



Licence Number	L8665/2012/2
Licence Holder	BHP Billiton Iron Ore Pty Ltd
ACN	008 700 981
Registered business address	Level 31 Brookfield Place 125-137 St George's Terrace PERTH WA 6000
File Number	2012/003877-1
Duration	01/10/2021 to 30/09/2041
Date of renewal	21 September 2021
Premises details	Warrawandu Village Wastewater Treatment Plant Portion of mining lease ML244SA NEWMAN WA 6753 As defined by the coordinates in Appendix A

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 54 Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters.	700 m ³ per day

This Licence is granted to the Licence Holder, subject to the following conditions, on 21 September 2021, by:

Jane Dalin

SENIOR ENVIRONMENTAL OFFICER
INDUSTRY REGULATION

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

Licence history

Instrument log		
Instrument	Issued	Description
W4542/2009/1	17/09/2009	Works Approval issued
L8665/2012/1	27/09/2012	New Licence issued
L8665/2012/1	10/12/2015	Proponent application for amendments to pH and nutrient loading target and groundwater monitoring. Licence amendment to remove targets, add monitoring bores and update to new format.
L8665/2012/1	17/03/2020	Licence amendment to increase the disposal of Treated Wastewater to the Sprayfield from 98.6m ³ per day (annual average) to 132m ³ per day (annual average), include the size on the Sprayfield into condition 8, and add a footnote to monitoring tables 5 and 7 to allow <i>E.coli</i> to be reported as MPN where CFU/100ml is unavailable. This amended licence includes minor administrative amendments to formatting, numbering, corrections to any administrative errors, and deleted the redundant AACR form set out in schedule 2 of the previous licence and advise the Licence Holder to obtain the form from the Department's website.
L8665/2021/2	21/09/2021	Replacement licence issued

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: Containment infrastructure

Vessel or compound	Operational Requirements	Infrastructure location (Schedule 1 Maps)
2 x Facultative Ponds	Lined with 1.5mm HDPE	Facultative Pond 1,2
3 x Maturation Treatment Ponds	Lined with 1.5mm HDPE	Maturation pond 1,2,3
Evaporation/Infiltration Pond	Disposal of up to 568m ³ per day (annual average) of treated wastewater to an unlined evaporation / Infiltration Pond to evaporate or infiltrate.	Evaporation/Infiltration Pond
Sludge Drying Area	One bunded area that is lined to achieve hydraulic permeability of 1×10^{-9} m/sec or less, and returns sludge leachate to the start of the treatment process	N/A
Irrigation Sprayfield	Disposal of up to 132m ³ per day (annual average) of treated wastewater to 5ha Sprayfield to irrigate native vegetation.	Evaporation/Infiltration Pond

Operational controls

2. The Licence Holder shall immediately recover, or remove and dispose of spills of sewage, partially treated sewage and sewage sludge outside an engineered containment system.
3. The Licence Holder shall only allow waste to be accepted onto the Premises if:
 - (a) it is of a type listed in Table 2;
 - (b) the quantity accepted is below any limit listed in Table 2; and
 - (c) it meets any specification listed in Table 2.

Table 2: Waste Acceptance

Waste	Waste Code	Quantity Limit	Specification
Sewage	N/A	700 m ³ per day	Accepted through Inlet Distribution Chamber 1

4. The Licence Holder shall ensure that the wastes accepted onto the Premises are only subjected to the processes set out in Table 3 and in accordance with any process limits or requirements described in Table 3.

Table 3: Waste processing

Waste type	Process	Process Requirement
Sewage	Biological, physical and chemical treatment	Treatment of sewage waste shall not exceed the treatment capacity of 700 m ³ per day.
Sewage sludge	Storage	In accordance with the document titled "Western Australian guidelines for biosolids management" (Department of Environment and Conservation 2012) as amended from time to time.

