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	19/09/2016
Prescribed Premises	Category 58: Bulk material loading or unloading; and Category 5: Processing or beneficiation of metallic or non-metallic ore.
Premises	Roy Hill Port Bulk Handling Facility and Screening Plant Part of Lot 370 on Deposited Plan 35619 Certificate of Title Volume LR3118 Folio 753 Reserve 50892: Lots 1199, 1200 and 1301 on Deposited Plan 70562 Part of Lot 372 on Deposited Plan 35620 Certificate of Title Volume LR3118 Folio 755 within coordinates as defined in Schedule 1
Date of Amendment	7 April 2020

This Licence is granted to the Licence Holder, subject to the following conditions, on 7 April 2020, by:

Christine Hass

Digitally signed by Christine Hass
Date: 2020.04.07 09:41:03 +08'00'

Christine Hass
Manager Licensing, Resource Industries
Regulatory Services
an officer delegated under section 20 of the Environmental Protection Act 1986 (WA)

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 means the version of the standard, guideline, or code of practice in force at the time of granting of this Licence and includes any amendments to the standard, guideline or code of practice which may occur from time to time during the course of the Licence;

(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 Table

Column 1	**Column 2**
Emission Type	**Exclusions/Limitations/Requirements**
Specified Emissions	
Fugitive dust	Subject to Conditions 2 to 26
Discharge wash water and stormwater from the Premises	Subject to: • Conditions 8 and 27. • Discharge only from the Culvert Drains 1-7 depicted in Figure 2 of Schedule 1.
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

Column 1	Column 2
Emission Type	**Exclusions/Limitations/Requirements**
	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 must load no more than a maximum total amount of 60,000,000 tonnes of iron ore per Annual Period.

3. In the event that more than 240,000 wet tonnes of iron ore is 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

4. 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.

5. The Licence Holder must not re-stockpile a Static Stockpile for the purpose of avoiding requirements of Condition 4.

6. 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.

7. The Licence Holder must undertake Moisture Content monitoring of 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	Continuous monitoring for every in-load accepted at the Premises	ISO3087:2011; or ATS5621-2012; or alternative method approved by the CEO.
Moisture Content	Moisture Analyser located at the Overland Conveyor Transfer Station, depicted in Figure 3 of Schedule 1 (out-load circuit)	Averaged for each ship load	Continuous monitoring during out-loading at shiploader	ISO3087:2011; or ATS5621-2012; or alternative method approved by the CEO.

Infrastructure and equipment

8. The Licence Holder must ensure that the infrastructure and equipment named and described in column 1 and column 2 of Table 10 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 10 in Schedule 3.

9. 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.

10. 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 10 of Schedule 3.

11. 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.

Dust monitoring and management

Boundary air quality monitoring

12. The Licence Holder must undertake air quality boundary 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 3.

Table 3: Boundary air quality monitoring

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

Monitoring and management response

13. 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 4 exceed the corresponding management trigger criteria and Reportable Event criteria specified in Columns 2 and 3 of Table 4, when monitored in accordance with Condition 12.

Table 4: Dust management during dust events

Column 1	Column 2	Column 3
Monitoring location	**Management trigger criteria**	**Reportable Event Criteria**
DM2, DM3, DM4 and/or DM5	≥300 $\mu g/m^3$ PM_{10} (rolling 1 hour average) when wind direction is between 215 and 250° for three or more ten minute periods during the hour, as measured at the Port AWS. Unless where, BOM or Yule River monitoring stations[1] have recorded ≥100 $\mu g/m^3$ PM_{10} (rolling 1 hour average) within 3 hours prior to the trigger event.	120 $\mu g/m^3$ PM_{10} (rolling 24-hour average) when wind is direction is between 215° and 250° for 12 or more hours (cumulative) over the rolling 24-hour averaging period.
DM3 and/or DM4	≥300 $\mu g/m^3$ PM_{10} (rolling 1 hour average) when wind direction is averaged between 295 and 325° for three or more ten minute periods during the hour, as measured at the Port AWS. Unless where, BOM or Yule River monitoring stations[1] have recorded ≥100 $\mu g/m^3$ PM_{10} (rolling 1 hour average)	120 $\mu g/m^3$ 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.

	within 3 hours prior to the trigger event.	
Taplin Street[1]	≥100 µg/m^3 PM_{10} (rolling 1 hour average) when wind direction is between 230 and 250° for three or more ten minute periods during the hour, 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.	N/A

14. Immediately upon being notified of management trigger criteria and/or Reportable Event criteria specified in Condition 13 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.

