Government of Western Australia
Department of Water and Environmental Regulation

Licence

Licence number	L9224/2019/1
Licence holder	Yara Pilbara Fertilisers Pty Ltd
ACN	095 441 151
Registered business address	Level 5, 182 St Georges Terrace PERTH WA 6000
DWER file number	DER2019/000563
Duration	21/04/2020 to 20/04/2040
Date of issue	20/04/2020
Premises details	Yara Pilbara Fertilisers Ammonia Plant Village Road BURRUP WA 6714 Legal description - Part of Lot 564 on Deposited Plan 31023 Certificate of Title Volume 2222 Folio 200 As defined by the coordinates in Schedule 2: Premises boundary

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 31: Chemical manufacturing: premises (other than premises within category 32) on which chemical products are manufactured by a chemical process.	Not more than 950,000 tonnes per annual period
Category 85: 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.	Not more than 36 m^3 per day

This licence is granted to the licence holder, subject to the attached conditions, on 20 April 2020, by:

James Milne
Digitally signed by James Milne
Date: 2020.04.20 05:31:39 +08'00'

James Milne

A/ Senior Manager, Process Industries

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

Licence history

Reference Number	Date	Summary of changes
W3589/2002/1	15 May 2002	New works approval for construction of the Ammonia Plant.
W3791/2002/1	30 June 2003	Amended the previous works approval (largely relating to monitoring requirements).
W3838/2002/1	20 October 2003	New works approval for the construction of a sewage treatment facility to support the Ammonia plant's construction.
R1571/2003/1	1 December 2003	New registration to operate the sewage treatment facility (Category 85). This was revoked and the sewage treatment facility included into the operating licence.
L7997/2002/1	15 April 2005	Licence granted for operation of the Ammonia Plant.
L7997/2002/1	12 December 2005	Licence amended to alter the detection limits for wastewater sampling.
L7997/2002/2	18 April 2006	Licence was reissued with amendments relating to monitoring and discharge requirements.
L7997/2002/3	19 April 2007	Licence review including a risk assessment of premises for Category 31.
L7997/2002/4	17 April 2008	Licence reissued.
L7997/2002/5	20 April 2009	Licence reissued.
L7997/2002/6	15 April 2010	Licence reissued with amendments to remove duplicate reporting conditions and update premises boundary.
L7997/2002/7	14 April 2011	Licence reissued.
L7997/2002/8	19 April 2012	Licence reviewed to incorporate a more comprehensive suite of conditions for monitoring and reporting emissions and discharges from the site.
L7997/2002/9	18 April 2013	Licence re-issue
L7997/2002/10	16 April 2014	Licence re-issue
L7997/2002/11	16 April 2015	Licence re-issue
W5920/2015/1	7 January 2016	New works approval for the replacement of existing WWTP with a new rotating biological contactor WWTP.
L7997/2002/11	20 April 2016	Licence amended to align with requirements of MS 586 which was amended in August 2015 under section 45C of the EP Act. The amendment authorised an increase in the nominated design capacity of the Ammonia Plant and extended the licence duration to 20 April 2020.
L7997/2002/11	29 June 2018	Licence amendment to incorporate operation of the Technical Ammonium Nitrate (TAN) Plant, and amend the prescribed premises boundary to include both the Ammonia and TAN plants.
L7997/2002/11	2 April 2019	Amendment to the licence in the form of an amendment notice to extend the date associated with TN and TP limits for discharges from the Premises WWTP from 1 April 2019 to 30 November 2019.
L9224/2019/1	20 April 2020	New licence issued in place of L7997/2002/1 for operation of the Ammonia Plant. L7997/2002/1 expires on 20 April 2020. L9224/2019/1 takes effect from 21 April 2020.

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 means:

  (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

Site infrastructure and equipment	Operational requirements	Infrastructure location
Sewage treatment plant	Production must not exceed 36 m^3/day. Treated effluent may only be discharged to: • the Evaporation pond; or • a storage tank pending offsite disposal.	As shown in Schedule 1: Maps of infrastructure locations
Western sedimentation basin	• For storage of stormwater and cooling tower blowdown water only. • Lined with 1.5 mm thick HDPE to achieve a permeability of less than 1 x 10^{-9} m/s. • Water may be discharged from the sedimentation basins to the King Bay tidal flats via dedicated pipelines.	
Eastern sedimentation basin		
Evaporation pond	• Must not be operated prior to submission of the Environmental Compliance Report required by condition 3. • For storage and evaporation of treated effluent received from the Sewage treatment plant. • Fenced, gated and signposted to prevent unauthorised entry. • Maintained with a minimum operational freeboard of 500 mm. • Stormwater runoff from site drainage shall be diverted away from the pond embankments. • Lined with 2 mm thick HDPE to achieve a permeability of less than 1 x 10^{-9} m/s.	
Primary reformer	Must be operated with low NOx burners.	
Package boilers		
Diesel generator	Must only be operated for start-up of the Ammonia Plant or for emergency power.	
Startup heater	• Must only be operated for start-up of the Ammonia Plant. • Must be operated with low NOx burners.	
Production flare and storage flare	• Pilot lights must be lit at all times during plant operation. • Ammonia directed to the flare must be combusted.	

Site infrastructure and equipment	Operational requirements	Infrastructure location
Seawater cooling circuit pipeline	A daily visual inspection of the pipeline must be undertaken and a record of each inspection must be maintained.	NA

2. The licence holder must:

(a) construct and/or install the infrastructure and/or equipment;

(b) in accordance with the corresponding design and construction / installation requirements; and

(c) at the corresponding infrastructure location,

as set out in Table 2

Table 2: Design and construction / installation requirement

Infrastructure and equipment	Design and construction / installation requirements	Infrastructure location
Evaporation pond	Pond to be constructed in accordance with the design requirements specified in the detailed design plans in Schedule 3: Works, including the following specifications: • Minimum capacity - 753 m^3; • Minimum depth between crest and toe – 0.94 m; • Approximate internal crest dimensions – 51 x 51 m; • Approximate internal toe dimensions – 47.2 x 47.2 m; • Internal embankment slope – 1:2; • Embankments and pond base have a minimum 100 mm thick compacted sand layer, overlain with BIDIM A34 or similar geotextile, overlain with 2 mm thick HDPE to achieve a permeability of less than 1 x 10^{-9} m/s; • Pond lining to be anchored to the embankment crest via an anchoring trench; and • Perimeter fencing and gated access to be established around the pond to prevent unauthorised access.	As shown as Evaporation pond in Schedule 1: Maps of infrastructure locations

3. The licence holder must within 28 days of the infrastructure required by condition 2 being constructed;

(a) undertake an audit of their compliance with the requirements of condition 2; and

(b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

4. The Environmental Compliance Report required by condition 3 must include as a minimum the following:

(a) certification by a suitably qualified civil engineer that the items of infrastructure or components thereof, as specified in condition 2 have or have not, been

constructed in accordance with the relevant requirements specified in condition 2;

(b) as constructed plans for each item of infrastructure or component of infrastructure specified in condition 2; and

(c) be signed by a person authorised to represent the licence holder and contains the printed name and position of that person.

Emissions and discharges

Discharges to air

5. The licence holder must ensure that emissions specified in Table 3 are discharged only from the corresponding discharge point and only at the corresponding discharge point location set out in Table 3.

