



<b>Licence number</b>	L9360/2022/1
<b>Licence holder</b>	IB Operations Pty Ltd
<b>ACN (if applicable)</b>	165 513 557
<b>Registered business address</b>	Fortescue Metals Group Level 2 Hyatt Centre 87 Adelaide Terrace East Perth WA 6004
<b>DWER file number</b>	DER2022/000609
<b>Duration</b>	21/02/2023 to 20/02/2033
<b>Date of issue</b>	21/02/2023
<b>Premises details</b>	North Star Magnetite Project Marble Bar Wastewater Treatment Plant  Legal description - Part of Mining Tenement L45/486 Marble Bar Road MARBLE BAR WA 6760 As defined by the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i> )	Assessed 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	180 m <sup>3</sup> per day

This licence is granted to the licence holder, subject to the attached conditions, on 21 February 2023, by:

**Stephen Checker**

**MANAGER WASTE INDUSTRIES**

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

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## Licence history

Date	Reference number	Summary of changes
28/01/2022	W6596/2021/1	Works approval granted
21/02/2023	L9360/2022/1	This 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

- 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**

Site infrastructure and equipment	Operational requirement	Infrastructure location
Irrigation spray field	<ul style="list-style-type: none"> <li>a) Not more than 180 m<sup>3</sup> per day of blended effluent to be applied to the designated irrigation spray field area.</li> <li>b) Irrigation via low drift fan-spray nozzles spaced for even distribution.</li> <li>c) Irrigation to be managed to prevent ponding and pooling of blended effluent on the ground surface of the irrigation spray field.</li> <li>d) No blended effluent is permitted to run off or discharge beyond the irrigation spray field.</li> </ul>	As shown in Schedule 1, Figure 3 and Figure 6
WWTP and Pipeline	<ul style="list-style-type: none"> <li>a) Volumetric flow meters are maintained on the RO brine holding tank outlet, WWTP inlet and outlet to the irrigation spray field.</li> <li>b) Sludge is contained within sealed sludge tanks prior to removal by a licensed waste carrier for disposal to a licensed disposal facility.</li> <li>c) Screenings are contained within a sealed bin prior to removal for disposal to a licensed disposal facility.</li> <li>d) Spills of wastewater, RO brine or chemicals outside of a vessel/container to be cleaned up immediately.</li> </ul>	As shown in Schedule 1, Figure 3, Figure 4 and Figure 5.
RO brine pipeline	<ul style="list-style-type: none"> <li>a) No more than 91 m<sup>3</sup>/day of RO brine supplied to the WWTP.</li> </ul>	As shown in Schedule 1, Figure 4 and Figure 5.

Site infrastructure and equipment	Operational requirement	Infrastructure location
Chemical storage	<p>a) All chemicals to be stored separately within an above ground vessel/s that is contained within bunds of a capacity of 110% of the total vessel/s contents.</p> <p>b) Chemicals to be stored in accordance with Australian Standards AS1940-2004, AS3780-2008 and/or AS3833-2007 dependent on the type of chemical to be stored.</p>	As shown in Schedule 1, Figure 4 and Figure 5.

## Emissions and discharges

### Water discharges

- The licence holder must ensure that the emission specified in Table 2 is discharged only from the corresponding discharge points and only at the corresponding discharge point location.

**Table 2: Authorised discharge points**

Emission	Discharge point	Discharge point location
Blended effluent	Sprinklers within the irrigation spray field	Irrigation spray field as shown in Schedule 1, Figure 3 and Figure 6.

- The licence holder must ensure that discharge to the irrigation area does not exceed 295 kg/ha/year for nitrogen and 120 kg/ha/year for phosphorous for any annual period.
- The licence holder must ensure that when irrigating blended effluent that:
  - Only blended effluent is irrigated;
  - No irrigation generated runoff, spray drift or discharge occurs beyond the boundary of the established irrigation spray-field;
  - Wastewater is evenly distributed over the irrigation area, and that no ponding or pooling occurs;
  - No soil erosion occurs; and
  - Vegetative cover is maintained over the irrigation area.

