Revised Licence

Licence Number	L6107/1967/17
Licence Holder	CSBP Limited
ACN	008 668 371
Registered business address	Level 14, Tower 2 Brookfield Place 123 St Georges Terrace PERTH WA 6000
DWER file number	DWERVT3889
Duration	31/07/2011 to 29/07/2030
Date of last amendment	26/03/2021
Premises	CSBP Limited Part of Lot 20 on Diagram 78086, Volume 1918 / Folio 244 and Part of Lot 18 on Plan 17311, Volume 2058 / Folio 310 KWINANA BEACH WA 6167 As defined in Attachment 1

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed capacity**
Category 31: Chemical manufacturing	3,712,000 tonnes per annum
Category 61: Liquid waste facility	10,000 tonnes per annum
Category 61A: Solid waste facility	10,000 tonnes per annum
Category 75: Chemical blending or mixing not causing discharge	100,000 tonnes per annum

This amended licence is granted to the licence holder, subject to the following conditions, on 26/03/2021, by:

Chris Malley
Digitally signed by Chris Malley
Date: 2021.03.26 16:11:04 +08'00'

Manager, Process Industries

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

The licences issued for the Premises since 2009

Instrument log table		
Instrument	**Issued**	**Description**
L6107/1967/16	29/11/2009	Licence re-issue
L6107/1967/17	14/07/2011	Licence issued
L6107/1967/17	29/04/2016	Department initiated amendment in accordance with section 59(1)(k) of the *Environmental Protection Act 1986* to amend the duration of the licence date month year.
L6107/1967/17	30/06/2016	Licence amended with the revised SDOOL discharge limits.
L6107/1967/17	6/02/2017	Amendment Notice 1: Change of Registered Business Address.
L6107/1967/17	1/03/2017	Amendment Notice 2: authorisation for construction and operation of the ANE Plant and an additional category 75 in the licence.
L6107/1967/17	22/01/2018	Amendment Notice 3: Construction and operation of a Water Treatment Plant, remove Mn and Fe limits and add Quarter to the definitions re: condition A4(a)(ii).
L6107/1967/17	26/04/2018	Amendment Notice 4: Licensee initiated amendment to replace 'three month period' with 'Quarter' to conditions G2(a)(viii), A5(a)(ii) and A6(a).
L6107/1967/17	2/12/2019	Amended Licence: Amendment and consolidation of previous amendments into a new Amended Licence.
L6107/1967/17	01/07/2020	Amended Licence: Licensee initiated amendment to add conditions to control Controlled Waste acceptance.
L6107/1967/17	26/03/2021	Amended Licence: CEO initiated amendment to correct a controlled waste category for ammonium nitrate emulsion.

CONDITIONS OF LICENCE

DEFINITIONS

In these Conditions of Licence, unless inconsistent with the text or subject matter:

'Approved form' means the Annual Audit Compliance Report (AACR) Form template approved by the CEO for use and available via DWER's external website.

'**Annual Period**' means a 12 calendar month period, commencing on the 1 July;

'ANE' means Ammonium Nitrate Emulsion plant;

'DWER' means Department of Water and Environmental Regulation.

'CEO' means Chief Executive Officer of the Department of Water and Environmental Regulation;

'CEO' for the purpose of correspondence means:

Chief Executive Officer
Department Administering the *Environmental Protection Act 1986*
Locked Bag 10
JOONDALUP DC WA 6027
Telephone: (08) 6367 7000
Facsimile: (08) 6367 7001
Email: info@dwer.wa.gov.au

'Controlled waste' as defined in the Controlled Waste Regulations;

'Controlled Waste Category Group' as defined in the controlled waste category list (DWER, May 2018) available from https://www.der.wa.gov.au/images/documents/our-work/controlled-waste/updated_controlled_waste_category_list/20180511_Controlled_Waste_Category_list.pdf;

'Controlled Waste Regulations' means *Environmental Protection (Controlled Waste) Regulations 2004* (WA);

'Delivery vehicle' means the vehicle in which the waste material was delivered;

'g/m^3' means grams per cubic metre, expressed at 0 degrees Celsius and 1.0 atmosphere pressure (101.325 kilopascals);

'g/s' means grams per second;

'kg/day' means kilograms per day;

'KWRP pipeline' means the Water Corporation operated Kwinana Water Reclamation Plant pipeline for supply of reclaimed water to industry;

'licensee' means the licence holder specified on page one of the licence;

‘licensed premises’ means the operations undertaken by CSBP Limited within the premises described by the Certificate of Title as Kwinana Lots 205, 206, 208 and portion of each of Kwinana Lots 18, 207, 209 and Cockburn Sound Locations 244 and 704; the whole of the said land being Lot 20 the subject of Diagram 78086;

‘m/s’ means metres per second;

‘MDEA’ means methyl diethanolamine;

‘NOx concentration’ means the total combined concentration of nitric oxide and nitrogen dioxide, expressed as nitrogen dioxide, dry, at 0 degrees Celsius and 1.0 atmosphere pressure (101.325 kilopascals);

‘QAP’ means quality assurance program;

‘Quarter’ means a three month period of time commencing on either 1 January, 1 April, 1 July or 1 October;

‘reliable data’ means data which meets acceptable quality criteria, verified by calibration procedures and detailed in the QAP;

‘stack test’ means a representative sample taken at normal operating conditions;

‘start up’ with reference to the integrated Ammonium Nitrate - Nitric Acid Plant means from when the reactors are 'lit-off' to when ammonia is introduced to the Selective Catalytic Reductor (SCR);

‘SDOOL’ means the Water Corporation operated Sepia Depression Ocean Outlet Landline;

‘usual business day’ means Monday to Friday excluding public holidays.

‘waste type’ means waste types identified in Schedule 1 of the Controlled Waste Regulations (as applicable).

Other terms take their meaning as defined in the *Environmental Protection Act 1986.*

GENERAL CONDITIONS

REPORTING FORMAT

G1(a) The licensee shall ensure that any continuous atmospheric discharge data submitted by the licensee in accordance with the conditions of this licence shall be computer readable and shall be:

(i) in time-series hourly-averaged listings; and
(ii) the time mark in hourly-averaged continuous data shall refer to the data collected in the hour prior to the time mark.