Table 3: Authorised discharge points to air

Emission	Discharge point	Discharge point height (m)	Discharge point location As shown in Schedule 1: Map of authorised discharge point locations
NOx, SO_2, PM, CO	Primary reformer stack	36	Discharge point A5
	Package boiler stack	30	Discharge point A6
CO, CO_2	CO_2 stripper stack	60	Discharge point A7
NOx, PM, SO_2	Start-up heater stack	30	Discharge point A8
H_2, N_2	Back-end vent (Vent A)	60	Discharge point A9
H_2, N_2, CH_4,	Front-end vent (Vent B)	35	Discharge point A10
NOx, NH_3, N_2	Production flare	35	Discharge point A11
NOx, NH_3, N_2,	Storage flare	35	Discharge point A12
NOx, SO_2, PM, CO, VOCs	Emergency diesel generator	12.2	Discharge point A13

6. The licence holder must ensure that emissions from the discharge point listed in Table 4 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with condition 10.

Table 4: Discharges to air limits

Discharge point	Emission	Limit (mg/m^3)
Primary reformer stack (A5)	NOx (as NO_2)	180[1]
Package boiler stack (A6)	NOx (as NO_2)	300[1]

Note 1: emission limits for the Primary reformer stack, and Package boiler stack do not apply during Start-up.

Discharges to marine waters

7. The licence holder must ensure that emissions specified in Table 5 are discharged only from the corresponding discharge point and only at the corresponding discharge point location set out in Table 5.

Table 5: Authorised discharge points to marine waters

Emission	Discharge point	Discharge point location As shown in Schedule 1: Map of authorised discharge point locations
Process effluent (Ammonia Plant)	MUBRL	Discharge Point MUBRL
Process effluent (TAN Plant)	MUBRL	Discharge Point MUBRL
Stormwater and cooling tower blowdown	Western sedimentation basin to King Bay tidal flats	Discharge Point WSB
	Eastern sedimentation basin to King Bay tidal flats	Discharge Point ESB

8. The licence holder must ensure that emissions from the discharge point listed in Table 6 for the corresponding parameter do not exceed the corresponding limit when monitored in accordance with condition 16.

Table 6: Discharge to marine waters limits

Discharge point	Parameter	Limit (including units)	Averaging period
Ammonia Plant and TAN Plant input to MUBRL (MUBRL)	Temperature	Less than 5°C above ambient seawater temperature	80th percentile of daily averages
		Less than 2°C above ambient seawater temperature 80% of the time	
	pH	6.9 – 8.3	Monthly
	Electrical conductivity	75 000 µs/cm	
	Ammonia as ammoniacal nitrogen (NH_3-N)	30 164 µg/L	Monthly rolling average
	Arsenic (III)	140 µg/L	
	Arsenic (V)	275 µg/L	
	Cadmium	36 µg/L	
	Chromium (III)	459 µg/L	

Discharge point	Parameter	Limit (including units)	Averaging period
	Chromium (VI)	8.5 µg/L	
	Cobalt	61 µg/L	
	Copper	11 µg/L	
	Lead	134 µg/L	
	Mercury	1.4 µg/L	
	Nickel	427 µg/L	
	Selenium	183 µg/L	
	Silver	49 µg/L	
	Vanadium	3050 µg/L	
	Zinc	419 µg/L	
Western sedimentation basin to King Bay tidal flats (WSB) Eastern sedimentation basin to King Bay tidal flats (ESB)	Total suspended solids	80 mg/L	Spot sample
	pH	6 – 9	
	Total recoverable hydrocarbon	15 mg/L	
	MDEA	2 mg/L	

Noise emissions

9. The licence holder must ensure that noise emissions do not exceed the limit of 65 dB(A) when monitored in accordance with condition 20.

Monitoring

Discharges to air

10. The licence holder must monitor emissions:

(a) from each discharge point;

(b) at the corresponding monitoring location;

(c) for the corresponding parameter;

(d) at the corresponding frequency;

(e) for the corresponding averaging period;

(f) in the corresponding unit; and

(g) using the corresponding method

as set out in

Table 7.

Table 7: Monitoring of discharges to air

Discharge point	Monitoring location	Parameter	Frequency	Averaging period	Unit [1]	Method [2,3] (sampling and analysis)
Primary reformer stack (A5) and Package boiler stack (A6)	Schedule 1: Map of monitoring locations A5 and A6	Flow rate	Quarterly until 31 May 2020	60 minutes	m^3/s	USEPA Method 2
		NOx (as NO_2)			mg/m^3 g/s	USEPA Method 7E
		Flow rate	Continuous after 31 May 2020	60 minutes	m^3/s	CEMS
		NOx (as NO_2)			mg/m^3 g/s	

Note 1: Concentrations to be corrected to STP at 3% oxygen on a dry basis.
Note 2: Duplicate sample runs conducted consecutively on the same sampling day.
Note 3: Where any USEPA method refer to USEPA Method 1 for the sampling plane, this must be read as a referral to AS/NZS 4323.1:2001.

11. The licence holder must ensure that quarterly monitoring is undertaken such that there are at least 45 days in between the days on which samples are taken in successive quarters.

12. The licence holder must ensure that sampling required by condition 10 is undertaken at sampling locations in accordance with the current version of AS 4323.1 or relevant part of the CEMS Code.

13. The licence holder must ensure that all non-continuous sampling and analysis undertaken pursuant to condition 10 is undertaken by a holder of a current accreditation from the National Association of Testing Authorities (NATA) for the methods of sampling and analysis relevant to the corresponding parameter.

14. For any CEMS operated in accordance with condition 10 the licence holder must ensure that the CEMS is operated, maintained and calibrated in accordance with the CEMS Code.

Ambient air quality

15. The licence holder must monitor the air for concentrations of the parameter listed in Table 8:

(a) at the corresponding monitoring location;

(b) in the corresponding unit;

(c) at no less that the corresponding frequency;

(d) for the corresponding averaging period;

(e) using the corresponding method;

as set out in Table 8.

Table 8: Monitoring of ambient air concentrations

Parameter	Monitoring location	Unit	Frequency	Averaging Period	Sampling Method	Analytical Method
NH_3	Schedule 1: Map of monitoring locations AA1, AA2, AA3, AA4	ppm	Continuous	NA	Diffusion Visible and audible alarm at 35 ppm	Electrochemical

Discharges to marine waters

16. The licence holder must monitor emissions:

(a) from each discharge point;

(b) at the corresponding monitoring location;

(c) for the corresponding parameter;

(d) at the corresponding frequency;

(e) for the corresponding averaging period;

(f) in the corresponding unit; and

(g) using the corresponding method

as set out in Table 9.

Table 9: Monitoring of discharges to marine waters

Discharge point	Monitoring location	Parameter [2]	Frequency	Averaging period	Unit	Method	
						Sampling	Analysis
MUBRL	Schedule 1: Map of monitoring locations W1 and W4	Flow [1]	Continuous	NA	m^3/day	AS5667.1-1998 and AS5667.10-1998	NATA accredited
		Temperature [1]			^0C		
		pH [1]			NA		
		Electrical conductivity [1]			µs/cm		
		Dissolved oxygen [1]	Weekly	Spot sample	%		
		Ammonia as ammoniacal nitrogen (NH_3-N)	Daily	Weekly composite of daily spot sample	µg/L		
		Total Phosphorous					
		Arsenic (III)					
		Arsenic (V)					
		Cadmium					
		Chromium (III)					
		Chromium (VI)					
		Cobalt					

Discharge point	Monitoring location	Parameter [2]	Frequency	Averaging period	Unit	Method	
						Sampling	Analysis
		Copper					
		Lead					
		Mercury					
		Nickel					
		Selenium					
		Silver					
		Vanadium					
		Zinc					
		Total recoverable hydrocarbons					
		MDEA [3,4]					
WSB and ESB	Schedule 1: Map of monitoring locations W2 and W3	Total suspended solids	Maximum of one hour before discharge and every 24 hours after that for the duration of the discharge	Spot sample	mg/L		
		pH [1]			NA		
		Total recoverable hydrocarbons			mg/L		
		MDEA [3]			µg/L		

Note 1: In-field non-NATA accredited analysis permitted.
Note 2: All metals must be analysed as total and filterable.
Note 3: Non-NATA accredited laboratory analysis permitted.
Note 4: Sampling and analysis for MDEA is not applicable to monitoring location W4.