15. In the event that no visible dust can be identified within 20 minutes of the management trigger criteria and/or Reportable Event 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.

16. The Licence Holder must continue actions specified in Conditions 14 and 15 for the duration of management trigger criteria and/or Reportable Event criteria being exceeded.

17. The Licence Holder must obtain monitoring data:

(a) at the location specified in Column 1;

(b) for the parameter specified in Column 2;

(c) for the averaging period specified in Column 4;

(d) for the frequency specified in Column 5; and

(e) in accordance with the method specified in Column 6,

specified in Table 5.

Table 5: Ambient air quality monitoring

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Location	**Parameter**	**Reportable Event Criteria[2]**	**Averaging Period**	**Frequency**	**Method**
Taplin Street[1]	Particles as PM_{10} ($\mu g/m^3$)	70 $\mu g/m^3$	24 hour average (measured from midnight to midnight)	N/A[1]	AS3580.9.11
		N/A	Annual average		

Note 1: Taplin Street: Provision of this data to the Licence Holder is via the Port Hedland Industries Council, of which Roy Hill is a member.
Note 2: Licence Holder requirements for Reportable Event Criteria are specified in Condition 15 and Schedule 4.

Reportable Events

18. 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 Conditions 13 and 17) is exceeded.

Improvement requirements

19. 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:

(a) Stage 1 Trial Location depicted in Figure 5;

(b) revegetation trial locations and access roads within the Stage 2 Trial Location depicted in Figure 5; and

(c) sediment ponds depicted in Figure 2.

20. Chemical surface binding treatment of the Port Loop Stage 2 Area, as depicted in Figure 5 and excluding the areas specified in Condition 19(b), must be commenced within two months of the issue of this amendment.

21. 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.

22. Within two months of the issue of this amendment, the Licence Holder must submit to the CEO a revised Revegetation Plan for the Stage 1 Trial Location and Stage 2 Trial Location, as depicted in Figure 5 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.

23. In the event that the trialled Revegetation Plan described in Condition 22 is not successful, a revised Revegetation Plan must be submitted within three months prior to commencement of the next rehabilitation program.

24. The Licence Holder must cease all topsoil application and scarification in the Stage 1 Trial Location and Stage 2 Trial Location areas, as depicted in Figure 5 of Schedule 1, where average wind directions are between 180º and 300º for three or more ten minute periods during the hour.

Wash water and stormwater monitoring

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

Table 6: 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; Car Dumper OWS; Screening Plant North OWS; and Screening Plant South OWS, shown in map, Schedule 1	Quarterly, unless there is no discharge from the OWS during the quarter.	15mg/L	Grab sample	AS5667.10:1998

Record keeping

26. The Licence Holder must maintain accurate and auditable records in relation to:

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

(b) monitoring data required by Conditions 7, 12, 17 and 27 of this Licence;

(c) the maintenance of infrastructure required to ensure that it is kept in good working order in accordance with Condition 8 of this Licence;

(d) a log of management responses during trigger events specified in Condition 13;

(e) quarterly investigations into Reportable Events reported in accordance with Conditions 3, 13, 17 and Schedule 4 of this Licence;

(f) the application of surface binding treatments in accordance with Conditions 19 and 20;

(g) a log of surface binding treatment inspections in accordance with Condition 21;

(h) inspections undertaken at the wharf;

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

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

(k) complaints received under Condition 27 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.

27. 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.

28. The Licence Holder must submit to the CEO no later than 30 September 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:

1. Condition 7 for Moisture Content and DEM level of iron ore received to, and out-loaded from the Premises;
2. Condition 12 for ambient air quality monitoring at DM1 to DM6 and meteorological monitoring at Met Station, depicted in Schedule 1, Figure 2, in the format specified in Schedule 5;
3. Condition 17 for ambient air quality monitoring at Taplin Street including a comparison of monitoring results against the interim guideline as specified in Column 4 of Table 5; and
4. Condition 25 for wash water and stormwater monitoring at each OWS as specified in Table 6.

29. 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:

Anniversary Date means 30 June of each year.

