Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L9396/2023/1
Licence holder	IB Operations Pty Ltd
ACN	165 513 557
Registered business address	Level 2, Hyatt Centre, 87 Adelaide Terrace East Perth WA 6004
DWER file number	DER2023/000409
Duration	09/11/2023 to 08/11/2043
Date of issue	09/11/2023
Premises details	Iron Bridge Concentrate Handling Facility Lot 6 on Reserve 50528 Utah Road, Boodarie, Port Hedland WA 6722 As defined by the premises maps attached to the issued licence

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production 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 (c) tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam.	22 Million tonnes per annum
Assessed activities directly related to the above categories	
Electric power generation: 8 MW (below threshold prescribed under Schedule 1 of the Environmental Protection Regulations 1987 for Category 52)	

This licence is granted to the licence holder, subject to the attached conditions, on 09 November 2023, by:

Michael Greenslade Digitally signed by Michael Greenslade
Date: 2023.11.09 16:03:34 +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
2/09/2020	W6394/2020/1	Works approval granted.
13/04/2022	W6394/2020/1	Premises boundary of Works approval amended to accommodate construction of the Concentrate Diversion Pond (CDP) in a different location and changes in the location of the associated pipelines.
05/12/2022	W6394/2020/1	Premises boundary of Works approval amended to include the relocation of the proposed magnetite concentrate reclaim handling pad.
09/11/2023	L9396/2023/1	Licence granted.

Interpretation

In this licence:

(a) the words ‘including’, ‘includes’ and ‘include’ in conditions mean “including but not limited to”, and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this licence:

  (i) if dated, refers to that particular version; and

  (ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

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

Licence conditions

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

Infrastructure and equipment

1. The licence holder must ensure that the site infrastructure and equipment listed in Table 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.

Table 1: Infrastructure and equipment requirements

	Infrastructure	Operational requirements	Infrastructure location
1.	Conveyor	(a) Maintenance of belt wash station on conveyor CV301 to reduce the carry back of ore stuck to the underside of the return conveyor. (b) Routine removal of sediment from the belt wash station sump. (c) Routine removal spilt ore from underneath the conveyor.	CV301, as depicted in Figure 2 of Schedule 1
2.	Transfer station	Maintenance of an enclosed skirting system.	TS301, as depicted in Figure 2 of Schedule 1
3.	Sample station	Moisture analyser maintained and moisture analysis of material undertaken for the purpose of accurately determining the moisture content of ore prior to leaving the premises.	SS301, as depicted in Figure 2 of Schedule 1
4.	Concentrate dewatering infrastructure	Maintenance of noise absorbing baffles and plant exhaust mufflers for the purpose of ensuring noise is minimised during operations.	As depicted in Figure 2 of Schedule 1
5.	Concentrate Diversion Pond	(a) Storage capacity must be equivalent or more to magnetite slurry pipeline. (b) Visual monitoring must be undertaken during discharge to ensure containment is not breached. (c) Water collection points to deliver water to process water overflow storage and from there to CHF process water tank for return to mine. (d) Perimeter drainage and CDP overflow caused by extreme weather event will report to the sediment pond.	As depicted in Figure 1 of Schedule 1
6.	Reclaim handling area	(a) Any hydrocarbon spills will be cleaned up and disposed of appropriately. (b) Water trucks will be used as required to reduce dust lift off cleared surfaces.	As depicted in Figure 1 of Schedule 1

	Infrastructure	Operational requirements	Infrastructure location
7.	Sediment sumps and bunding	Earthen sumps and bunds maintained to prevent stormwater from discharging directly offsite during operations.	Where needed to achieve design requirements
8.	BAM	Maintained to continuously measure particles as PM_{10} (µg/m^3) over 10 minute averaging periods.	Monitoring location 'CHF', as depicted in Figure 3 of Schedule 1.

Emissions and discharges

Water discharges

2. The licence holder must not allow the Concentrate Diversion Pond to discharge water from the concentrate dewatering infrastructure, specified in condition 1, into the environment.