17. The licence holder must ensure that weekly monitoring is undertaken such that there are at least four days in between the days on which samples are taken.

Ambient groundwater

18. The licence holder must monitor the groundwater for concentrations of the parameters listed in Table 10:

(a) at the corresponding monitoring location;

(b) in the corresponding unit;

(c) at no less that the corresponding frequency;

(d) for the corresponding averaging period;

(e) using the corresponding sampling method; and

(f) the corresponding analytical method

as set out in Table 10.

Table 10: Monitoring of ambient groundwater concentrations

Parameter [3,4,5]	Monitoring location	Unit	Frequency	Averaging Period	Method	
					Sampling	Analytical
pH [1,]	Schedule 1: Map of monitoring locations BFC, BFE, BFF, BFG US1, US3	NA	Quarterly	Spot sample	AS/NZS 5667.11	NATA accredited
Electrical conductivity [1]		µS/cm				
Redox potential [1]		mV				
Temperature [1]		°C				
Dissolved Oxygen [1]		%				
MDEA [2]		µg/L				
Ammonia as ammoniacal nitrogen (NH_3-N)						
Nitrate and nitrite						
Aluminium						
Cadmium						
Chromium (III)						
Chromium (VI)						
Copper						
Nickel						
Lead						
Sulfate						
Total dissolved solids						
Total Kjeldal nitrogen						
Total nitrogen as N and total oxidised						
Total recoverable hydrocarbons						
Total phosphorus as P						
Total organic carbon						
Total alkalinity						
Major cations (K+, Na+, Ca^{2}+,Mg^{2}+)						
Zinc						

Note 1: In-field non-NATA accredited analysis permitted. Samples must be measured in a flow-through cell.
Note 2: Non-NATA accredited laboratory analysis permitted.
Note 3: Limits of reporting must be lower than the site-specific proposed trigger levels specified in the Western Environmental Groundwater data review, Yara Pilbara Operations Water Quality Monitoring Procedure 2016, prepared for Yara Pilbara Fertilisers Pty Ltd.
Note 4: Ultra-trace analysis must be used where possible if matrix interference causes a consequential increase of the limits of reporting.
Note 5: Metal samples are to be filtered for analysis

Process monitoring

19. The licence holder must undertake monitoring of treated effluent from the sewage treatment plant:

(a) at specified monitoring location;

(b) for the corresponding parameter;

(c) at the corresponding frequency;

(d) for the corresponding averaging period;

(e) in the corresponding unit; and

(f) using the corresponding method

as set out in Table 11.

Table 11: Treated effluent monitoring

Monitoring location	Parameter	Frequency	Averaging period	Unit	Method	
					Sampling	Analysis
Schedule 1: Map of monitoring locations L1	Flow[1]	Continuous	NA	m^3/day	AS5667.1:1998 and AS5667.10: 1998 and AS/NZS 2031:2001	NATA accredited
	Total nitrogen	Quarterly	Spot sample	µg/L		
	Total phosphorus					
	BOD					
	pH[1]			NA		
	Total suspended solids			µg/L		
	E.coli			cfu/100mL		

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

Noise emissions

20. The licence holder must monitor noise:

(a) at the corresponding monitoring location;

(b) in the corresponding unit;

(c) at no less that the corresponding frequency;

(d) for the corresponding averaging period;

(e) using the corresponding sampling method; and

(f) the corresponding analytical method

as set out in Table 12.

Table 12: Monitoring of noise

Parameter	Monitoring location	Unit	Frequency	Averaging Period	Monitoring method
Noise $L_{A\ 10}$	Schedule 1: Map of monitoring locations N1, N2 and N3	dB	Quarterly	Not less than 15 minutes, and not more than 4 hours	Part 3 – Noise measurement *Environmental Protection (Noise) Regulations 1997*

21. The licence holder must ensure that quarterly monitoring is undertaken such that there are at least 45 days in between the days on which samples are taken.

Records and reporting

22. 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) the works conducted in accordance with condition 2 of this licence;

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

(d) monitoring programmes undertaken in accordance with conditions 10, 15, 16, 18, 19 and 20 of this licence; and

(e) complaints received under condition 24 of this licence.

23. The books specified under condition 22 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.

24. 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.

25. The licence holder must, within seven days of becoming aware of any non-compliance with conditions 6, 8 and 9 of this licence, notify the CEO in writing of that non-compliance and include in that notification the following information:

(a) which condition was not complied with;

(b) the time and date when the non-compliance occurred;

(c) if any environmental impact occurred as a result of the non-compliance and if so what that impact is and where the impact occurred;

(d) the details and result of any investigation undertaken into the cause of the non-compliance;

(e) what action has been taken and the date on which it was taken to prevent the non-compliance occurring again; and

(f) what action will be taken and the date by which it will be taken to prevent the non-compliance occurring again.

26. 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 90 days after the end of that annual period an Annual Audit Compliance Report in the approved form.

27. The licence holder must submit to the CEO by no later than 90 days after the end of each annual period, an annual environmental report for that annual period for the conditions listed in Table 13, and which provides information in accordance with the corresponding requirement set out in Table 13.

Table 13: Reporting requirements – Annual Environmental Report

Condition	Requirement
10 Monitoring of discharges to air	Tabulated monitoring data results and time-series graphs in Microsoft Excel format for each monitoring location showing concentrations of all parameters over a minimum three year period (where sufficient data allows). An interpretation of the monitoring data including comparison to historical trends and emission limits. Copies of original monitoring, laboratory and analysis reports submitted by third parties.
	A summary of Ammonia Plant startup and shutdown events including dates, times, durations, reasons for each event, characterisation and quantification of gases vented during each event, and commentary on how the emissions compared with inputs used in previous modelling for the Ammonia Plant.
15 Ambient air monitoring	Summary of alarm threshold exceedances and actions taken.
16 Monitoring of discharges to marine water	Tabulated monitoring data results and time-series graphs in Microsoft Excel format for each monitoring location showing concentrations of all parameters over a minimum three year period (where sufficient data allows). An interpretation of the monitoring data including comparison to historical trends and emission limits (where relevant). Copies of original monitoring, laboratory and analysis reports submitted by third parties.
18 Groundwater monitoring	
19 Process monitoring	

Condition	Requirement
20 Noise monitoring	
24 Complaints	Summary of complaints received and any action taken to investigate or respond to any complaint

Definitions

In this licence, the terms in Table 14 have the meanings defined.