## Monitoring

- The licence holder must monitor emissions:
  - from each discharge point;
  - at the corresponding monitoring location;
  - for the corresponding parameter;
  - at the corresponding frequency;
  - for the corresponding averaging period; and
  - in the corresponding unit;
 as set out in Table 3.

**Table 3: Emission and discharge monitoring requirements**

Discharge point	Monitoring location	Parameter	Frequency	Averaging Period	Unit
Irrigation spray field	WWTP outlet	<i>E. coli</i>	Quarterly	Spot sample	cfu / 100mL
		Thermotolerant coliforms			
		BOD <sub>5</sub>			mg/L
		Total suspended solids			
		Total nitrogen			
		Total phosphorus			
		Total dissolved solids			
		Residual chlorine			
		pH <sup>1</sup>			-
		Cumulative flow volume discharged to the irrigation spray field <sup>1</sup>	Continuous	N/A	m <sup>3</sup>
	RO brine pipeline outlet	Cumulative flow volume supplied to the WWTP			

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

- 6.** For the monitoring activity required by condition 5, the licence holder must:
- (a) record the results;
  - (b) handle and preserve all water samples collected during the monitoring of the WWTP in accordance with Australian Standard 5667.1:1998 Water Quality – Sampling; and
  - (c) have analysis conducted by a laboratory with current National Association of Testing Authorities (NATA) accreditation for the parameters specified.

## Records and reporting

- 7.** 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.
- 8.** The licence holder must:

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- (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 30 days after the end of that annual period an Annual Audit Compliance Report in the approved form.
- 9.** 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) monitoring programmes undertaken in accordance with conditions 5 and 6 of this licence; and
  - (d) complaints received under condition 7 of this licence.
- 10.** The books specified under condition 9 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 4 have the meanings defined.

**Table 4: 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 of the immediately following year.
AS 1940-2004	means Australian Standard 1940-2004 The storage and handling of flammable and combustible liquids.
AS 3780-2008	means Australian Standard 3780-2008 The storage and handling of corrosive substances.
AS/NZS 3833:2007	means Australian Standard/New Zealand Standard 3833:2007 The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers.
AS/NZS 5667.1-1998	means Australian Standard/New Zealand Standard 5667.1-1998 Water quality – Sampling – Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples.
blended effluent	means treated wastewater from the wastewater treatment plant blended with RO brine reject.
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: <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
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.

Term	Definition
emission	has the same meaning given to that term under the EP Act.
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
ha	hectare
kL	kilolitres
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.
m <sup>3</sup>	cubic metres
mg/L	milligrams per litre
mL	milliliter
NATA	National Association of Testing Authorities
NATA accreditation	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 (Figure 1) in Schedule 1, and within the coordinates set out in Schedule 2 to this licence
prescribed premises	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.

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## END OF CONDITIONS



## Schedule 1: Maps

### Premises map

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



**Figure 1: Map of the boundary of the prescribed premises**

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Prescribed premises location

The prescribed premises location is shown in the map below (Figure 2).



Figure 2: Map of the prescribed premises location

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Infrastructure layout map

The infrastructure layout is shown in the map below (Figure 3).