G1(b) The licensee shall include with submitted data all relevant targets and discharge limits associated with each substance that is required to be monitored by a condition of this licence.

G1(c) The licensee shall, for the practical purposes of reporting monitoring results, not wait for analytical results that have a long turn-around time where, in such cases, the licensee should annotate a report to the effect that certain results will be provided in the next sequential report.

ANNUAL REPORTING

G2(a) The licensee shall provide to the CEO, an annual monitoring report pursuant to:

(i) Condition G4(d) for updated information for the QAP;

(ii) Condition M3 should the emergency wastewater discharges to Cockburn Sound via the Beach outfall occur;

(iii) Condition M4(c) providing averaged wastewater data for each month in the reporting period;

(iv) Condition W1(c) for the annual groundwater monitoring report;

(v) Condition A2(a) for continuous monitoring of nitrogen oxide emissions;

(vi) Condition A4(b) for a summary of hydrofluoric acid data for the Superphosphate and Granulation Plants in accordance with Condition A4(a);

(vii) Condition A5(b) for a summary of ammonia data for the Granulation Plant in accordance with Condition A4(a);

(viii) Condition A6(b) for a summary of each Quarter NOx grab samples for the Ammonia Plant; and

(ix) Condition A7(b) for a summary of the stack testing data for the 2008 Ammonium Nitrate Prilling Plant.

(x) Condition WA2 the total amount of waste accepted onto the premises, for each waste type.

G2(b) The licensee shall ensure that the data required by condition G2(a) for the Annual Period be provided to the CEO prior to 1 September of each year.

G2(c) The licensee must:

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

(ii) prepare and submit to the CEO by no later than 1 September an Annual Audit Compliance Report in the Approved Form.

G3(a) The licensee shall notify the CEO before 5pm on the next usual business day after becoming aware that any monitoring result has exceeded a target or a limit for a waste discharge specified in any condition of this licence.

G3(b) The licensee shall provide a non-conformance report to the CEO where any monitoring results are in excess of the limits specified in any condition of this Licence within seven usual business days of that exceedance becoming known, where the exceedance report shall contain:

(i) the amount by which the limit was exceeded, supported by relevant monitoring data;

(ii) reasons for the emission levels being in excess of the limits; and

(iii) an outline of corrective action taken by the licensee to ensure that emission levels are maintained below the limits, where applicable.

G3(c) The licensee shall provide a detailed report to the CEO of the outcome of internal investigations by the licensee where any exceedance warrants further investigation, so determined by the CEO, within a time period so determined by the CEO.

QUALITY ASSURANCE PROGRAM

G4(a) The licensee shall maintain a current QAP, which describes in detail the sampling methodology, calibration, instrumentation and calculation procedures implemented to satisfy any monitoring requirement contained in the conditions of this licence.
The QAP may refer to other published methods.

G4(b) The licensee shall ensure that all monitoring equipment, required by any licence condition, is calibrated in accordance with the manufacturer's requirements or an appropriate Australian, International or appropriate standard of another country.

G4(c) The licensee shall ensure that the QAP, referred to condition G4(a), shall be amended to reflect any alterations or additions to the calibration, instrumentation and calculation procedures being adopted in practice by the licensee within three months of that change occurring.

G4(d) The licensee shall provide the CEO with an updated tabulated list of all QAPs required for accurate reporting pursuant to conditions of this licence, the condition to which they relate and the most recent revision date in each annual report.

GROUNDWATER PROTECTION CONDITIONS

GROUNDWATER MONITORING PROGRAM

W1(a) The licensee shall ensure that all water samples, required by any conditions of this licence, shall be taken, preserved, transported and analysed (where appropriate) in accordance with the latest DWER approved CSBP Ground Water Operating Strategy.

W1(b) The licensee shall conduct groundwater monitoring in accordance with the latest DWER approved CSBP Ground Water Operating Strategy.

W1(c) The licensee shall prepare an annual groundwater monitoring report, in accordance with the requirements of condition W1(b), to indicate contours calculated from measurements and samples taken from the monitoring bores detailed in the CSBP Ground Water Operating Strategy referred to in W1(b) and shall include data required by condition W1(b).

W1(d) The licensee shall contain and recover, or absorb and dispose of, liquid resulting from spills or leaks of chemicals including fuel, oil or other hydrocarbons, whether inside or outside secondary containment compound(s).

MARINE POLLUTION CONTROL CONDITIONS

STOCKPILE MANAGEMENT

M1 The licensee shall at all time store raw materials and fertilisers (except phosphate rock) upon a sealed hardstand and under a rainproof covering.

MARINE DISCHARGES

M2(a) The licensee shall ensure that all process wastewater shall only be discharged to the environment via the:

(i) diffuser at the end of the submarine pipeline to Cockburn Sound,

(ii) SDOOL; or

(iii) emergency beach outfall to Cockburn Sound.

M2(b) The licensee shall notify the CEO of any intention to discharge wastewater other than stormwater via the emergency beach outfall to Cockburn Sound.

MONITORING PROGRAM FOR EMERGENCY MARINE DISCHARGES

M3 The licensee shall, in the event of a discharge via the beach outfall, conduct the following monitoring program in order to estimate the mass load and concentration of substances entering Cockburn Sound via the beach outfall:

(i) representative samples shall be taken of the discharge;

(ii) determine the parameters as specified in Condition M4(c); and

(iii) a record of start and stop times of wastewater discharge via the beach outfall shall be kept.

MONITORING PROGRAM FOR DISCHARGE VIA THE SUBMARINE PIPELINE OR TO SDOOL

M4(a) (i) The licensee shall collect samples from the effluent stream, that is discharged in accordance with Condition M2(a)(i) or (ii), where the samples are bulked to form a 24-hour composite sample which is representative of the effluent discharged during those 24 hours.

(ii) The licensee shall ensure that no more than ten 24-hour composite samples per year are missed due to error or malfunction.

(iii) The licensee shall ensure that no more than two consecutive 24-hour composite samples are missed.

M4(b) The licensee shall determine the discharge of the effluent stream, as required by Condition M2(a)(i) or (ii), in cubic metres per day, on a daily basis.