Dust emissions

3. The licence holder must operate the belt wash station and spray bars at conveyor CV301 when handling iron ore at an average monthly availability rate of at least 90%.

4. The licence holder must:

(a) apply and maintain dust suppressant chemicals to long-term open and cleared areas;

(b) apply and maintain water and/or dust suppressant chemicals to unsealed internal roads;

(c) limit vehicle speeds to 40 km/h; and

for the purpose of preventing dust generation.

Monitoring

Air quality and meteorological monitoring

5. The licence holder must obtain air quality and meteorological monitoring data:

(a) in real time for monitoring specified in rows 1 to 4, 6 and 7 (for unvalidated data);

(b) from the monitoring stations specified in column 1 and shown in Figures 3 of Schedule 1,

(c) for the parameters specified in column 2,

(d) calculated as an average over the period specified in column 3,

(e) at the frequency specified in column 4,

(f) in accordance with the method specified in column 5,

of Table 2.

Table 2: Air quality and meteorological monitoring

Row	Column 1	Column 2	Column 3	Column 4	Column 5
	Monitoring Station	**Parameter**	**Averaging Period**	**Frequency**	**Method**
1.	SW Corner SE Corner TUL SW as depicted in Figure 3 of Schedule 1[1].	Particles as PM_{10} (µg/m^3)	10 minutes	Continuous	AS3580.1.1 AS3580.9.11
2.	TUL SE as depicted in Figure 3 of Schedule 1[1].	Particles as PM_{10} (µg/m^3)	10 minutes	Continuous	AS3580.1.1
3.	CHF as depicted in Figure 3 of Schedule 1.	Particles as PM_{10} (µg/m^3)	10 minutes	Continuous	AS3580.1.1 AS3580.9.11
4.	Richardson St, Kingsmill St, Taplin St, Neptune Pl, BOM, Wedgefield, South Hedland, Yule as depicted in Figure 4 of Schedule 1[2].	Particles as PM_{10} (µg/m^3)	Hourly	Continuous	AS3580.9.11
5.	TUL Met Station as depicted in Figure 3 of Schedule 1.	Rainfall (mm)	10 minutes	Continuous	AS3580.14
6.		Wind direction (°)			
7.		Wind speed (m/s)			

Note 1: Provision of this data to the licence holder is via the Fortescue Metals Group Ltd under Licence L8194/2007/3.
Note 2: Provision of this data to the Licence Holder is from the Port Hedland Ambient Air Quality Network, managed by DWER.

6. The licence holder must obtain validated air quality and meteorological monitoring data specified in condition 5 within 45 days of data collection.

Dust monitoring and management response

7. Immediately upon being notified of management trigger criteria and/or Reportable Event criteria specified in Table 3 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 inspection conducted in accordance with part (a) of this condition, immediately control visible dust emissions by:

(i) applying additional dust suppression; and/or

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

Table 3: Dust management trigger criteria

Monitoring location	Management trigger criteria	Reportable Event criteria
SE Corner	300 µg/m^3 PM_{10} (rolling 1 hour average) recorded at monitoring location SE Corner, as depicted in Figure 3 of Schedule 1, when wind direction directions are between 201º and 231º for three or more ten-minute periods during the hour, as measured at the TUL Met Station. Unless where, BOM or Yule River monitoring stations[1] have recorded ≥100 µg/m3 PM_{10} (rolling 1 hour average) within 3 hours prior to the trigger event.	≥120 µg/m3 PM10 (rolling 24-hour average) recorded at monitoring location SE Corner when averaged wind is direction is between 201 and 231° inclusive, for any 12 or more hours (cumulative) over the rolling 24-hour averaging period.
CHF	300 µg/m^3 PM_{10} (rolling 1 hour average) recorded at monitoring location CHF, as depicted in Figure 3 of Schedule 1, when wind direction directions are between 305º and 340º for three or more ten-minute periods during the hour, as measured at the TUL Met Station. Unless where, BOM or Yule River monitoring stations[1] have recorded ≥100 µg/m3 PM_{10} (rolling 1 hour average) within 3 hours prior to the trigger event.	≥120 µg/m3 PM10 (rolling 24-hour average) recorded at monitoring location CHF when averaged wind is direction is between 305 and 340° inclusive, for any 12 or more hours (cumulative) over the rolling 24-hour averaging period.
Taplin Street[1]	≥100 µg/m^3 PM_{10} (rolling 1 hour average) when averaged wind direction is between wind arc 201 and 231° inclusive for any three or more ten minute periods during the rolling 1-hour period, as measured at the TUL Met Station. Unless where, BOM or Yule River monitoring stations1 have recorded ≥100 µg/m3 PM10 (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: Provision of this data to the Licence Holder is from the Port Hedland Ambient Air Quality Network, managed by DWER.