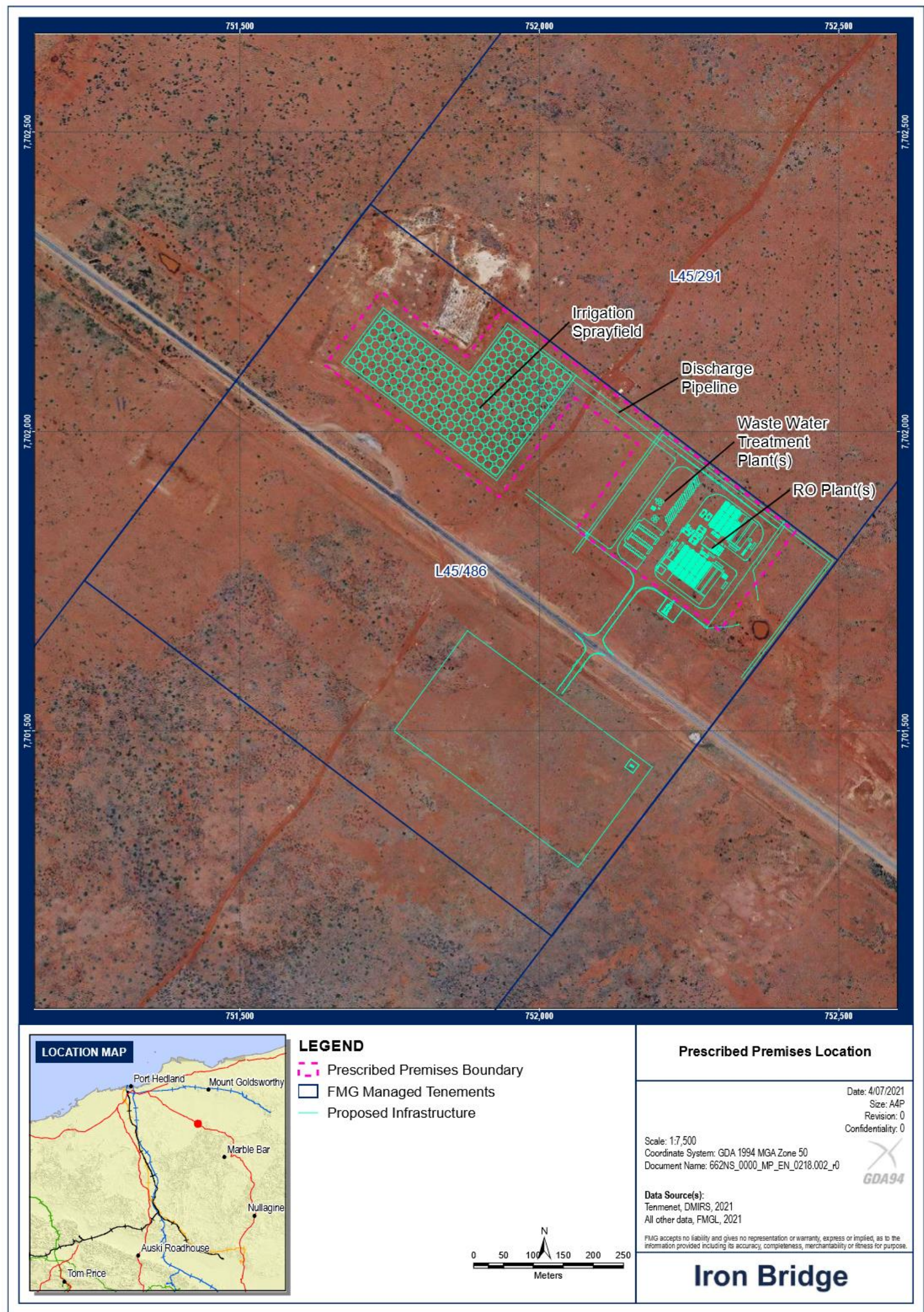


Figure 3: Map of the infrastructure layout



WWTP layout map

The WWTP layout map is shown in the map below (Figure 4).