M4(c) The licensee shall determine the pH and concentration of Total Inorganic Nitrogen, Orthophosphate, Aluminium, Arsenic (inorganic), Cadmium, Chromium, Cobalt, Copper, Free Cyanide, Fluoride, Iron, Lead, Manganese, MDEA, Mercury, Molybdenum, Nickel, Vanadium and Zinc, for each sample bulked on a daily basis, as required by condition M4(a). For this purpose, Total Inorganic Nitrogen is defined as the combination of ammonium ion nitrogen (NH_4^+) and nitrate nitrogen (NO_3^-).

DISCHARGE LIMITS

M5(a) The licensee shall ensure that the daily concentrations and monthly average daily loads of substances in effluent discharged in accordance with Condition M2 shall not exceed the limits specified in Table 1 where Total Inorganic Nitrogen, Orthophosphate, and Fluoride are calculated as a three-month rolling average.

Table 1: Discharge limits to Cockburn Sound or SDOOL

Parameter	**Daily concentration limit for discharge to Cockburn Sound / Target concentration for discharge to SDOOL**	**Monthly average daily load limit for both the discharge to Cockburn Sound and SDOOL**
	mg/L	**kg/day**
Total Inorganic Nitrogen	-	200
Orthophosphate	-	100
Arsenic (Inorganic)	0.1	-
Cadmium	0.036	-
Copper	0.285	-
Free cyanide	0.1	-
Fluoride	-	54
Mercury	0.0014	0.020
Molybdenum	0.25	-
MDEA	16.0	-
Zinc	2.25	-

M5(b) Effluent discharged to Cockburn Sound or to the SDOOL shall at all times be between 6.0 and 9.0 pH units except for one day in the month when the pH may be between 4.0 and 10.0.

AIR POLLUTION CONTROL CONDITIONS

EMISSIONS MONITORING REQUIREMENTS

A1(a) The licensee shall ensure that waste gases shall only be emitted to the environment through the emission points shown in Attachment 1 and listed in Attachment 2.

A1(b) The licensee shall also report the following parameters when determining, for the purpose of any condition of this licence, the quantity and/or nature of waste gases discharged:

(i) density at stack temperature;

(ii) moisture content;

(iii) total volume flow rate at exit temperature;

(iv) exit temperature; and

(v) production rate through the relevant item of equipment from which the discharge originates, percent of maximum capacity and other notable operational circumstances likely to affect discharges from the associated item.

A1(c) The licensee shall ensure that, where any of the parameters required by Condition A1(b) are not directly measured, then estimates shall be included and declared as such, including the source and calculation method of the estimates.

A1(d) Where continuous gaseous emission analysers are required by conditions of this licence, the licensee shall ensure that reliable emissions monitoring data is obtained and recorded for:

(i) greater than 90 percent of the manufacturing plant's stable operating time in every calendar month period; and

(ii) greater than 95 percent of the manufacturing plant's stable operating time in any 12 consecutive calendar months.

INTEGRATED AMMONIUM NITRATE AND NITRIC ACID PLANTS

NITROGEN OXIDES MONITORING

A2(a) The licensee shall continuously monitor the emission of NOx gases from each Nitric Acid Plant.

A2(b) The licensee shall ensure that the monitoring system, required by Condition A2(a) shall measure directly or otherwise estimate the following quantities expressed as 1 hourly averages:

(i) NOx concentration g/m^3; and

(ii) NOx mass emission rate in g/s.

A2(c) The licensee shall ensure that the concentration of NOx gases emitted from each Nitric Acid Plant during operation, not including the half-hour period immediately following start-up, expressed as nitrogen dioxide, shall not exceed an hourly average concentration of 0.41 g/m^3.

A2(d) The licensee shall not start-up more than one Nitric Acid Plants at the same time. A minimum of one hour shall be maintained between start-ups of the Nitric Acid Plants.

NITROGEN OXIDES START-UP LIMITATIONS

A3(a) The licensee shall ensure that the Nitric Acid Plants shall not start-up unless a monitoring system is in place to analyse start-up NOx emissions.

A3(b) The licensee shall ensure that a record shall be kept indicating the time, prevailing wind speed and direction, and the maximum half-hourly average NOx concentration in g/m during each start-up of each Nitric Acid Plant.

A3(c) The licensee shall ensure that the NOx concentration of gases emitted from each Nitric Acid Plant during start-up, expressed as nitrogen dioxide, shall not exceed a half-hourly average concentration of 2.0 g/m^3.

SUPERPHOSPHATE MANUFACTURING AND GRANULATION PLANTS

FLUORIDE MONITORING

A4(a) The licensee shall twice every Annual Period take and analyse, using the relevant USEPA or other accredited method, grab samples of waste gases emitted from:

(i) the Superphosphate Manufacturing Plant scrubber stack or the Regenerative Thermal Oxidiser Stack (whichever one is being used at the time of the planned stack sampling), where these stack tests are performed at least two months apart; and

(ii) the Granulation Plant scrubber stack, where these stack tests are performed at least three months apart.

A4(b) The licensee shall ensure that stack sampling, required by condition A4(a) shall measure directly or otherwise estimate the following quantities:

(i) hydrofluoric acid concentration g/m^3; and

(ii) hydrofluoric acid mass emission rate in g/s;

A4(c) The licensee shall ensure that gaseous emissions from the Superphosphate Manufacturing Plant scrubber stack, the Regenerative Thermal Oxidiser stack or the Granulation Plant scrubber stack shall not exceed the target of:

(i) 0.05 g/m^3 as hydrofluoric acid; and

(ii) 2630 kilograms per month as fluoride.

GRANULATION PLANT

AMMONIA MONITORING

A5(a) The licensee shall twice every Annual Period take and analyse using the relevant USEPA or other accredited method, grab samples of waste gases emitted from the Granulation Plant scrubber stacks, where these stack tests are performed at least three months apart.

A5(b) The licensee shall ensure that stack sampling, required by Condition A5(a) shall measure directly or otherwise estimate the following quantities:

(i) ammonia concentration g/m^3; and

(ii) ammonia mass emission rate in g/s;

A5(c) The licensee shall ensure that gaseous emissions from the Granulation Plant Scrubber Stack shall not exceed 1.0 g/m^3 as ammonia.