5. The Licence Holder shall manage all wastewater treatment ponds such that:
- (a) overtopping of the ponds does not occur;
 - (b) a freeboard equal to, or greater than, 1000mm is maintained in the Facultative Treatment Ponds;
 - (c) a freeboard equal to, or greater than, 500mm is maintained in the Maturation Treatment Ponds and in the Evaporation/Infiltration Pond;
 - (d) the integrity of the containment infrastructure is maintained;
 - (e) trapped overflows are maintained on the outlet of ponds to prevent carry-over of surface floating matter; and
 - (f) vegetation and floating debris (emergent or otherwise) is prevented from encroaching onto pond surfaces or inner pond embankments.
6. The Licence Holder shall manage the irrigation of treated wastewater such that:
- (a) no irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the defined irrigation area;
 - (b) treated wastewater is evenly distributed over the irrigation area;
 - (c) no soil erosion occurs;
 - (d) irrigation does not occur on land that is waterlogged; and
 - (e) vegetation cover is maintained over the irrigation area.
7. The Licence Holder shall:
- (a) implement security measures at the site to prevent as far as is practical unauthorised access to the site;
 - (b) undertake regular inspections of all security measures and repair damage as soon as practicable; and
 - (c) ensure the entrance gates are closed and locked when the site is closed or unmanned.
8. The Licence Holder shall dispose of grit, screenings, sludge and biosolids to a licensed landfill facility.

Emissions

Emissions to land

9. The Licence Holder shall ensure that where waste is emitted to land from the emission points in Table 4 and identified on the map of emission points in Schedule 1, it is done so in accordance with the conditions of this Licence.

Table 4: Emissions to land

Emission point reference	Description	Source including abatement
Evaporation/Infiltration Pond	Infiltration from Evaporation/Infiltration Pond	Treated wastewater infiltrating from the Evaporation/ Infiltration Pond
Sprayfield Pump Station	Discharge to Sprayfield	Treated wastewater pipeline from wastewater treatment plant

Monitoring

General

10. The licence Holder shall ensure that:
- all water samples are collected and preserved in accordance with AS/NZS 5667.1;
 - all wastewater sampling is conducted in accordance with AS/NZS 5667.10;
 - all groundwater sampling is conducted in accordance with AS/NZS 5667.11;
 - all microbiological samples are collected and preserved in accordance with AS/NZS 2031; and
 - all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured, unless indicated otherwise in the relevant table.
11. The Licence Holder shall ensure that:
- quarterly monitoring is undertaken at least 45 days apart; and
 - six monthly monitoring is undertaken at least 5 months apart.
12. The Licence Holder shall ensure that the flow meters used on the Premises to comply with the conditions of this Licence are maintained and calibrated in accordance with the manufacturer's specifications.
13. The Licence Holder shall maintain the monitoring bores referred to in Table 7 of this licence to allow representative water samples to be collected.
14. Where the requirements for sampling, calibration or maintenance cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, the Licence Holder shall bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

Monitoring of emissions to land

15. The Licence Holder shall undertake the monitoring in Table 5 according to the specifications in that table.

Table 5: Monitoring of emissions to land

Emission point reference	Parameter	Units	Frequency
Distribution Chamber 6	Total Suspended Solids	mg/L	Quarterly
	Total Dissolved Solids	mg/L	
	Biochemical Oxygen Demand	mg/L	
	Total Nitrogen as N	mg/L	
	Total Phosphorus	mg/L	
	<i>E. coli</i>	cfu/100mL ²	
	pH ¹	-	

Note 1: In field non-NATA accredited analysis permitted.

Note 2: *E.coli* may be reported as MPN where cfu/100ml is not available

Monitoring of inputs and outputs

16. The Licence Holder shall undertake the monitoring in Table 6 according to the specifications in that table.

Table 6: Monitoring of inputs and outputs

Input/ Output	Monitoring Point Reference	Parameter	Units	Averaging period	Frequency
Sewage – Inlet Flow	Sewage Pump Station	Volumetric flow rate (cumulative)	m ³ per day	Monthly	Continuous
Treated wastewater discharged to the Sprayfield	Sprayfield Pump Station	Volumetric flow rate (cumulative)	m ³ per day	Monthly	Continuous
Treated wastewater discharged to the Evaporation/ Infiltration Pond	Distribution Chamber 6	Volumetric flow rate (cumulative)	m ³ per day	Monthly	Continuous