Table 14: 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.
Approved form	the AACR Form template approved by the CEO for use and available via DWER's external website.
AS 4323.1	means the Australian Standard *AS 4323.1 Stationary source emissions selection of sampling positions*
AS/NZS 2031	means the Australian Standard *AS/NZS 2031 Selection of containers and preservation of water samples for microbiological analysis*
AS/NZS 5667.1	means the Australian Standard *AS/NZS 5667.1 Water quality – sampling – guidance of the design of sampling programs, sampling techniques and the preservation and handling of samples*
AS/NZS 5667.10	means the Australian Standard *AS/NZS 5667.10 Water quality – sampling – guidance on sampling of waste waters*
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 *Water quality – sampling – guidance on sampling groundwater*
ATU	Aerobic Treatment Unit
books	has the same meaning given to that term under the EP Act.
CEMS	Continuous Emission Monitoring System
CEMS Code	means the document *"Continuous Emission Monitoring System (CEMS) Codes for Stationary Source Air Emissions*", March 2016, Department of Environment Regulation, Perth WA
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
CH_4	means methane

Term	Definition
CO	means carbon monoxide
CO_2	means carbon dioxide
condition	a condition to which this works approval / licence is subject under section 62 of the EP Act.
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.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure has been constructed in accordance with the relevant conditions.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
freeboard	means the distance between the maximum water surface elevation and the top of retaining banks or structures at their lowest point
H_2	means hydrogen
HDPE	High Density Polyethylene
Inspector	means an inspector appointed by the CEO in accordance with s.88 of the EP Act.
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	means the occupier of the premises, being the person to whom this licence has been granted, as identified on the front of this licence.
MDEA	means methyl diethanolamine
MUBRL	Multi User Brine Return Line
N_2	means nitrogen
NATA	means the (Australian) National Association of Testing Authorities.
NH_3	means ammonia
NOx	means oxides of nitrogen
PM	means particulate matter
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.

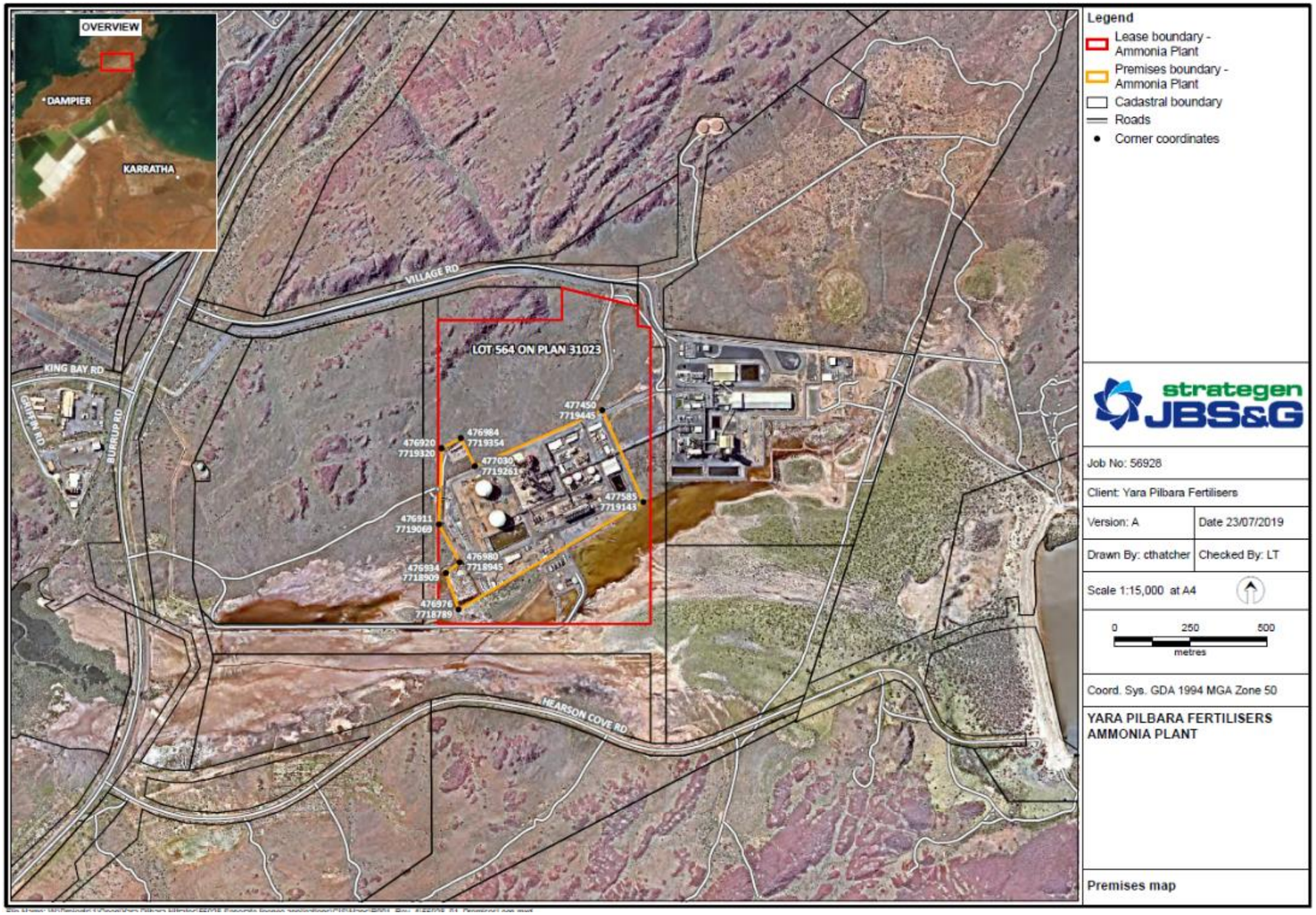
Term	Definition
Prescribed premises	has the same meaning given to that term under the EP Act.
SO_2	means sulfur dioxide
suitably qualified	means a person who: (a) holds a Bachelor of Engineering (Civil); and (b) has a minimum of at least three years of experience working in the field of civil engineering.
Startup – Primary Reformer Furnace (Ammonia Plant)	means the period from when the furnace burners are ignited to when the vent valve on the Ammonia Recovery Unit is closed
Startup – Package Boiler (Ammonia Plant)	means the period from when the boiler burners are ignited to when the vent valve on the Ammonia Recovery Unit is closed
STP	means standard temperature and pressure (0º Celsius and 101.325 kilopascals respectively), dry
USEPA	United States (of America) Environmental Protection Agency
USEPA Method 2	means USEPA Method 2 *Determination of Stack Gas Velocity and Volumetric Flow Rate (type s pitot tube)*
USEPA Method 7E	means USEPA Method 7E *Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)*
Usual working day	means 0800-17000 hours, Monday to Friday excluding public holidays in Western Australia
VOCs	means volatile organic compounds