8. The licence holder must continue actions specified in condition 7 for the duration of management trigger criteria and/or Reportable Event criteria being exceeded.

9. The licence holder must investigate, undertake actions and report in accordance with Schedule 4, for Reportable Events criteria as specified though condition 7.

Ore moisture content monitoring

10. 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 4.

Table 4: Moisture content monitoring

Column 1	Column 2	Column 3	Column 4	Column 5
Parameter	**Location**	**Averaging Period**	**Frequency**	**Method**
Moisture content	Moisture analyser at sample station SS301, as depicted in Figure 2 of Schedule 1	Averaged for every 10,000 tonnes of material	Continuous	Analyser calibrated at least once during environmental commissioning and at least every six months thereafter against: ISO3087; or AS5621; or alternative method approved by the CEO.

11. The licence holder must ensure that 100% of ore conveyed from the Iron Bridge Concentrate Handling Facility 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.

Records and reporting

12. The licence holder must record the following information in relation to complaints received by the licence holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:

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

(b) the time and date of the complaint;

(c) the complete details of the complaint and any other concerns or other issues raised; and

(d) the complete details and dates of any action taken by the licence holder to investigate or respond to any complaint.

13. The licence holder must:

(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and

(b) prepare and submit to the CEO by no later than 1 April annually an Annual Audit Compliance Report for the preceding annual period in the approved form.

14. The licence holder must maintain accurate and auditable books including the following records, information, reports, and data required by this licence:

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

(b) any maintenance of infrastructure that is performed in the course of complying with condition 1 of this licence;

(c) average monthly availability of controls as per condition 3 of this licence;

(d) monitoring programmes undertaken in accordance with conditions 5 and 10 of this licence; and

(e) complaints received under condition 13 of this licence.

15. The books specified under condition 14 must:

(a) be legible;

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

(c) be retained by the licence holder for the duration of the licence; and

(d) be available to be produced to an inspector or the CEO as required.

Definitions

In this licence, the terms in Table 5 have the meanings defined.

Table 5: Definitions

Term	Definition
ACN	Australian Company Number
Annual Audit Compliance Report (AACR)	means a report submitted in a format approved by the CEO (relevant guidelines and templates may be available on the Department's website).
annual period	a 12 month period commencing from 1 January until 31 December in the same year.
average monthly availability	means the average percentage availability of equipment, calculated for each calendar month by dividing the time that the equipment is operating, by the time the equipment is required to be operating. Equipment is considered 'unavailable' when it is not operating, despite being required to operate in accordance with condition 3 of this licence.
AS3580.1.1	means the Australian Standard AS3580.1.1 *Methods for sampling and analysis of ambient air - Guide to siting air monitoring equipment.*
AS3580.9.11	means the Australian Standard AS3580.9.11 *Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM_{10} beta attenuation monitors.*
AS3580.10.1	means the Australian Standard AS3580.10.1 *Methods for sampling and analysis of ambient air Method 10.1: Determination of particulate matter—Deposited matter— Gravimetric method*
AS5621	means Australian Technical Specification AS5621-2013 *Iron ores – rapid moisture determination* as amended from time to time
BAM	means beta attenuation monitor
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer of the Department. "submit to / notify the CEO" (or similar), means either: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
continuous/ continuously	means a data recovery rate of at least 90% per financial year quarter
DEM Level	means the dust extinction moisture. It is the Moisture Content of the