2000 AMMONIA PLANT

MONITORING OXIDES OF NITROGEN

A6(a) The licensee shall once every Quarter, when the plant is operating, take grab samples of waste gases emitted from the 2000 Ammonia Plant Primary Reformer Stack and Auxiliary Boiler Stack.

A6(b) The licensee shall ensure that grab samples required by condition A6(a) shall measure directly or otherwise estimate the following quantities expressed as 1 hourly averages.

(i) NOx concentration mg/m^3; and

(ii) NOx mass emission rate in g/s.

2008 AMMONIUM NITRATE PRILLING PLANT

PARTICULATES MONITORING

A7(a) The licensee shall perform at least two stack tests per Annual Period of waste gases from the 2008 ammonium nitrate prilling plant scrubber stack, where these tests are performed at least five months apart.

A7(b) The licensee shall ensure that stack testing required by condition A7(a) shall measure directly or otherwise estimate the following quantities expressed as 1 hourly averages:

(i) total particulate concentration g/m^3; and

(ii) total particulate mass emission rate in g/s.

A7(c) The licensee shall ensure that total particulate emissions from the 2008 ammonium nitrate prilling plant scrubber stack, determined in accordance with condition A7(b) shall not exceed 0.05 g/m^3.

A7(d) The licensee shall ensure that stack testing required by condition A7(a) shall be conducted in accordance with USEPA method 5 or another NATA accredited testing method.

WASTE ACCEPTANCE CONTROL CONDITIONS

WA1(a) The licence holder must only accept onto the premises waste of a waste type that meets the corresponding acceptance specification set out in Table 2, and which does not exceed the corresponding rate at which waste is received.

Table 2: Waste acceptance criteria

Waste type	Controlled Waste Category Group	Rate at which waste is received	Acceptance specification
Acidic solutions	B100	Combined total of no more than 10,000 tonnes per annual period of liquid waste and 10,000 tonnes per annual period of solid waste	Tankered into the premises or delivered in intermediate bulk containers (IBC), drums or other containers
Non toxic salts	D300		
Highly reactive chemicals not otherwise specified	E130		
Non-halogenated organic solvents	G110		
Waste mineral oils unfit for their intended purpose	J100		
Food and beverage processing waste	K200		
Car and truck wash waters	L100		
Industrial wash waters contaminated with a controlled waste	L150		
Non-halogenated organic chemicals	M130		
Containers or drums contaminated with residues of a controlled waste	N100		

WA1(b) Where waste does not meet the waste acceptance criteria set out in condition WA1(a), the licence holder must:

(a) reject the waste; and

(b) record the details of the:

(i) waste (type and description);
(ii) source of the waste load;
(iii) name of the waste carrier;
(iv) registration number of the delivery vehicle; and
(v) date that the waste load was rejected; and

(c) maintain accurate and auditable records of all waste loads rejected from the premises.

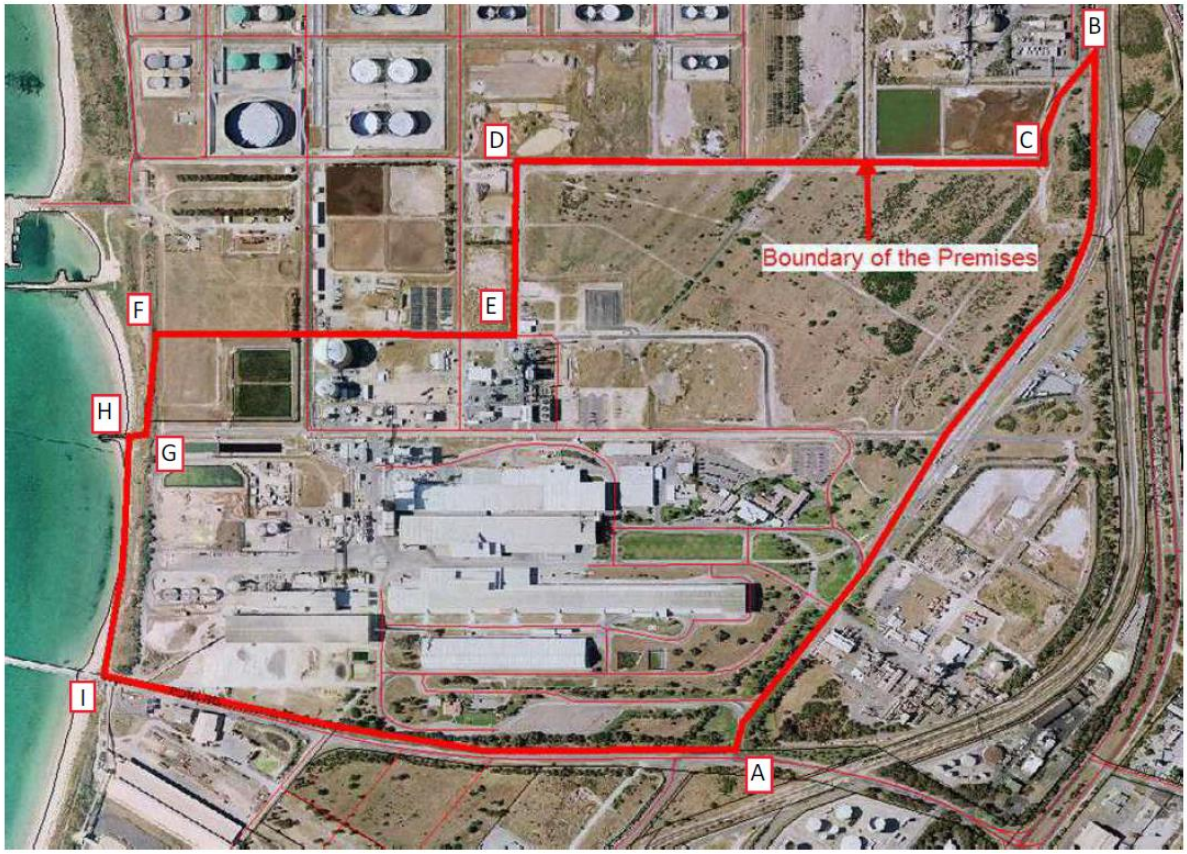
WA1(c) The licence holder must ensure that where waste does not meet the waste acceptance criteria set out in condition WA1(a), it is removed from the premises by the delivery vehicle or, where that is not possible, stored in a quarantined storage area or container and removed to an appropriately authorised facility as soon as practicable.