END OF CONDITIONS

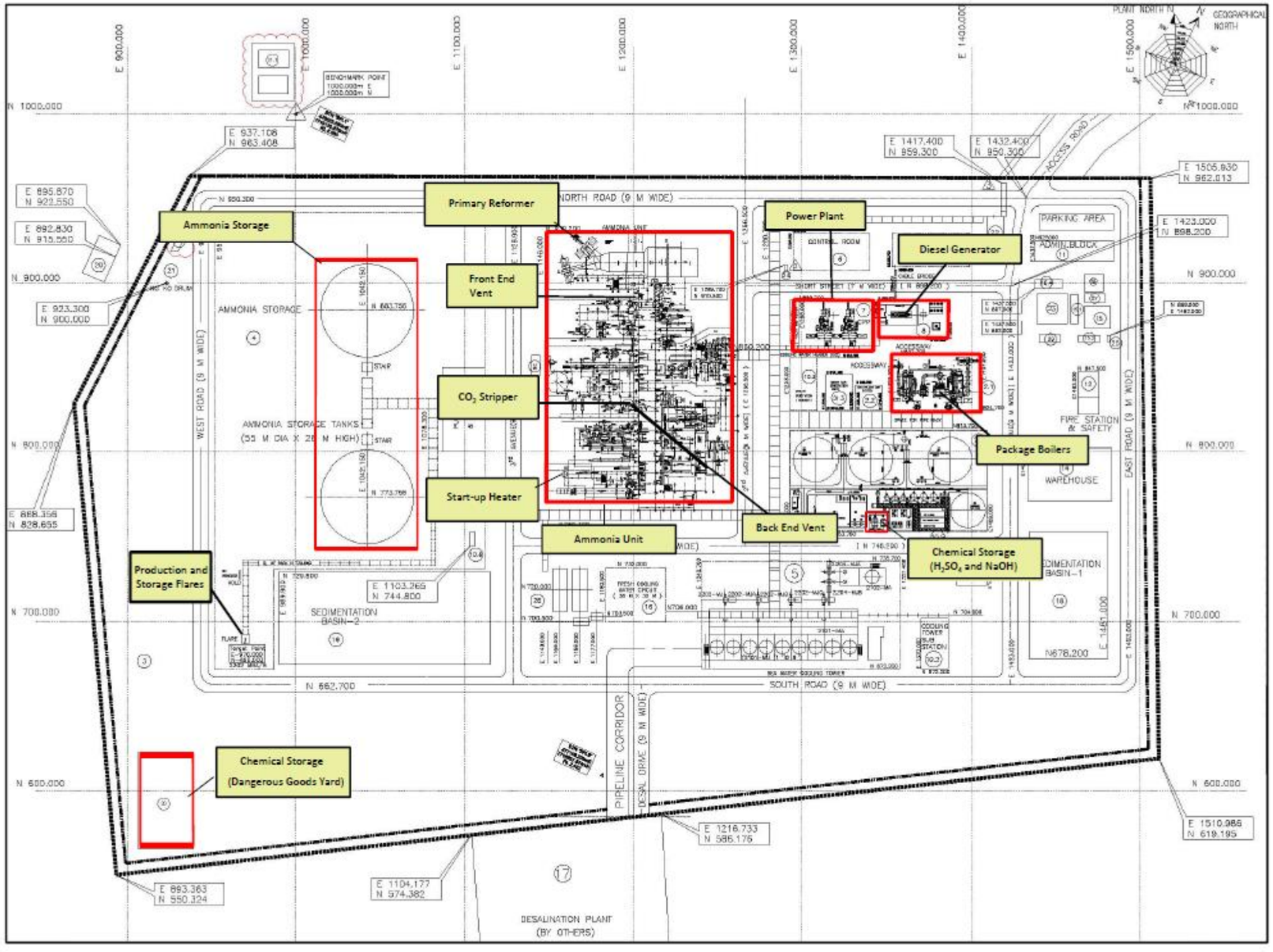
Schedule 1: Maps

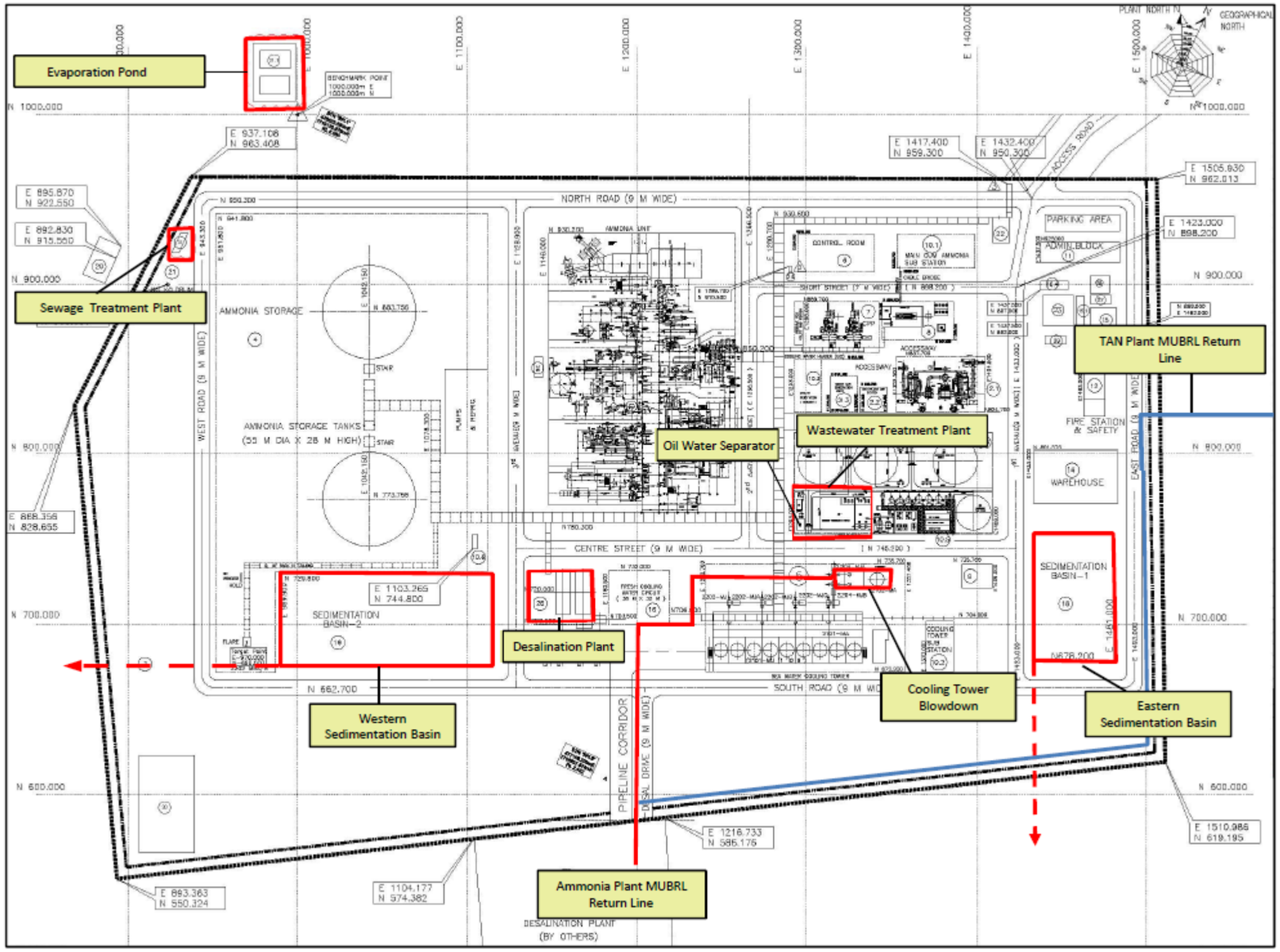
Premises map

The boundary of the prescribed premises is shown in orange in the map below.