Annual Period means a 12 month period commencing from 1 July until 30 June in the following year.

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

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 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.

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:

(e) 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

(f) 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.

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 10 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.

ISO3087:2011 means the International Standardization Organization standard ISO3087:2011 *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:

$$\boldsymbol{w = \frac{m_1 - m_2}{m_1} \times 100}$$

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.

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 iron ore stockpile that has been stacked and not reclaimed for a period of six weeks ore more.

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.

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

Schedule 1: Coordinates and maps

Table 7: 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

Point_ID	Easting	Northing	Point_ID	Easting	Northing	Point_ID	Easting	Northing
40	658109	7748547	88	660416	7749761	136	658497	7748622
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

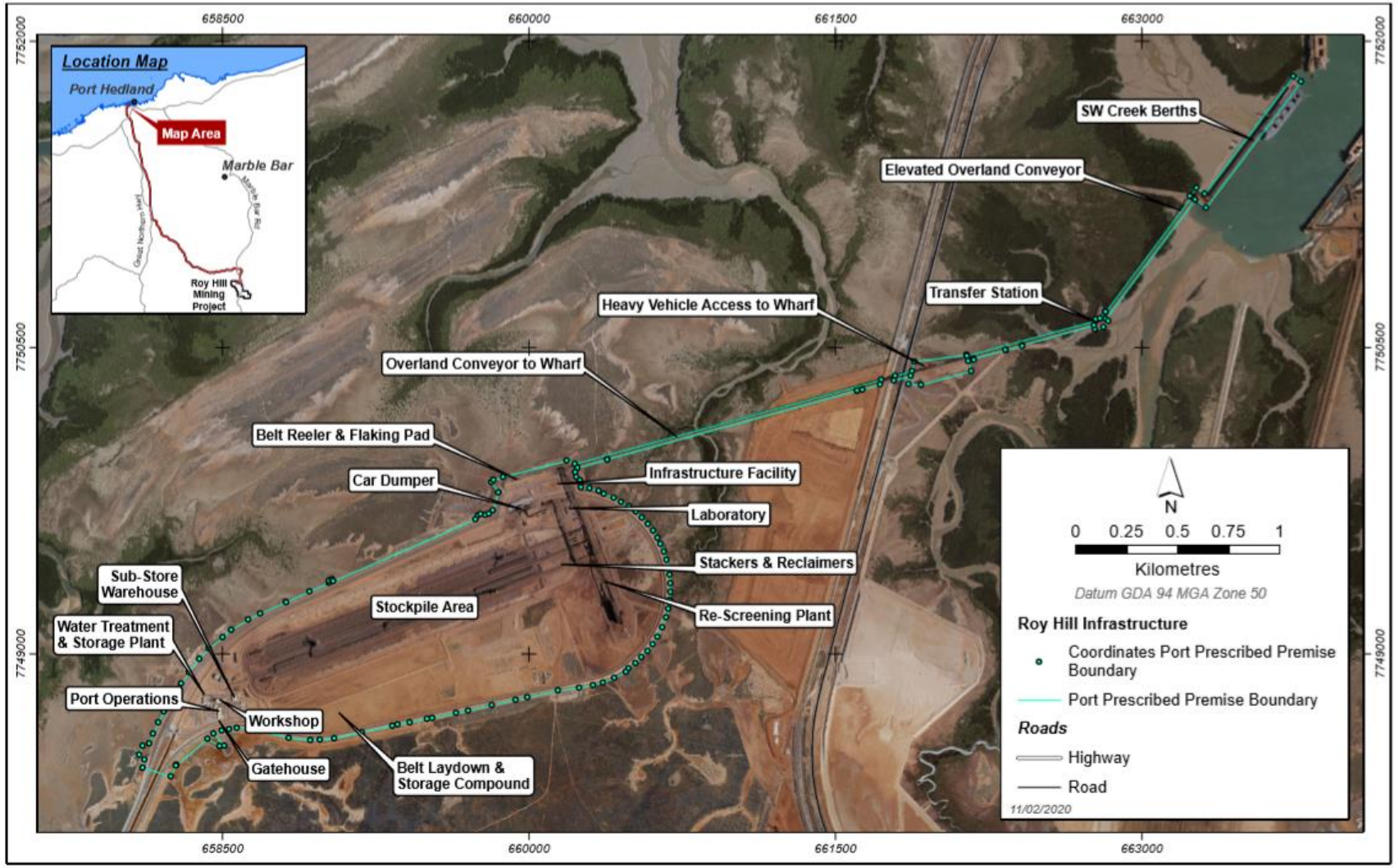

Figure 1: Premises map with premises boundary shown in green