Ambient environmental quality monitoring

17. The licence Holder shall undertake the monitoring in Table 7 according to the specifications in that table.

Table 7: Monitoring of ambient groundwater quality

Monitoring point reference and location	Parameter	Units	Frequency
	Total Dissolved Solids calculated from Electrical Conductivity	mg/L	
	Biochemical Oxygen Demand	mg/L	
	Total Nitrogen as N	mg/L	
	Total Phosphorus	mg/L	
	<i>E. coli</i>	cfu/100mL ¹	

Note 1: *E.coli* may be reported as MPN where cfu/100ml is not available

Records and reporting

- 18.** All information and records required by the Licence shall:
- (a) be legible;
 - (b) if amended, be amended in such a way that the original and subsequent amendments remain legible or are capable of retrieval;
 - (c) except for records listed in 18(d) be retained for at least 6 years from the date the records were made or until the expiry of the Licence or any subsequent licence; and
 - (d) for those following records, be retained until the expiry of the Licence and any subsequent licence:
 - (i) off-site environmental effects; or
 - (ii) matters which affect the condition of the land or waters.
- 19.** 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 93 calendar days after the end of that annual period, an Annual Audit Compliance Report in the approved form.
- 20.** 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.
- 21.** 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 2 of this licence;
 - (c) monitoring programmes undertaken in accordance with conditions 15,16 and 17 of this licence; and
 - (d) complaints received under condition 20 of this licence.
- 22.** The Licence Holder shall submit to the CEO an Annual Environmental Report within 93 calendar days after the end of the annual period. The report shall contain the information listed in Table 8 in the format or form specified in that table, which was collected during the annual period.

Table 8: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form ¹
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 2	Waste acceptance	Tabular
Table 3	Waste processing	Tabular
Table 5	Monitoring of emissions to land	Tabular
Table 6	Monitoring of inputs and outputs	Tabular
Table 7	Monitoring of ambient groundwater quality	Tabular
19	Compliance	Annual Audit Compliance Report (AACR)
20	Complaint's summary	None specified

Note 1: Forms are available on the Departments website

- 23.** The Licence Holder shall ensure that the Annual Environmental Report also contains:
- an assessment of the information contained within the report against monitoring results from the previous three annual periods;
 - calculation of the annual Total Nitrogen and Total Phosphorous loading rates applied to the Sprayfield during the annual period, and an assessment of these loading rates against the loading rates from the previous three annual periods;
 - any changes to containment infrastructure, site boundaries, location of groundwater monitoring bores, surface drainage channels and on-site or off-site impacts of pollution that occurred during the annual period; and
 - quantities of sludge removed during each desludging event that occurred during the annual period.

Definitions

In this licence, the terms in Table 9 have the meanings defined.

Table 9

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 July until 30 June
AS/NZS 2031	means the Australian Standard AS/NZS 2031 <i>Selection of containers and preservation of water samples for microbiological analysis</i> ;
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 <i>Water Quality – Sampling – Guidance of the Design of sampling programs, sampling techniques and the preservation and handling of samples</i> ;
AS/NZS 5667.10	means the Australian Standard AS/NZS 5667.10 <i>Water Quality – Sampling – Guidance on sampling of waste waters</i> ;
AS/NZS5667.11	means the Australian Standard AS/NZS 5667.11 <i>Water Quality – Sampling – Guidance on sampling of groundwaters</i> ;
averaging period	means the time over which a limit is measured or a monitoring result is obtained;
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 <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 or: info@dwer.wa.gov.au
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (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.
DWER	means Department of Water and Environmental Regulation;
emission	has the same meaning given to that term under the EP Act.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)

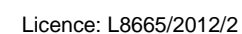
Term	Definition
freeboard	means the distance between the maximum water surface elevations and the top of retaining banks or structures at their lowest point;
licence	refers to this document, which evidences the grant of a licence by the CEO under section 57 of the EP Act, subject to the specified conditions 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.
NATA	means the National Association of Testing Authorities, Australia;
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis;
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 in Schedule 1 to this licence.
prescribed premises	has the same meaning given to that term under the EP Act.
Schedule 1	means Schedule 1 of this Licence unless otherwise stated
waste	has the same meaning given to that term under the EP Act.
WWTP	means wastewater treatment plant.

Schedule 1: Maps

Premises map: The Premises boundary is shown in the map below.