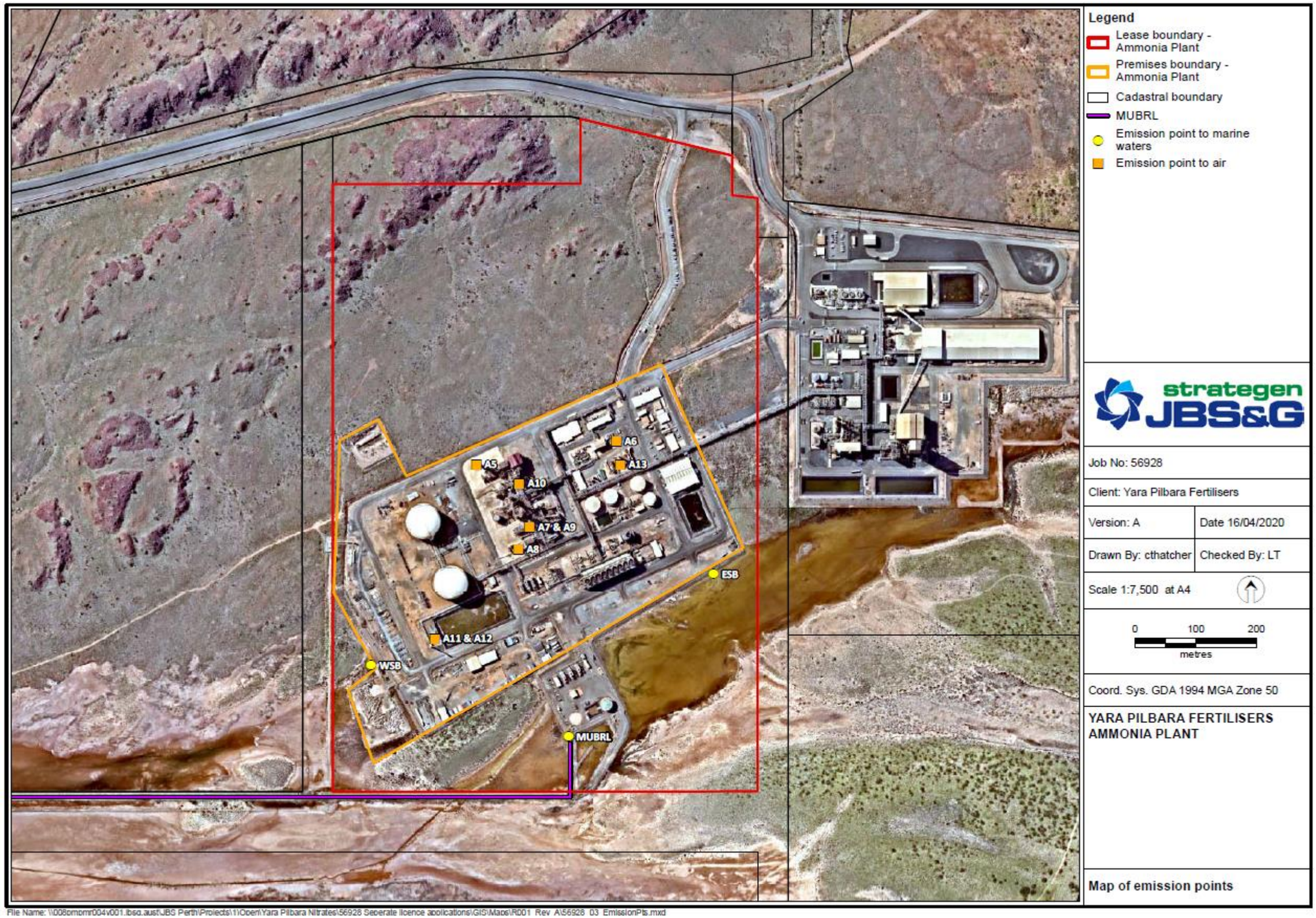


Maps of infrastructure locations

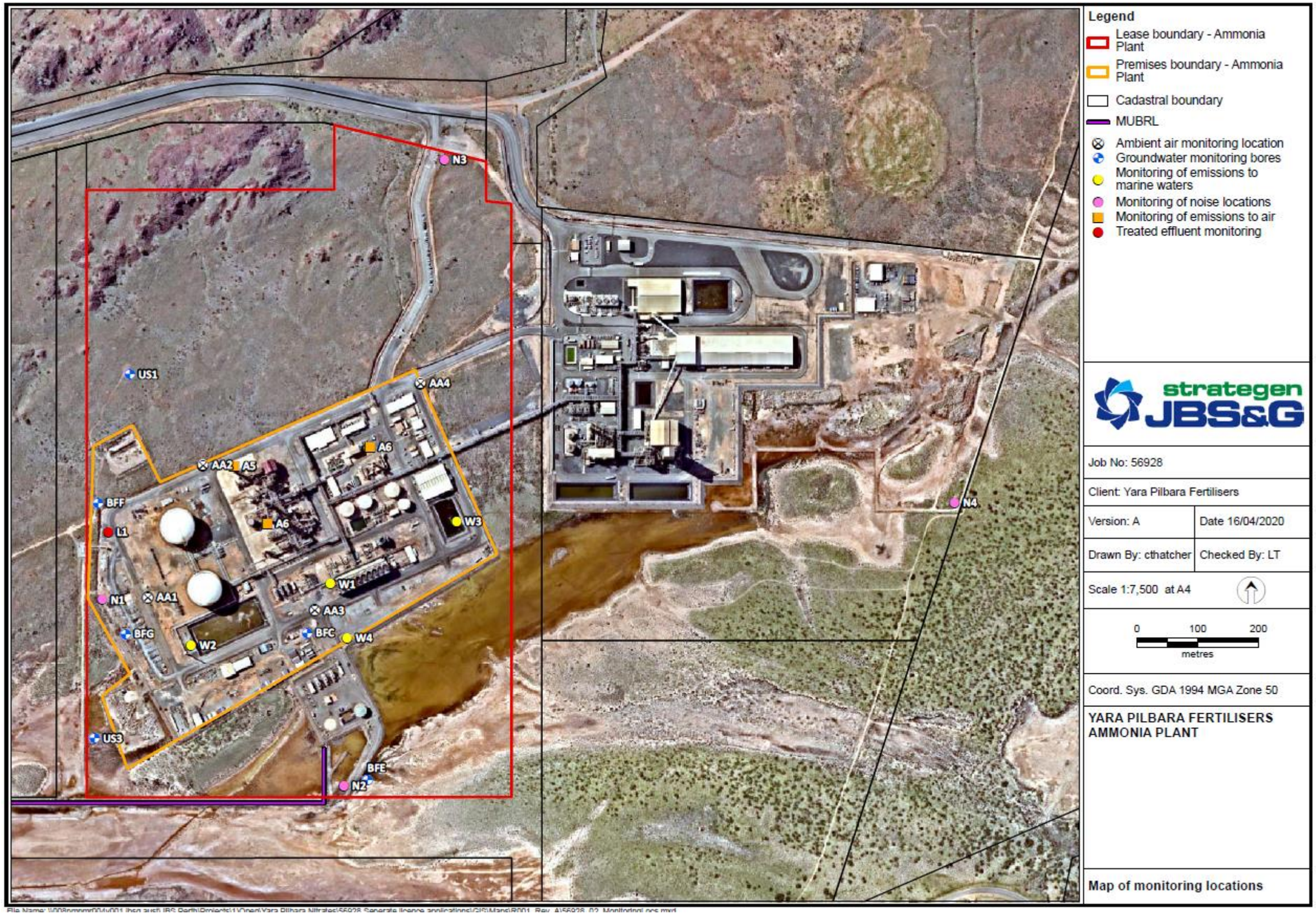



Evaporation Pond
Sewage Treatment Plant
TAN Plant MUBRL Return Line
Oil Water Separator
Wastewater Treatment Plant
Desalination Plant
Cooling Tower Blowdown
Eastern Sedimentation Basin
Western Sedimentation Basin
Ammonia Plant MUBRL Return Line
NORTH ROAD (9 M WIDE)
WEST ROAD (9 M WIDE)
EAST ROAD (9 M WIDE)
CENTRE STREET (9 M WIDE)
SOUTH ROAD (9 M WIDE)
PIPELINE CORRIDOR
AMMONIA STORAGE
AMMONIA STORAGE TANKS
(55 M DIA X 28 M HIGH)
SEDIMENTATION BASIN-1
SEDIMENTATION BASIN-2
PARKING AREA
ADMIN. BLOCK
CONTROL ROOM
WAREHOUSE
FIRE STATION & SAFETY
DESALINATION PLANT (BY OTHERS)
E 937.108 N 963.408
E 895.870 N 922.550
E 892.830 N 915.550
E 888.356 N 828.635
E 893.363 N 550.324
E 1104.177 N 574.382
E 1103.265 N 744.800
E 1216.733 N 585.176
E 1417.400 N 959.300
E 1432.400 N 950.300
E 1505.930 N 962.013
E 1423.000 N 898.200
E 1510.986 N 619.195