Term	Definition
	product at which the Dust Number is 10 derived from the Australian Standard AS4156.6-2000 or alternative standard as approved by the CEO.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
discharge	has the same meaning given to that term under the EP Act.
emission	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
ISO3087:2011	means International Standardization Organization ISO3087:2011 *Iron ores – Determination of the moisture content of a lot*
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions contained within.
licence holder	refers to the occupier of the premises, being the person specified on the front of the licence as the person to whom this licence has been granted.
moisture content	means the ratio of the mass of water in a sample to the mass of solids in the sample, expressed as a percentage. In equation form: $$w = \frac{m_1 - m_2}{m_1} \times 100$$ Where: w = moisture content of sample; m1 = initial mass, in grams, of the test portion; and m2 = mass, in grams, of the test portion after drying.
premises	refers to the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
Strong wind conditions	Means wind speeds of 14 metres per second or greater

END OF CONDITIONS

Schedule 1: Maps

Premises map

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

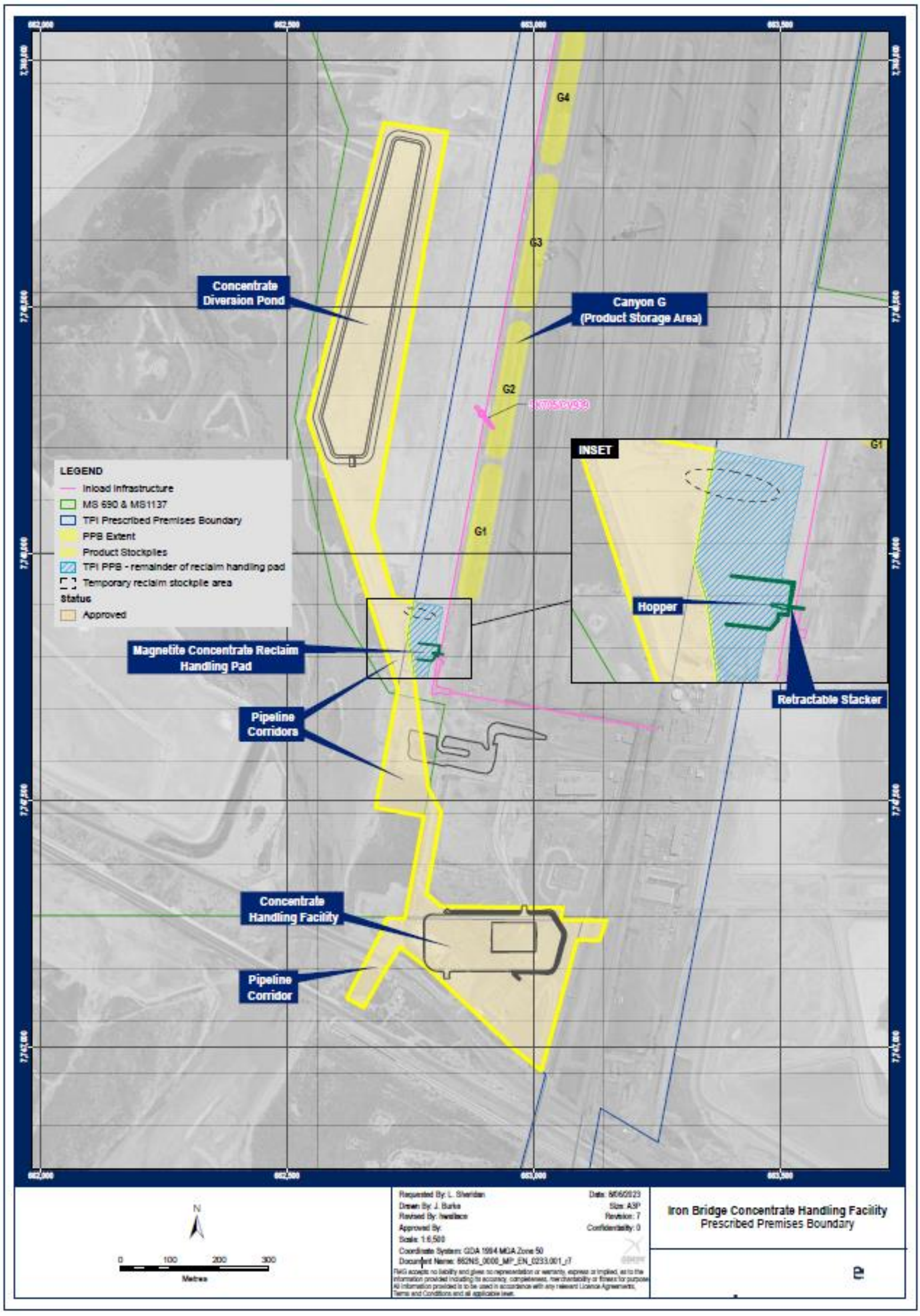

Figure 1: Premises boundary (depicted in yellow) and the boundary of the Anderson Point Materials Handling Facility boundary (depicted in dark blue)