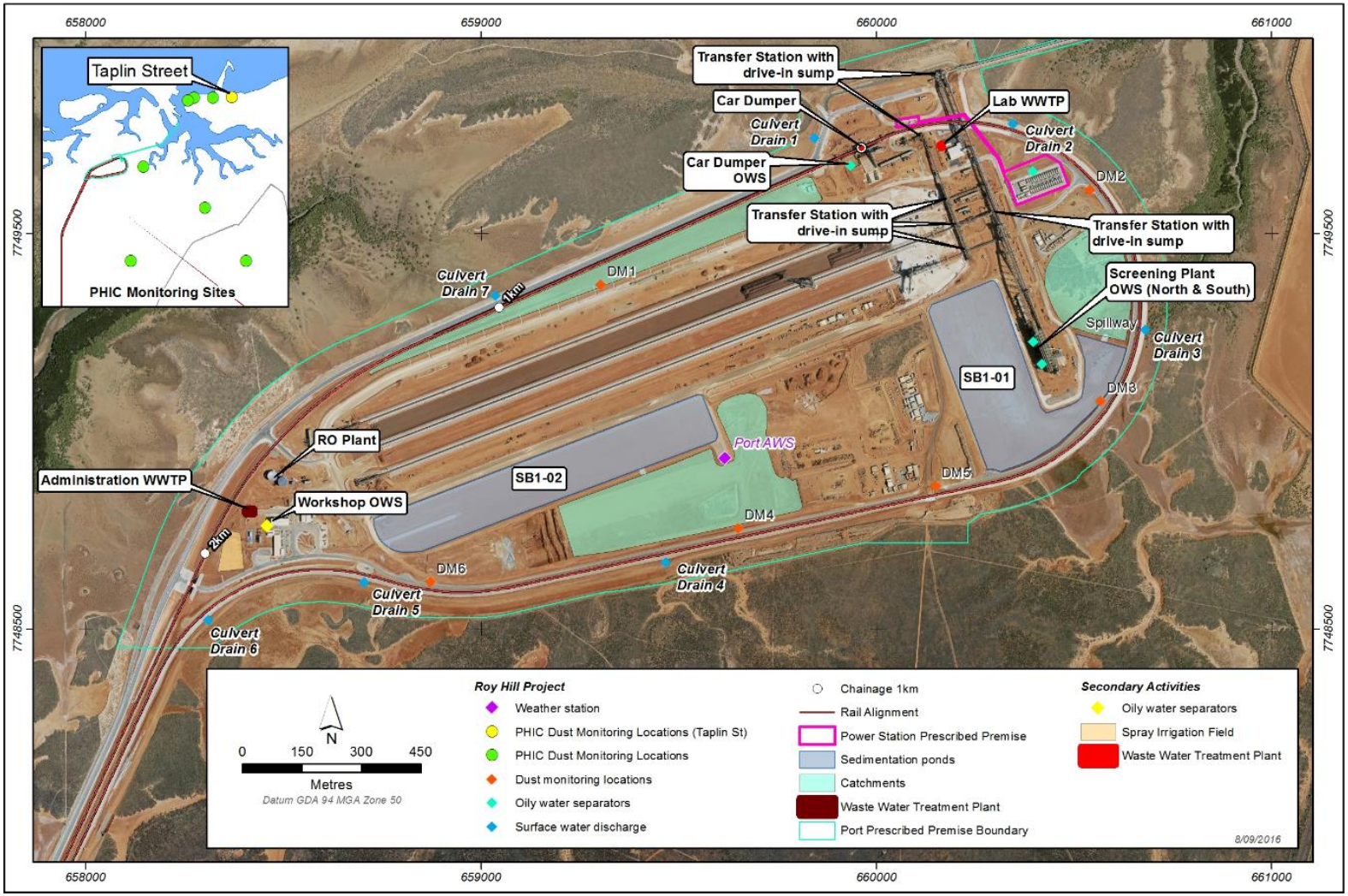

Figure 2: Stockyard area layout and boundary monitor locations

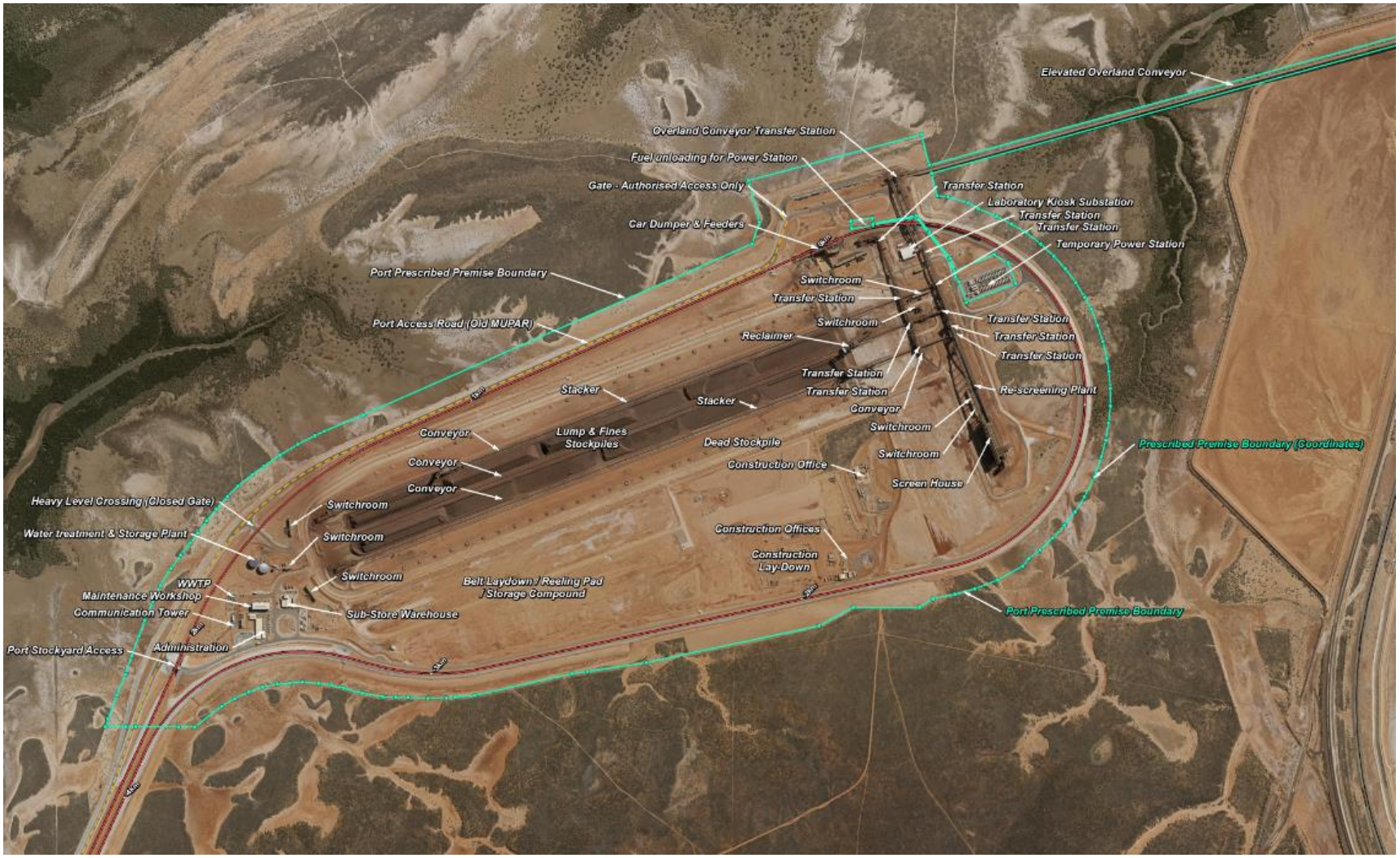

Figure 3: Stockyard area and overland conveyor layout

Figure 4: Overland conveyor and ship loading area layout

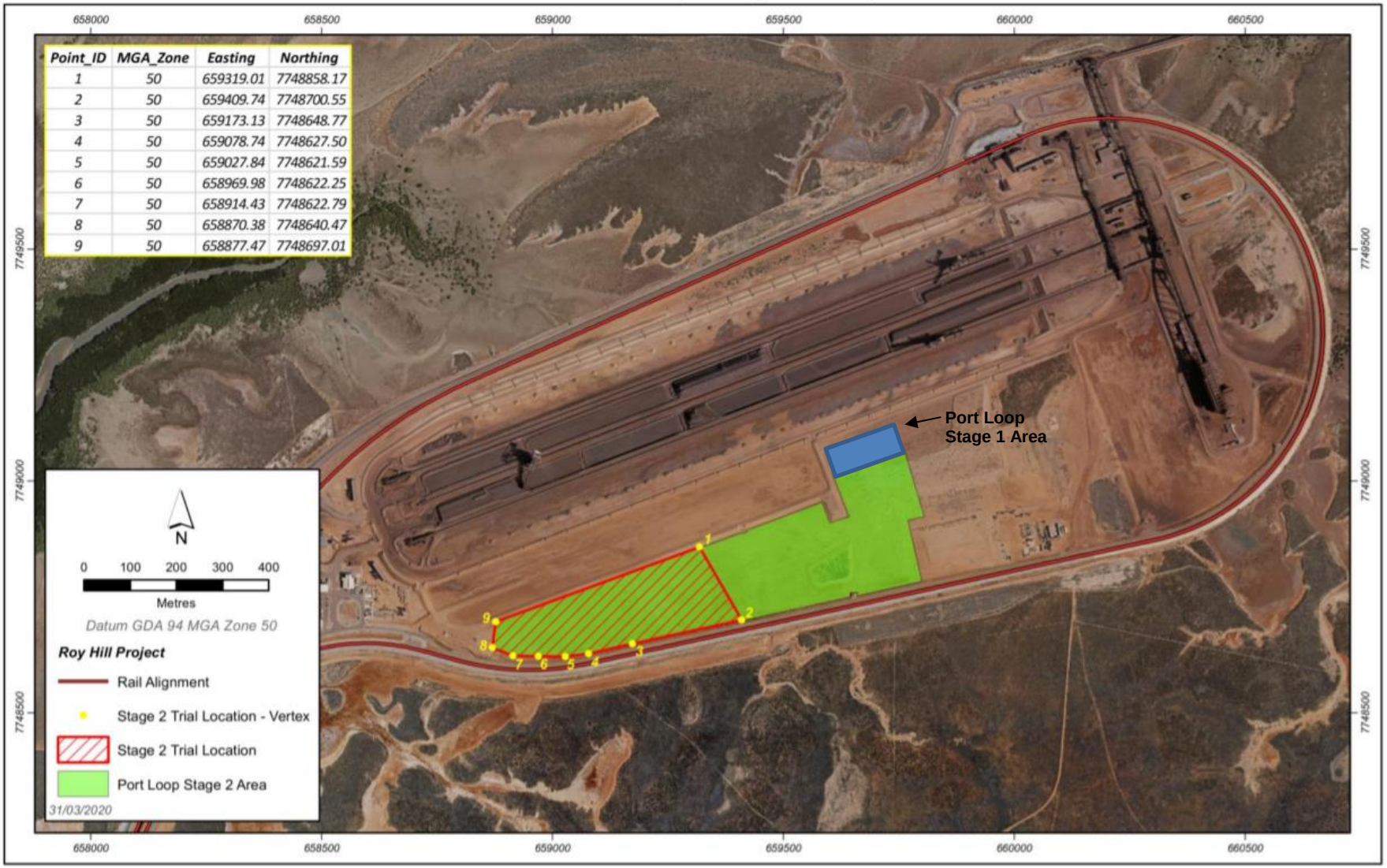

Figure 5: Areas for surface binding treatment and revegetation trials

Schedule 2: Primary Activities

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 Primary Activities are listed in Table 8.