WA2 The licence holder must record the total amount of waste accepted onto the premises, for each waste type listed in Table 2, in tonnes over the annual period.

Attachment 1: Maps

Premises map

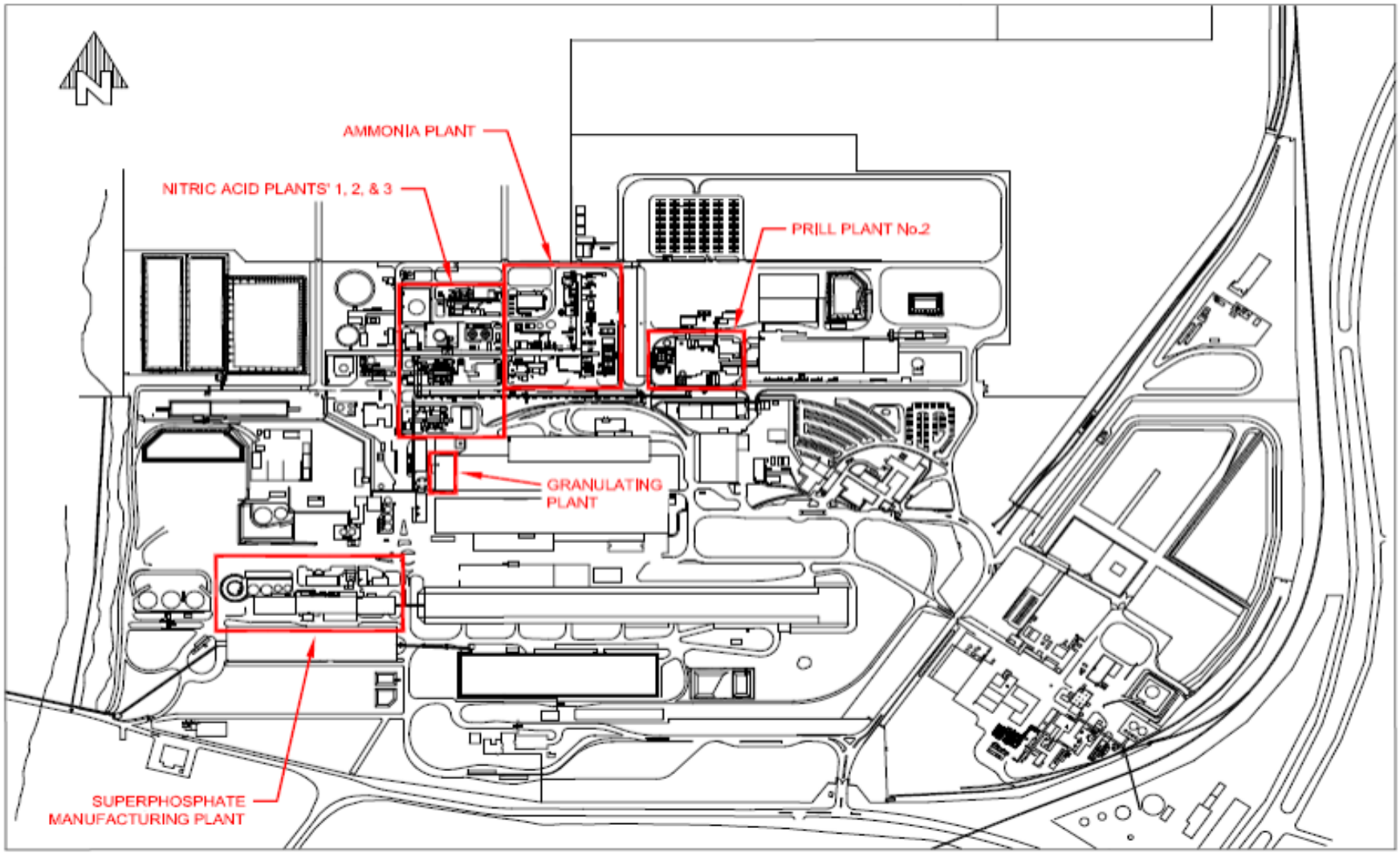
The Premises are shown in the map below.