Map of authorised discharge point locations



Map of monitoring locations



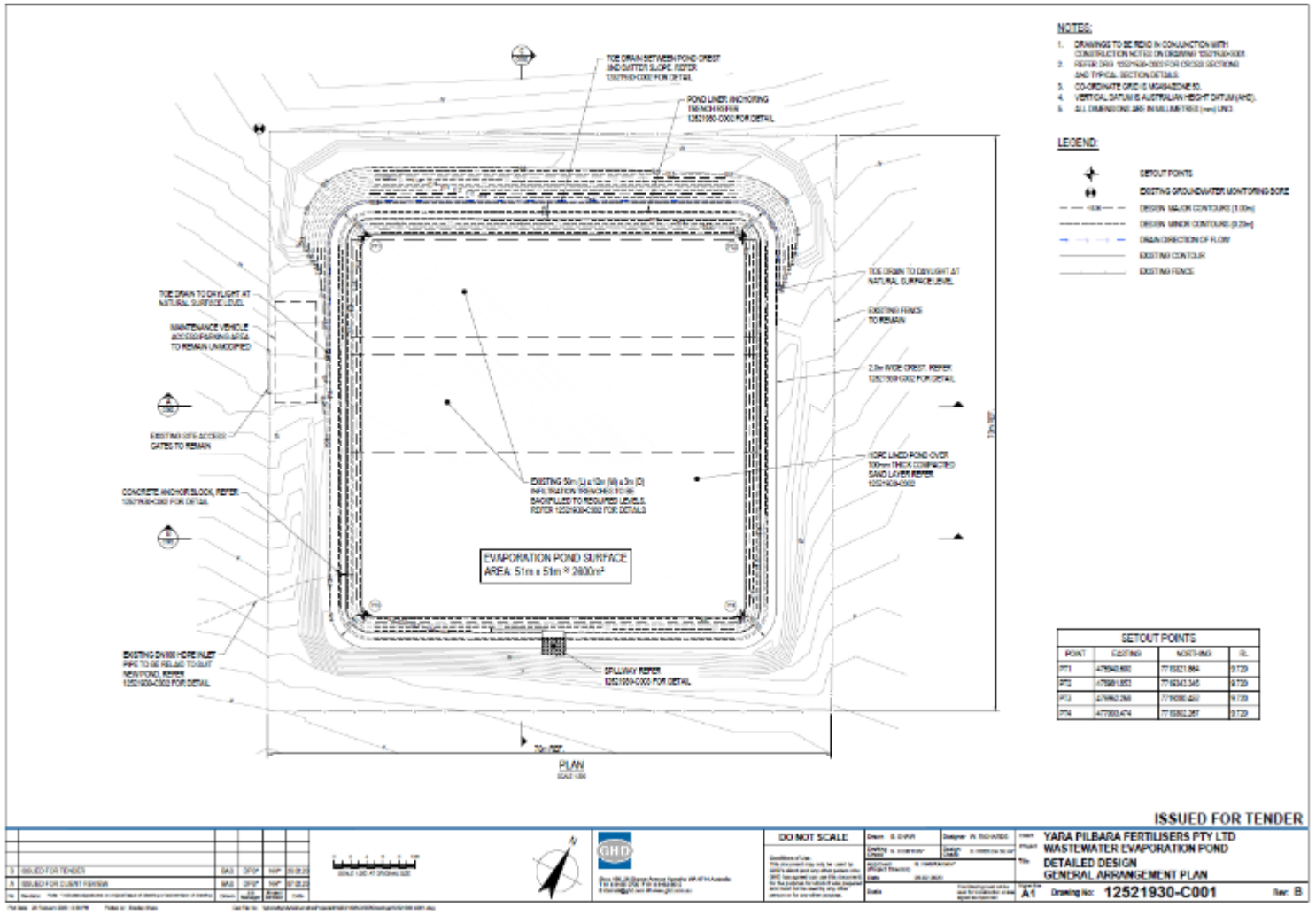
Schedule 2: Premises boundary

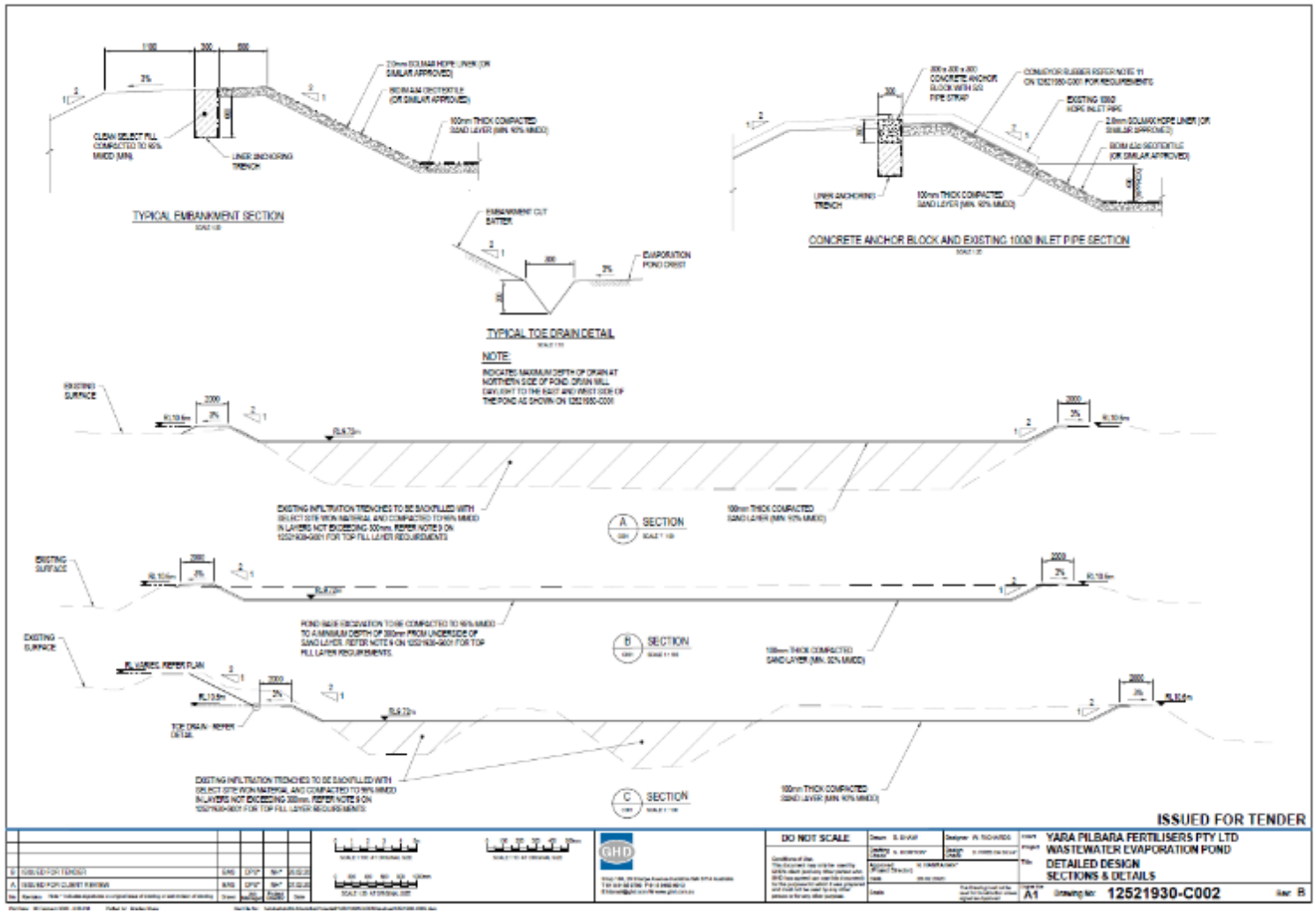
The premises boundary is defined by the coordinates in Table 15.