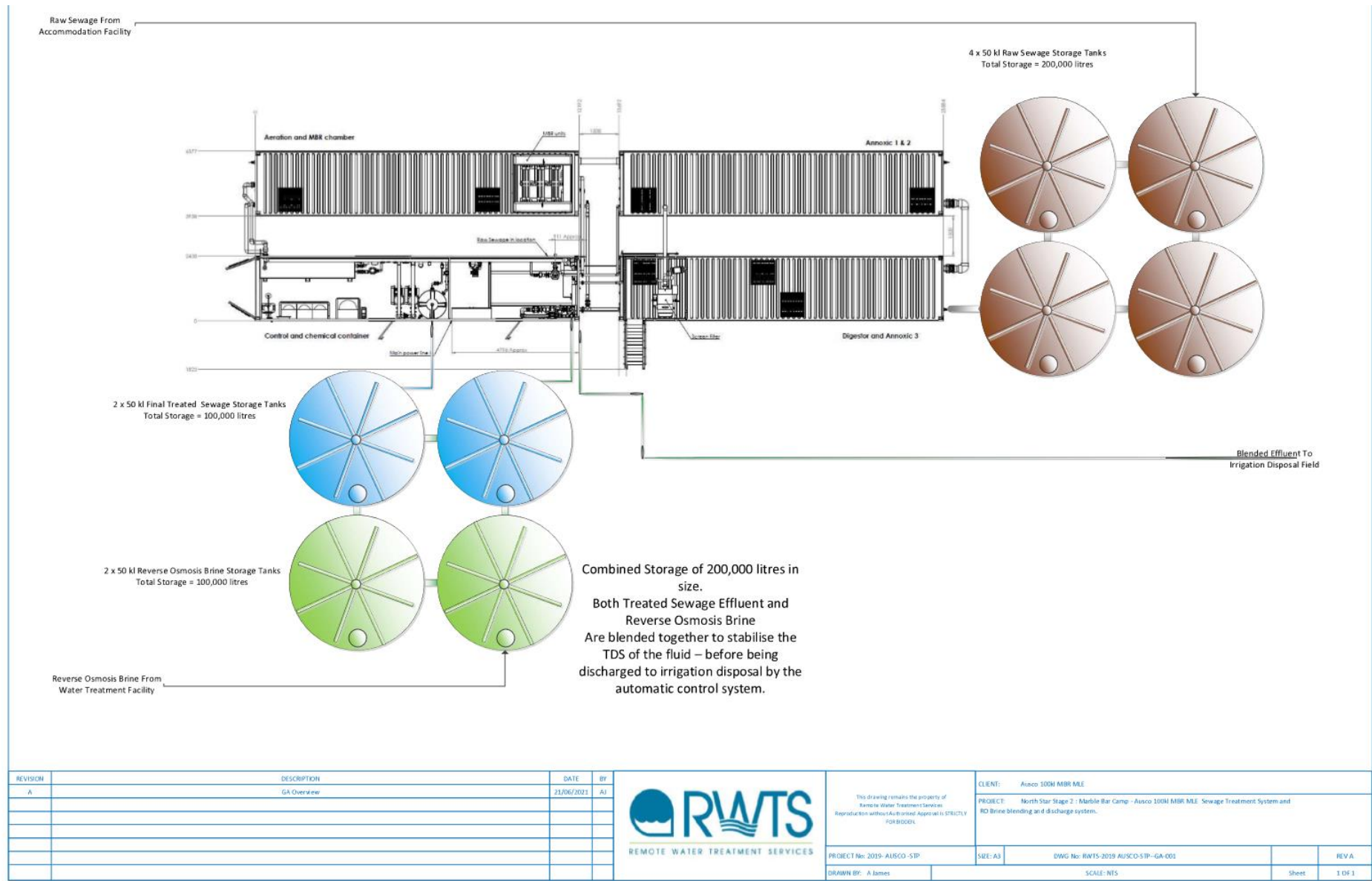


Figure 4: Map of the WWTP layout

WWTP schematic map

The WWTP schematic diagram is shown in the map below (Figure 5).