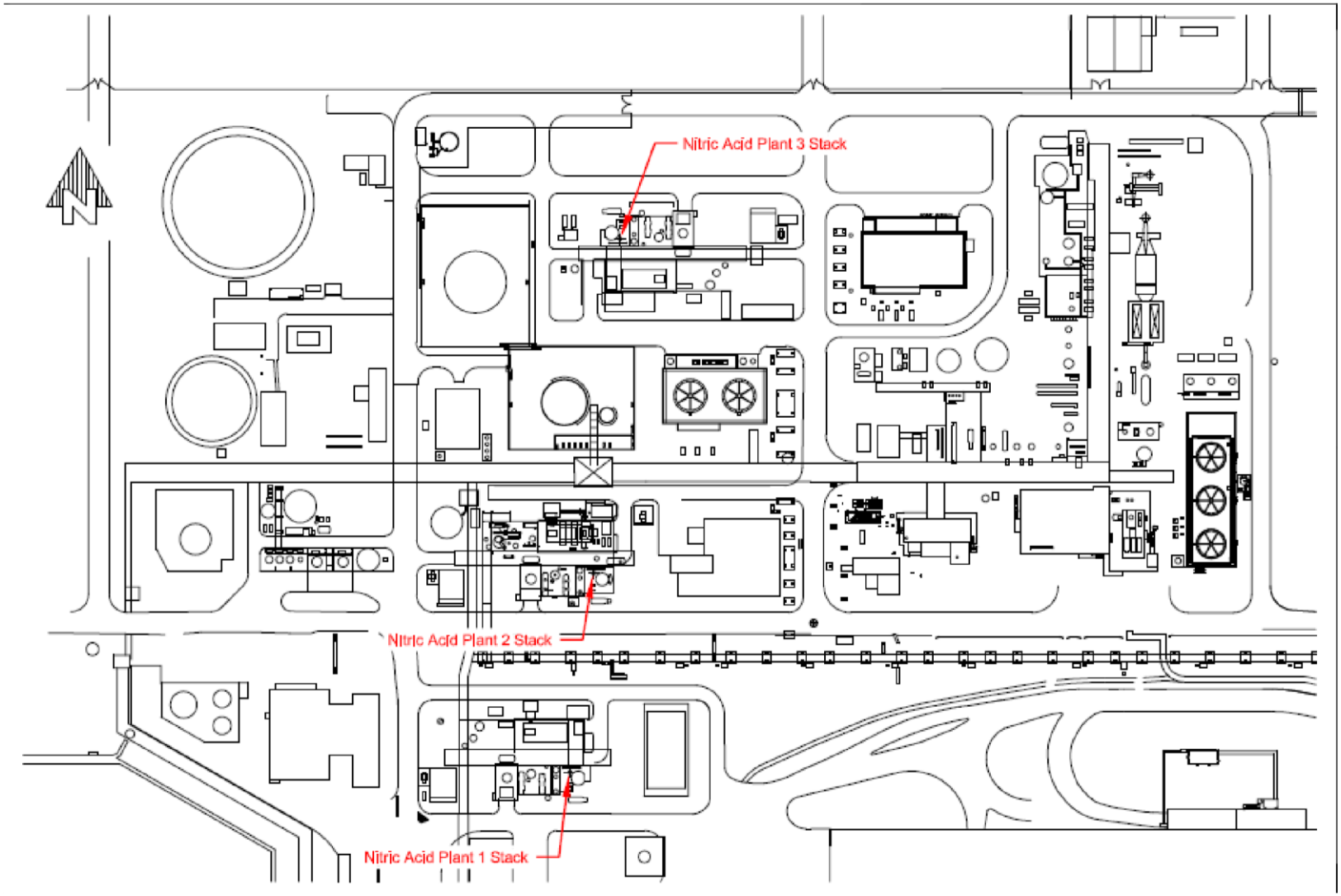
Coordinates of the points shown in figure above (GDA94-MGA Zone 50):

Point	X	Y
A	384141	6431978
B	384679	6433260
C	384601	6433066
D	383785	6433041
E	383782	6432738
F	383231	6432731
G	383206	6432562
H	383181	6432531
I	383137	6432090

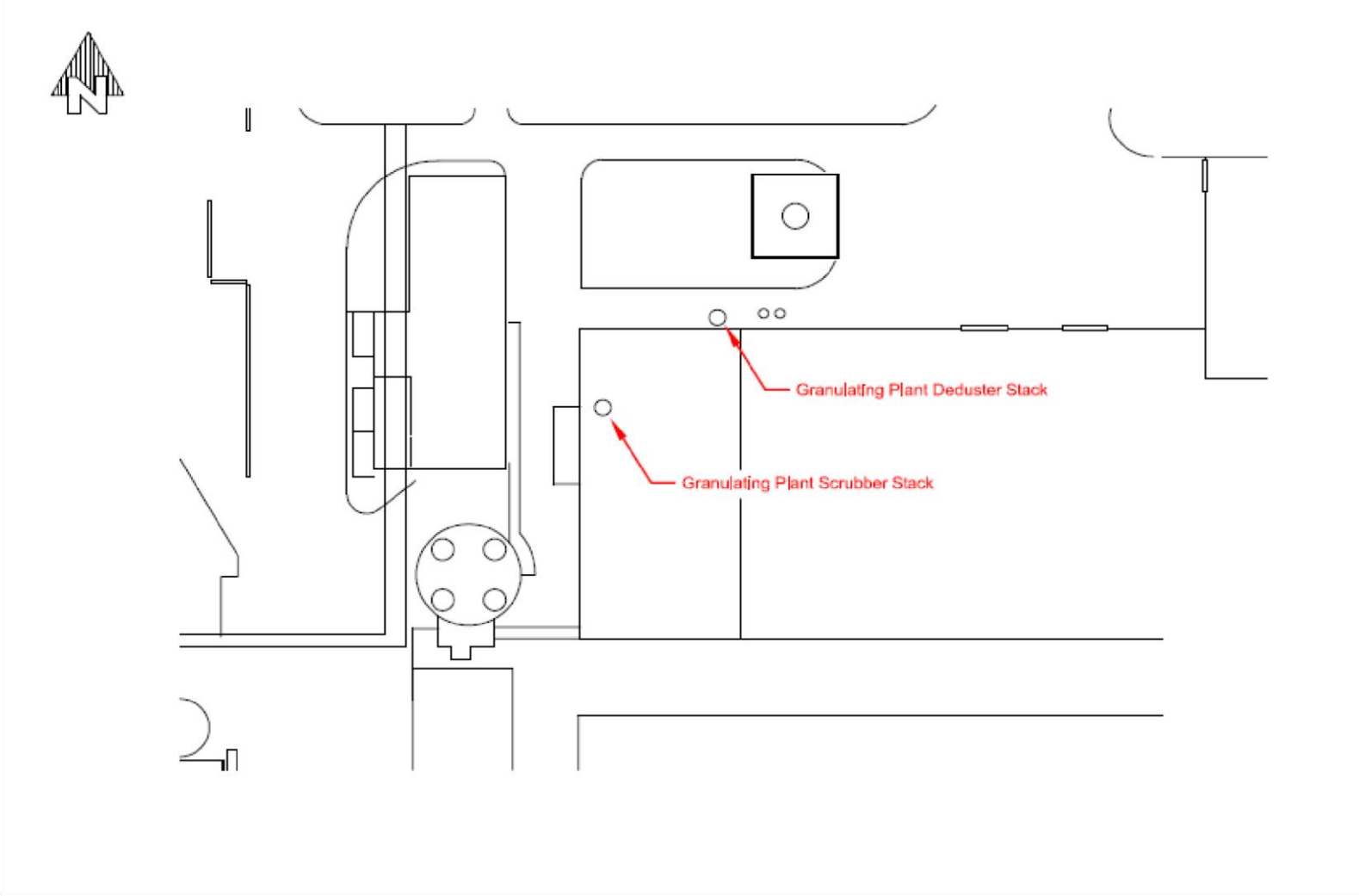
2: Oversight plan of the premises with five subprocesses marked