Table 8: Primary Activities

Primary 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.	33 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.	60 million tonnes per annual period

Infrastructure and equipment associated with Primary Activities

The following infrastructure and equipment are situated on the Premises:

Table 9: Infrastructure and equipment

	Infrastructure	Plan reference
1.	Raised rail loop	Figure 2: Rail Alignment
2.	Car Dumper	Figure 2: Car Dumper
3.	Stockyard including up to 14 stockpiles of 230 000 tonnes capacity	Figure 3: N/A
4.	Rail mounted stackers	Figure 3: Stacker
5.	Reclaimer	Figure 3: Reclaimer
6.	Rescreening plant	Figure 3: Re-screening Plant; Screen House
7.	Conveyor system	Figure 3 and Figure 4: Conveyor
8.	Transfer stations	Figure 3: Transfer Station
9.	Ship loader	Figure 4: Ship Loader
10.	Berths at Stanley Point Wharf	Figure 4: South West Creek Berth
11.	Stormwater sedimentation ponds	Figure 2: SB1-01; SB1-02

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.

Schedule 3: Infrastructure and equipment

Table 10: 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 during iron ore stacking.	Figure 3: Stacker
2.	Reclaimer	Water sprays fitted to the reclaimer wheel bucket	Sprays operated during iron ore reclaiming.	Figure 3: Reclaimer
3.	Stockyard	Water cannons adjacent to stockpiles	Water cannons activated by Condition 13 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 4.	Not shown
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: Car dumper
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: Re-screening Plant Screen House
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. Belt wash stations on overland conveyors 161, 162 and 164 are operated as required to reduce carry-back of iron ore.	Figure 3 and Figure 4: Conveyor
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.	Figures 3 and 4: Transfer Station

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation details**	**Reference to map**
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 4: Ship Loader
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.	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 ponds 1 and 2 (SB1—1 and SB1-02)	Sedimentation ponds	Stormwater runoff within the stockyard is directed to sedimentation ponds SB1-01 and SB1-02. Overflow from sedimentation ponds' spillways discharges to land via one way culvert discharge points (Culvert Drain 1 – Culvert Drain 7.	Figure 2: SB1-01 and SB1-02
12.	Car dumper sump and OWS	Containment bund (permeability less than 10^{-9} metres/second) which is designed to minimise flood water entry. Concrete sump (permeability less than 10^{-9} metres/second) OWS	Area of car dumper facility graded to drain into a containment bund. Wastewater within the containment bund pumped directly to a sump and 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).	Figure 2: Car Dumper OWS
13.	Screening plant sump and OWS	Containment bund (permeability less than 10^{-9} metres/second) which is designed to	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	Figure 2: Screening Plant OWS (North & South)

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation details**	**Reference to map**
		minimise flood water entry. Lined sump (permeability less than 10^{-9} metres/second) Two OWS	embankment via one way culverts (Culvert Drain 1 – Culvert Drain 7).	
14.	Workshop and maintenance area oily water separator	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 2: Workshop OWS
15.	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.	Figure 2: Transfer station drive in sumps
16.	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 4: South West Creek Berth
	Spill control infrastructure			

	Column 1	Column 2	Column 3	Column 4
	Site Infrastructure	**Description**	**Operation details**	**Reference to map**
17.	Conveyor belts	Conveyor belts have 15% surge capacity	Adequate distance maintained between iron ore and belt edge.	Schedule 1
18.	Spill kits	Equipped with hydrocarbon spill kit equipment.	Equipment deployed in the event of hydrocarbon spills and leaks.	N/A

Schedule 4: Quarterly event reporting

The following schedule outlines the investigation and reporting requirements triggered as a result where throughput amounts exceed Condition 3 amounts or where dust monitoring boundary and/or ambient Reportable Event Criteria listed in Conditions 13 and 14 are being exceeded.

Reporting frequency

Reports for the above mentioned events 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 in relation to all Reportable Events and Condition 3 throughput exceedances:

- date(s), time and duration of event;
- 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 3 as specified in Condition 12;
- a comparison of ambient air quality monitoring data with meteorological data, including wind speed and direction, as measured at the meteorological monitoring station depicted in Figure 2;
- 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; 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 Conditions 13 and 17:

- determination of the Premises' contribution to the exceedance through a review of:
    - PM_{10} concentrations at the Yule and BoM background monitors;
    - PM_{10} concentrations at any PHIC network monitor located downwind of Premises activities during the Reportable Event;
    - PM_{10} concentrations at any upwind boundary monitors during the Reportable Event;
    - 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 3 as specified in Condition 12 for the 24 hour periods before and during the Reportable Event.

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:

```
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 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 µg/m3)
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.