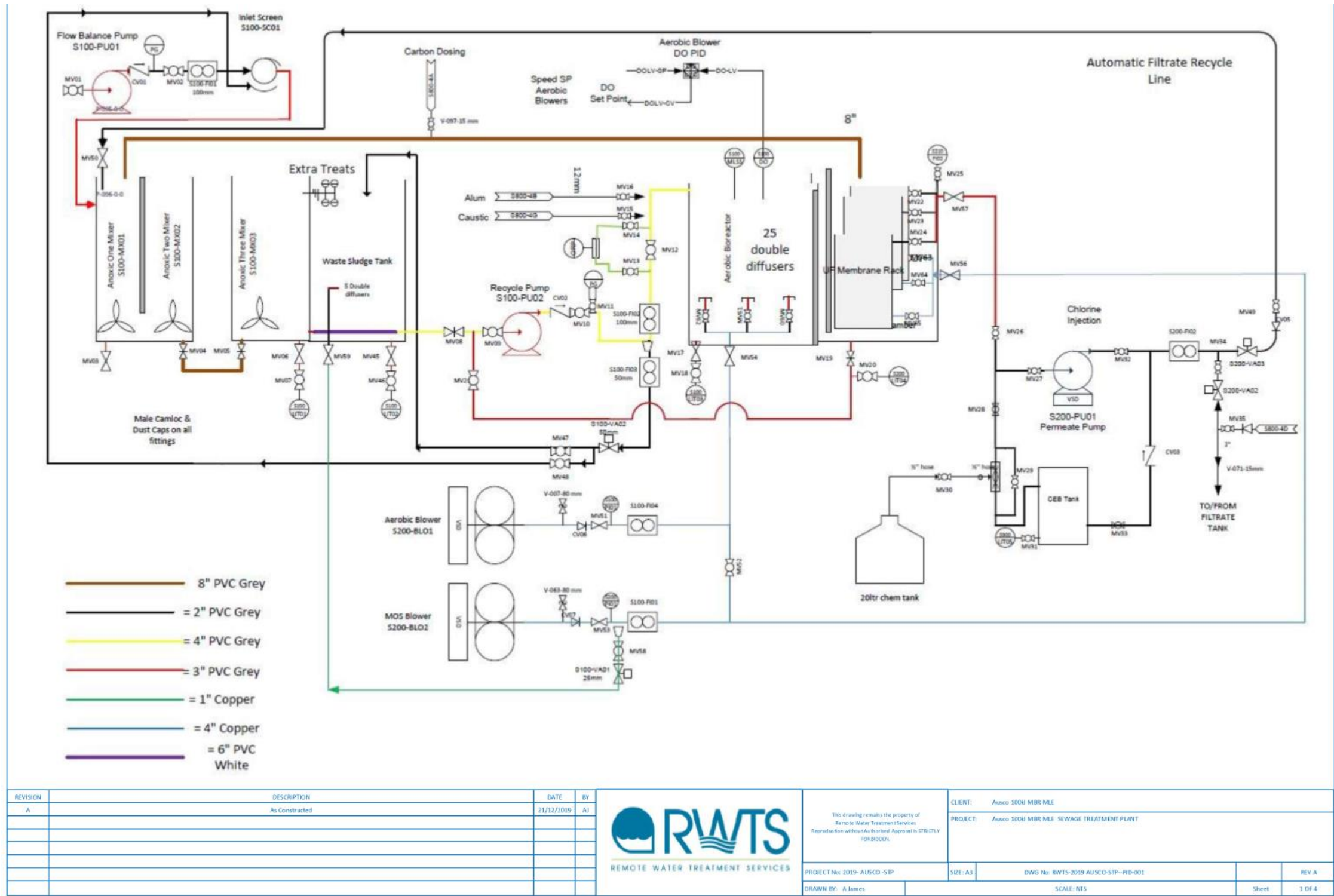


Figure 5: WWTP schematic diagram

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Irrigation spray-field map

The irrigation spray-field is shown in the map below (Figure 6).