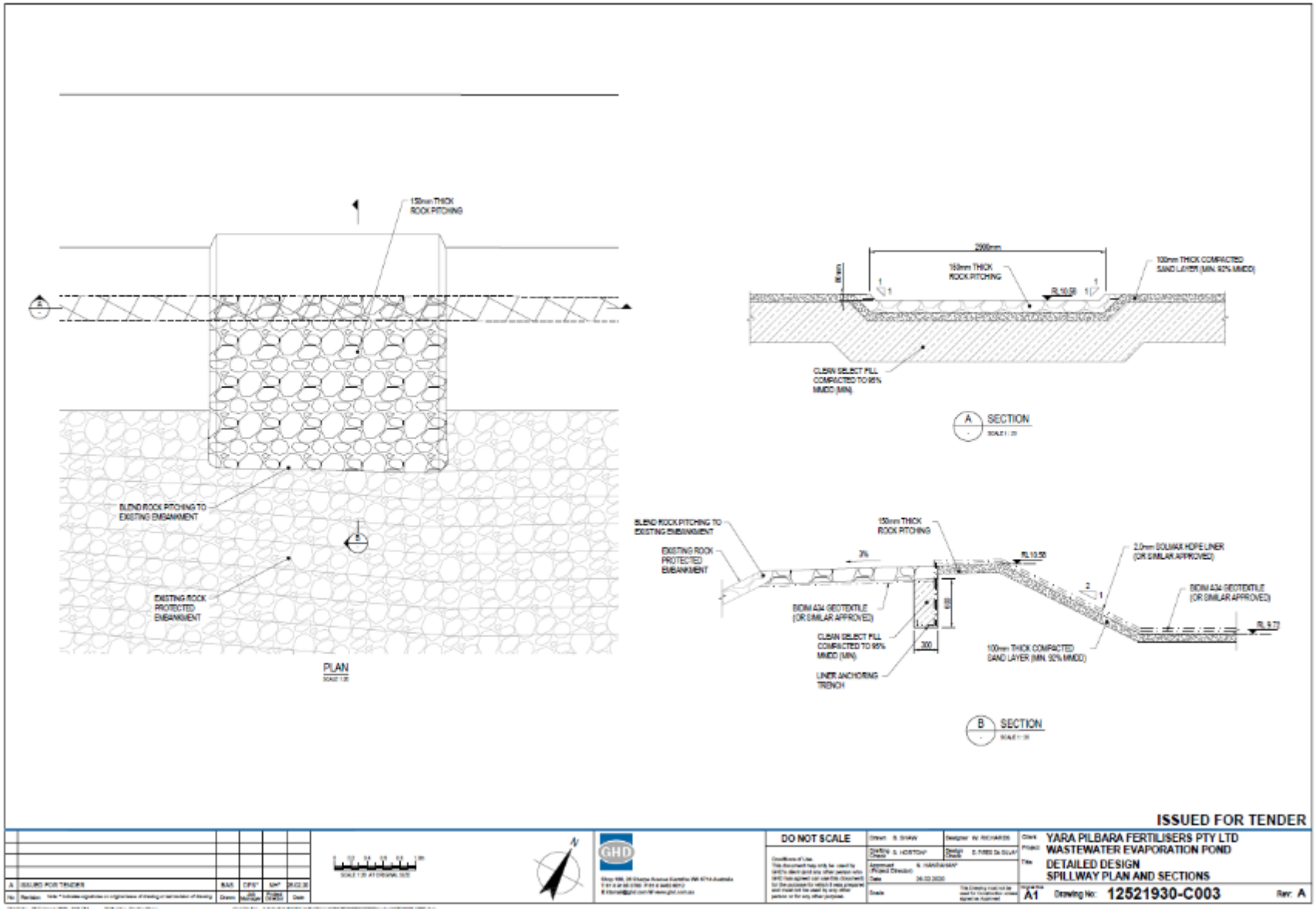
Table 15: Premises boundary coordinates (GDA94)

Easting	Northing	Zone
476920	7719320	50
476984	7719354	50
477030	7719261	50
477450	7719445	50
477585	7719143	50
476976	7718789	50
476934	7718909	50
476980	7718945	50
476911	771906	50

Schedule 3: Works




TYPICAL EMBANKMENT SECTION
CONCRETE ANCHOR BLOCK AND EXISTING 1000 INLET PIPE SECTION
TYPICAL TOE DRAIN DETAIL
NOTE:
A SECTION
B SECTION
C SECTION
ISSUED FOR TENDER
DO NOT SCALE
YARA PILBARA FERTILISERS PTY LTD
WASTEWATER EVAPORATION POND
DETAILED DESIGN
SECTIONS & DETAILS
A1
12521930-C002
B


150mm THICK ROCK PITCHING
BLEND ROCK PITCHING TO EXISTING EMBANKMENT
EXISTING ROCK PROTECTED EMBANKMENT
PLAN
2000mm
150mm THICK ROCK PITCHING
100mm THICK COMPACTED SAND LAYER (MIN. 92% MMDD)
RL 10.58
CLEAN SELECT FILL COMPACTED TO 95% MMDD (MIN)
A SECTION
BLEND ROCK PITCHING TO EXISTING EMBANKMENT
EXISTING ROCK PROTECTED EMBANKMENT
150mm THICK ROCK PITCHING
3%
RL 10.58
2.0mm BOLMAR HDPE LINER (OR SIMILAR APPROVED)
BIDIM A34 GEOTEXTILE (OR SIMILAR APPROVED)
RL 9.77
BIDIM A34 GEOTEXTILE (OR SIMILAR APPROVED)
CLEAN SELECT FILL COMPACTED TO 95% MMDD (MIN)
LINER ANCHORING TRENCH
100mm THICK COMPACTED SAND LAYER (MIN. 92% MMDD)
B SECTION
ISSUED FOR TENDER
DO NOT SCALE
YARA PILBARA FERTILISERS PTY LTD
WASTEWATER EVAPORATION POND
DETAILED DESIGN
SPILLWAY PLAN AND SECTIONS
A1
Drawing No: 12521930-C003
Rev: A