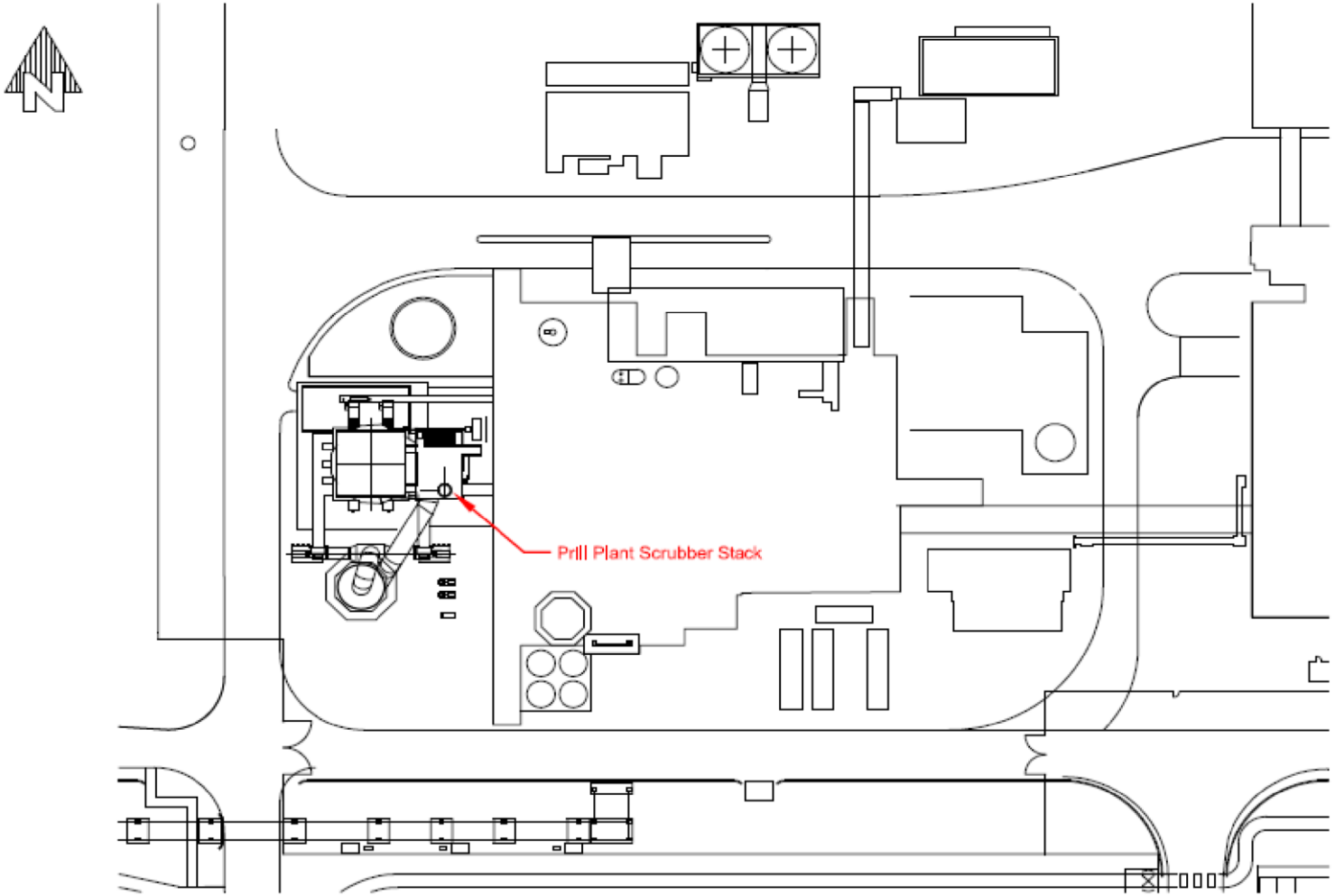
3: Map of the Nitric Acid Plants and the location of the stacks