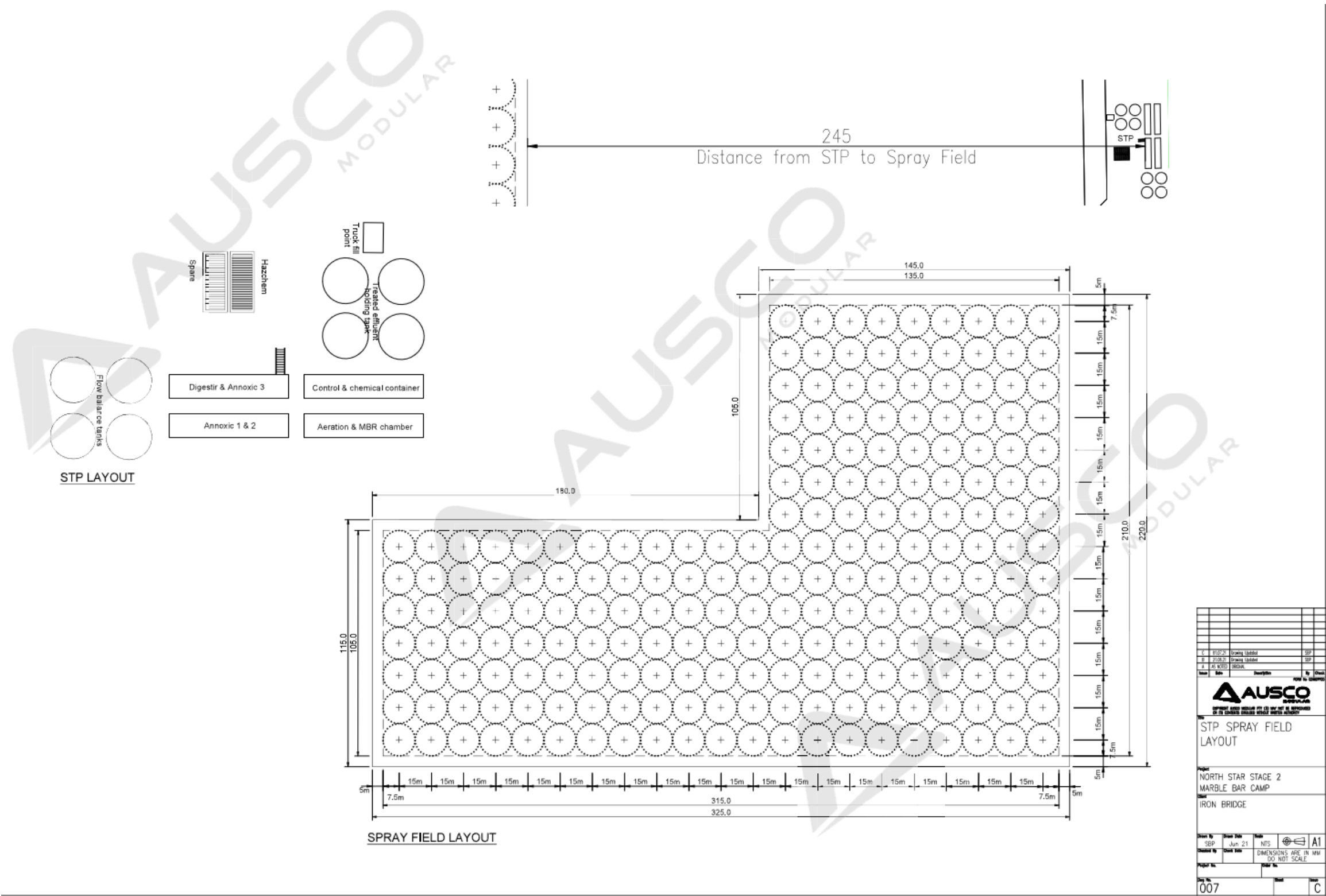


Figure 6: Map of the irrigation spray-field

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## Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in **Table 5**.

**Table 5: Premises boundary coordinates (GDA2020)**

Reference point	Easting	Northing	Zone
1.	751641.70160	7702110.48857	50
2.	751735.48260	7702233.85517	50
3.	751878.82560	7702124.93377	50
4.	751939.14400	7702204.29217	50
5.	752427.28910	7701832.94337	50
6.	752301.20840	7701667.84017	50
7.	752060.79670	7701835.73387	50
8.	752163.93200	7701978.91567	50
9.	752058.53470	7702055.70737	50
10.	751932.31110	7701889.64097	50