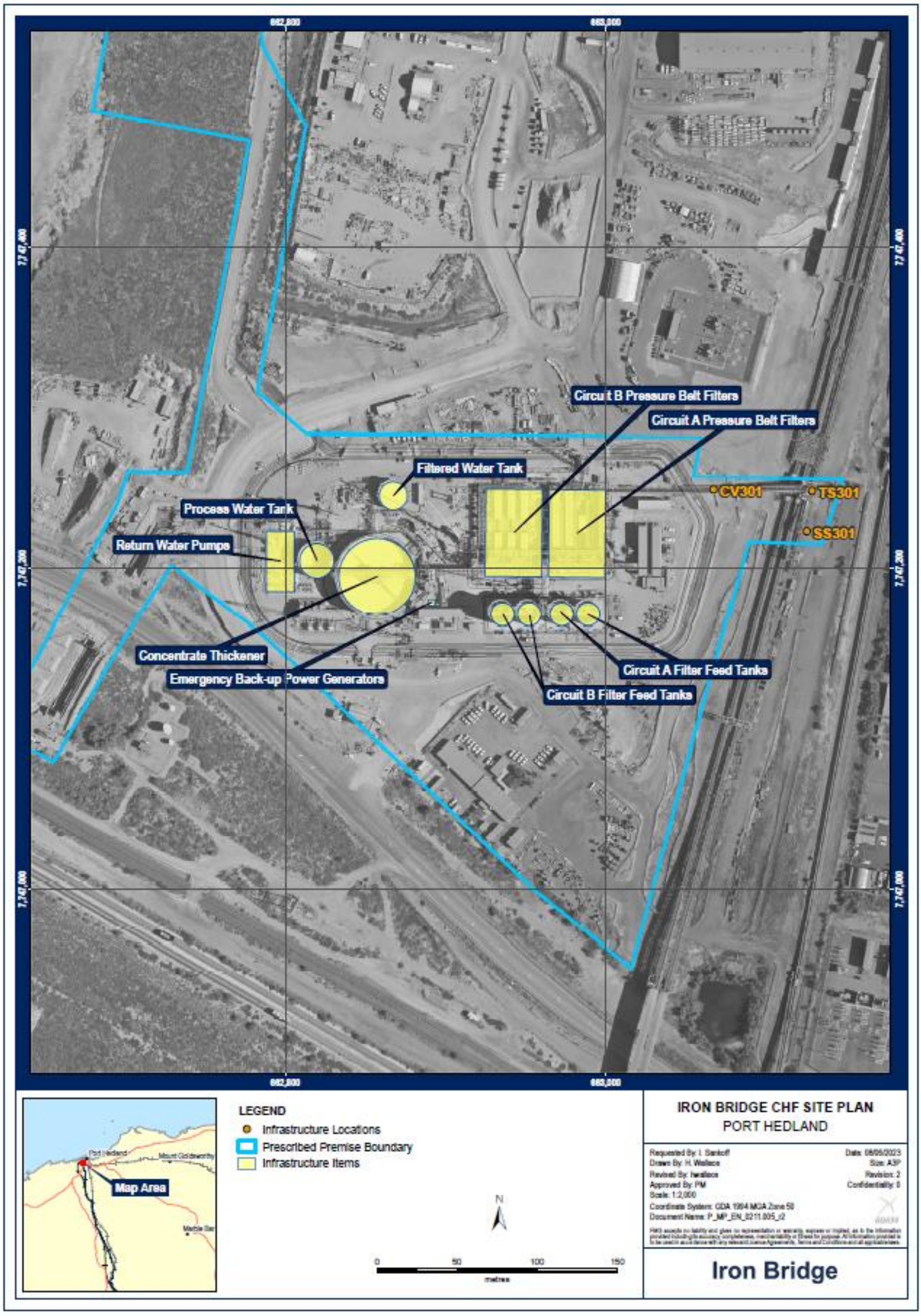

Figure 2: Infrastructure locations

Figure 3: Monitoring locations

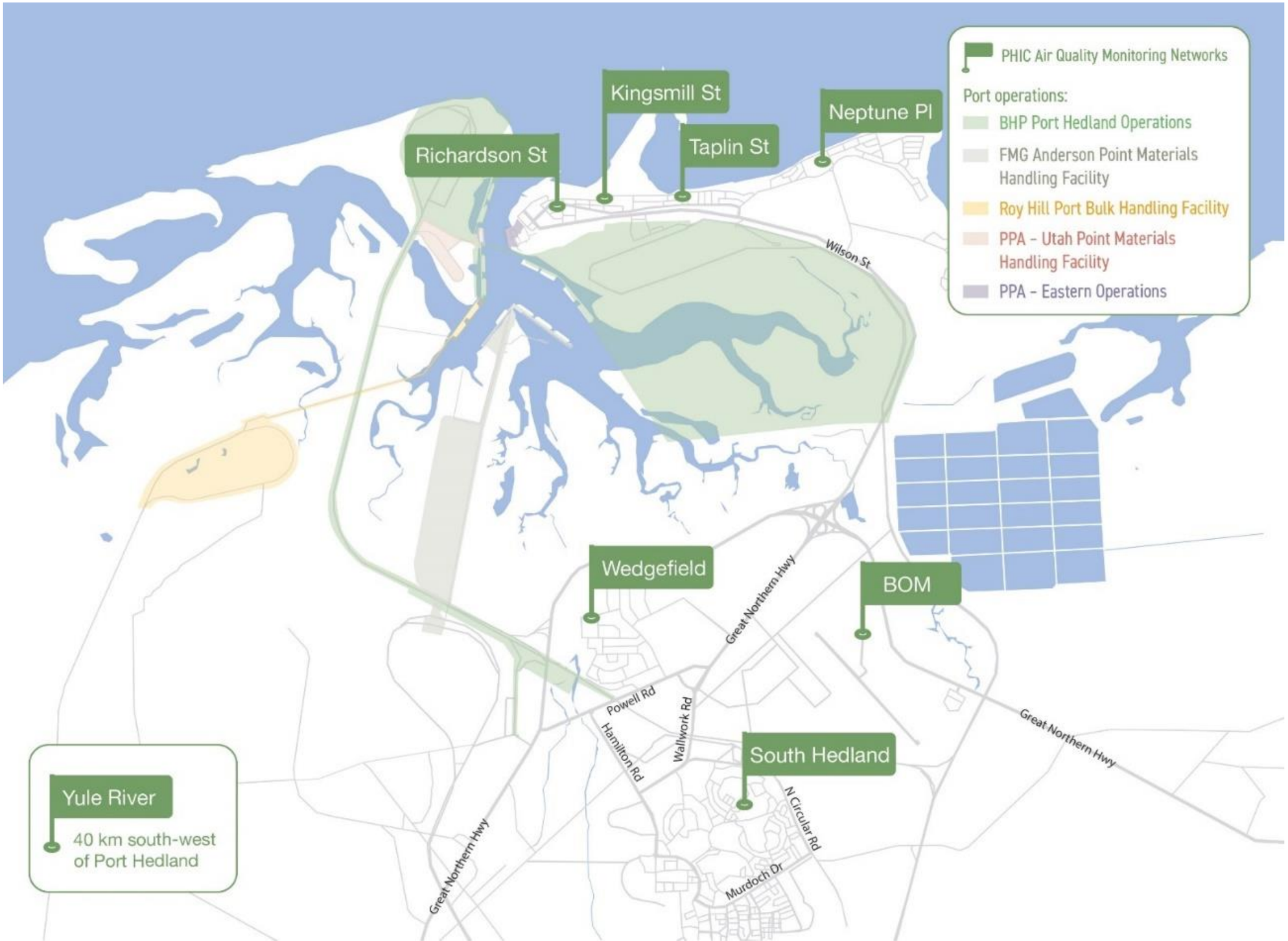

Figure 4: Ambient monitoring locations

Schedule 2: Premises boundary

The premises boundary is defined by the coordinates in Table 6.

Table 6: Premises boundary coordinates

ID	MGA Z50 East	MGA Z50 North
1	663060	7747282
2	663055	7747257
3	663054	7747257
4	663142	7747256
5	663137	7747240
6	663095	7747241
7	663087	7747209
8	663071	7747150
9	663016	7746951
10	662954	7747001
11	662786	7747159
12	662729	7747202
13	662699	7747156
14	662655	7747079
15	662621	7747098
16	662684	7747219
17	662696	7747241
18	662702	7747260
19	662739	7747260
20	662751	7747322
21	662778	7747467
22	662680	7747485
23	662725	7747726
24	662543	7748274
25	662606	7748521
26	662635	7748635
27	662697	7748873
28	662825	7748854
29	662776	7748607
30	662778	7748607
31	662673	7748053
32	662706	7747947
33	662737	7747846
34	662752	7747800
35	662786	7747525
36	662813	7747476
37	662783	7747310

ID	MGA Z50 East	MGA Z50 North
38	662813	7747284

Schedule 3: Dust 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/m^3)
