);
    - parameter estimates (e.g. sigma Z) where measured data not available; and
    - instrument details (e.g. DustTrak model, wind sensor model, etc); and
    - justification for the removal specific data points in emissions estimates.
- Process flow data in emission spreadsheets and flowcharts of the process. The emission data should be presented in a way that identifies: each product, activity, hourly ore moisture data and when each product does or does not meet DEM.
- All spreadsheets related to the emission validation process including all input data in computer readable and editable format (e.g. TSG files, dustiness index for each ore type, hourly tonnage data, estimated hourly moisture content for each ore type and controls etc.) for all emission sources tested both with and without the belt wash station operating and in the format specified in Schedule 7.
- Information on the statistical tests or other procedures adopted to ensure that the data used in final emissions estimations are robust, or that the uncertainty is properly understood and accounted for.

- A comparison of measured emissions reductions when dust controls are operating against modelled rates of emissions reduction provided in the Application.
- Include an assessment of statistical significance and uncertainty, for example by using methods of the U.S Environmental Protection (2007) *Agency Emissions Factor Uncertainty Assessment*.

Schedule 6: Dust Monitoring Report

The following schedule specifies the contents for the Dust Monitoring Report required by Condition 26.

Contents of Report

The report must contain at a minimum, but not be limited to the following information for the purpose analysing how dust concentrations at the Premises are reflected by the boundary monitoring network. Specifically to assess the:

- effects of dust control interventions;
- extent to which the network is capturing dust emissions from premises' sources;
- connection between elevated dust levels at boundary monitors and at the ambient monitoring locations depicted in Figure 5 of Schedule 1; and
- difference between background dust and premises' emissions,

the Licence Holder must provide:

- a review and analysis of available PM_{10} data from the monitoring stations:
    - DM1, DM2, DM3, DM4, DM5 and DM6 as depicted in Figure 2 of Schedule 1,

  for a period of at least 12 months prior to, and 12 months after installation of the infrastructure specified in Table 3;
- an analysis of PM_{10} monitoring station data with associated weather data and spatial data (location of monitor and locations of dust sources);
- an analysis of PM_{10} monitoring station data in comparison with concentrations at ambient monitoring locations depicted in Figure 5 where there are:
    - exceedances of the Air Guideline Value at Richardson St, Kingsmill St and Taplin St monitors; and
    - Reportable Events as specified in Condition 21,

  using suitable timeframes to account for plume travel from the Premises to the sensitive receptors;
- meaningful graphs, such as line graphs, polar plots and radial graphs to visualise the analysis findings;
- all validated, computer readable and editable data used for the report are to be provided as part of the report with the monitoring data meeting the specified format outlined in Schedule 7.

Schedule 7: 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. An example is given below. Variations on this format may be acceptable to DWER following discussions and approval from the DWER Air Quality Branch

```
SITE NAME:XXXXXXXXXX
column description
ddmmyyyy HHMM,x,x,x,…
ddmmyyyy HHMM,x,x,x,…
↓
↓
↓
ddmmyyyy HHMM,x,x,x,…
```

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 timestamp 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.

The following additional data is also required for each transect:

- Upwind concentration
- Windspeed during traverse
- Ambient temperature
- Sigma theta (maybe not)

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 µg/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 Air Quality Branch to use alternative units.

The proponent 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.