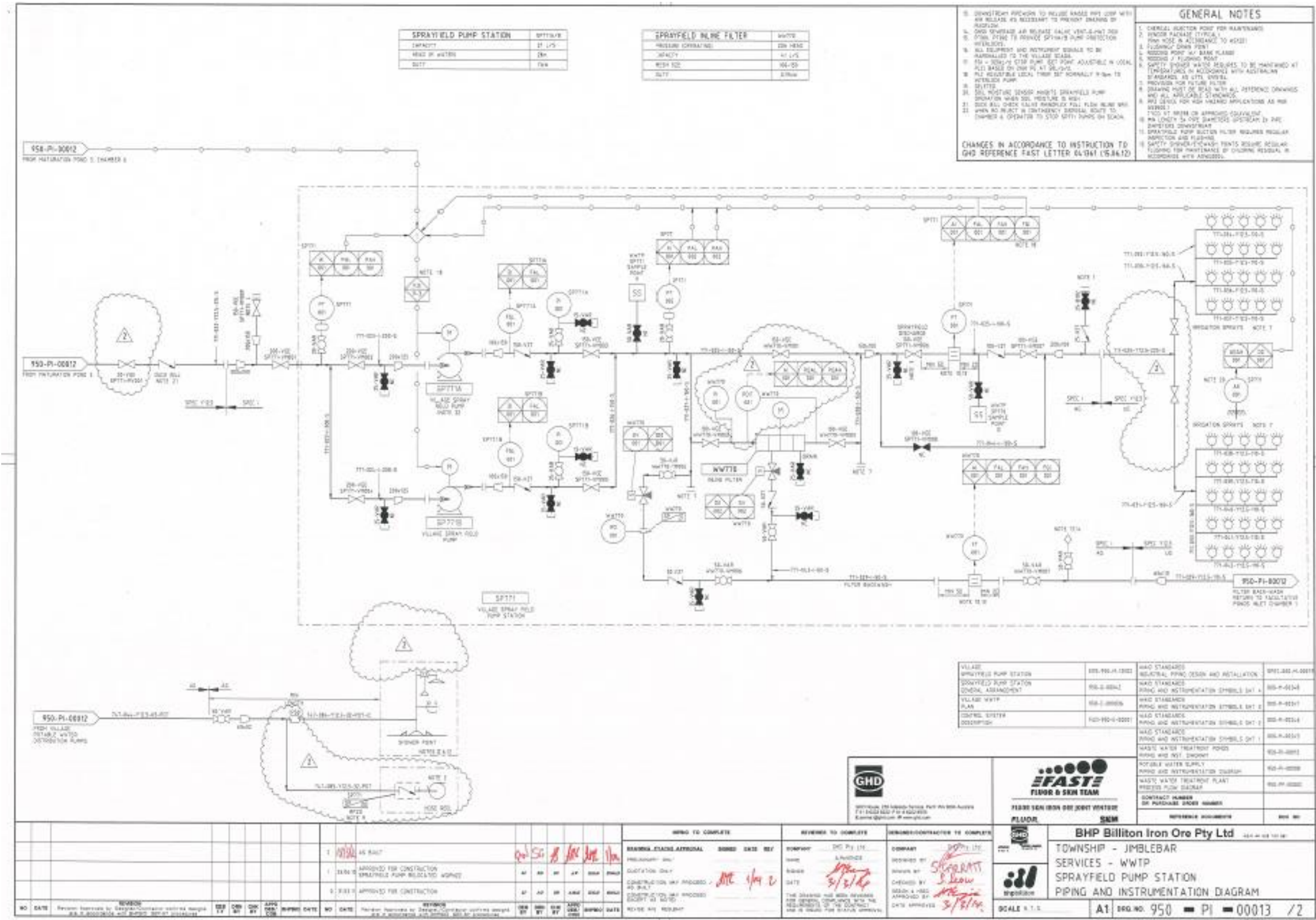






Maps of monitoring locations

Sprayfield Pump Station



Maps of monitoring locations

The locations of the monitoring points defined in Table 7 are shown below.



Appendix A

Easting Zone 50	Northing Zone50
E801494.01	N7416986.95
E801494.01	N7416017.14
E801490.31	N7415776.35
E797741.59	N7415951.61
E797735.44	N7416631.90
E798884.98	N7416625.75
E799354.02	N7417769.78