wind speed	metres per second	X.X (tenth of a m/s)
wind direction	degrees from north	X.X (tenth of a degree)
sigma	degrees	X.X (tenth of a degree)
air temperature	degrees Celsius	X.X (tenth of a degree)
relative humidity	%	X.X (tenth of a %)
pressure	hectopascals	X.X (tenth of a hPa)
solar radiation	watts per square metre	X.X (tenth of a watt/m^2)

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

The Licence Holder must provide:

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

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

The quarterly monitoring report must contain:

- all raw unvalidated monitoring data, or validated data where available, in tabulated form, recorded at those monitoring stations, listed in rows 1 to 4, 6 and 7 of Table 2 as specified in condition 5, in the format specified in Schedule 3;
- the following details for the period(s) in which Reportable Events occurred, as specified in condition 7:
    - date(s), time and duration of event;
    - time series graphical plots for the monitoring stations listed in rows 1 to 4, 6 and 7 of Table 2 as specified in condition, on the day/s on which the event occurred;
    - review of meteorological data (including temperature, wind speed, rainfall and direction) as recorded at TUL Met Station at the location depicted in Figure 3 of Schedule 1;
    - a description of all dust controls implemented by site personnel as a response to visible dust or high dust levels recorded at the monitors specified in Table 2, including the time and duration of dust controls implemented with respect to peaks in dust concentrations monitored;
    - daily average and maximum 1-hourly dust levels, including the times of peaks in PM_{10} concentrations as recorded at the monitors specified in Table 2.
    - the Moisture Content for all Iron Ore out-loaded from the premises against the corresponding DEM Level for the period of the criteria being exceeded and the following 48 hours;
    - total amount (in wet tonnes) of Iron Ore product out-loaded at the premises for the 24-hour periods before, during and after the criteria being exceeded; and
    - dust control infrastructure availability during the 24 hour period during and leading up to the criteria being exceeded.