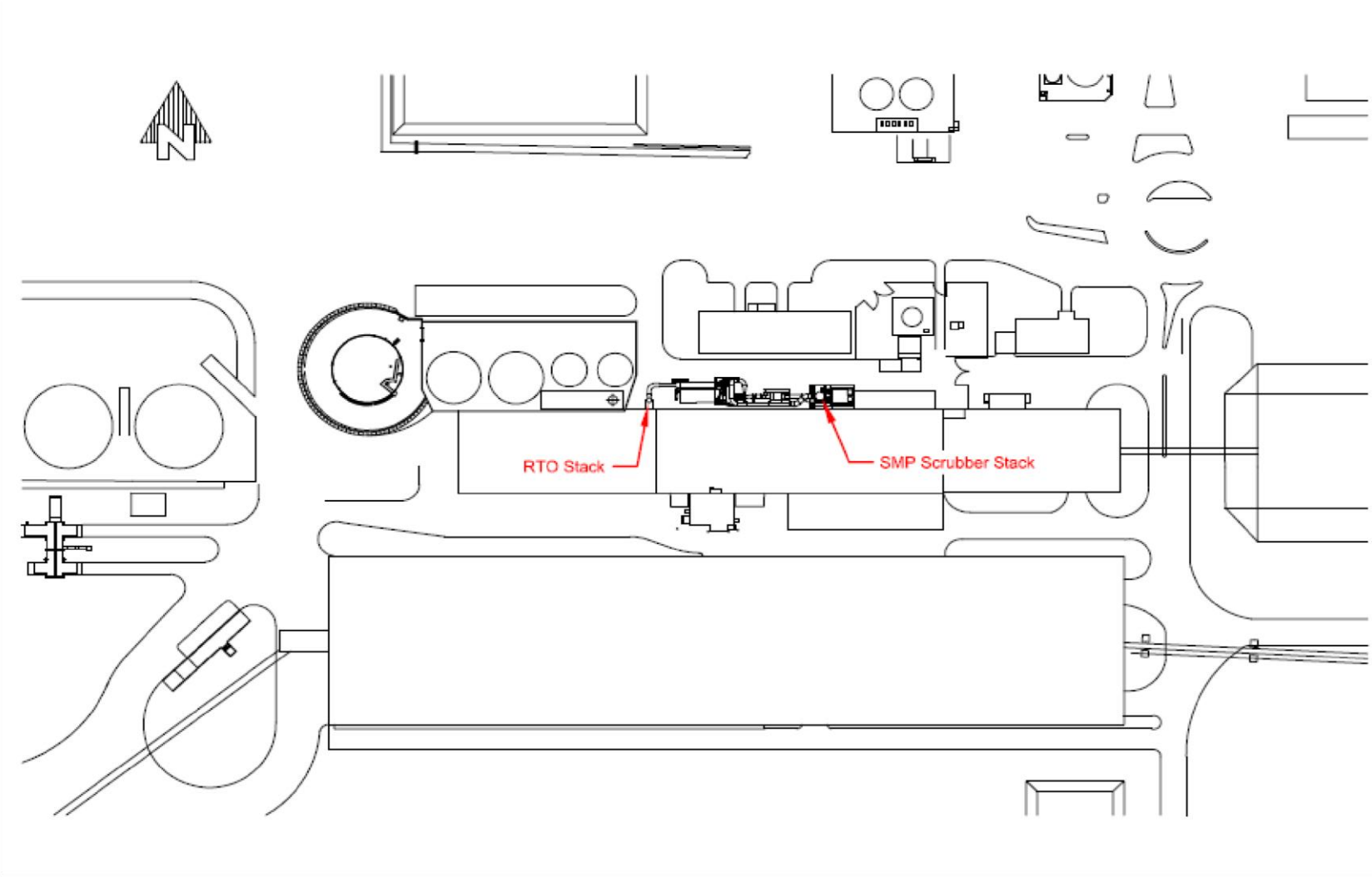
4: Map of the Granulating Plant with the stacks clearly marked



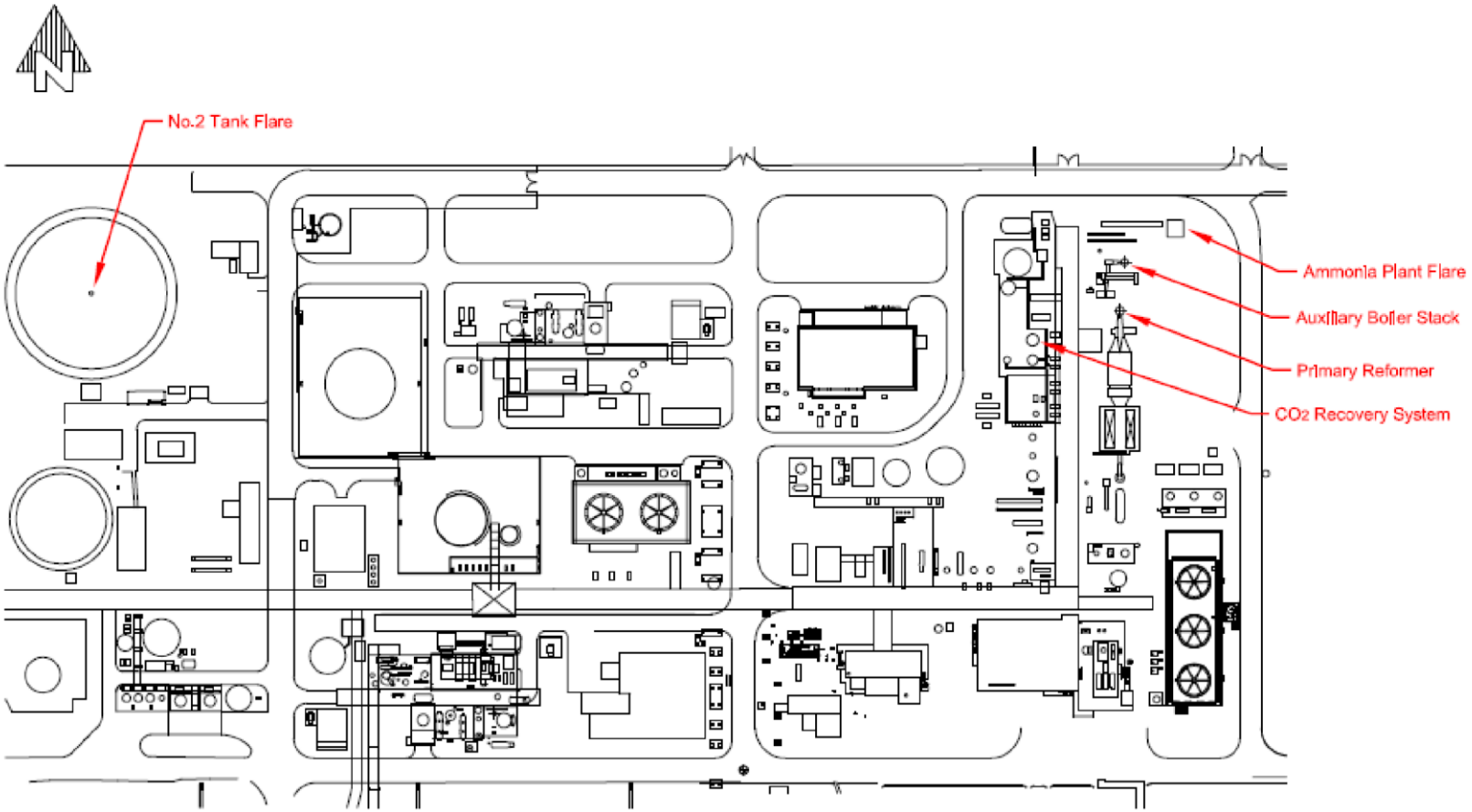
5: Map of the Prill Plant with the stack clearly marked



6: Map of the Super Phosphate Manufacturing Plant with the stacks marked



7: Map of the Ammonia Manufacturing Plant



ATTACHMENT 2

Gaseous emission points during normal operation

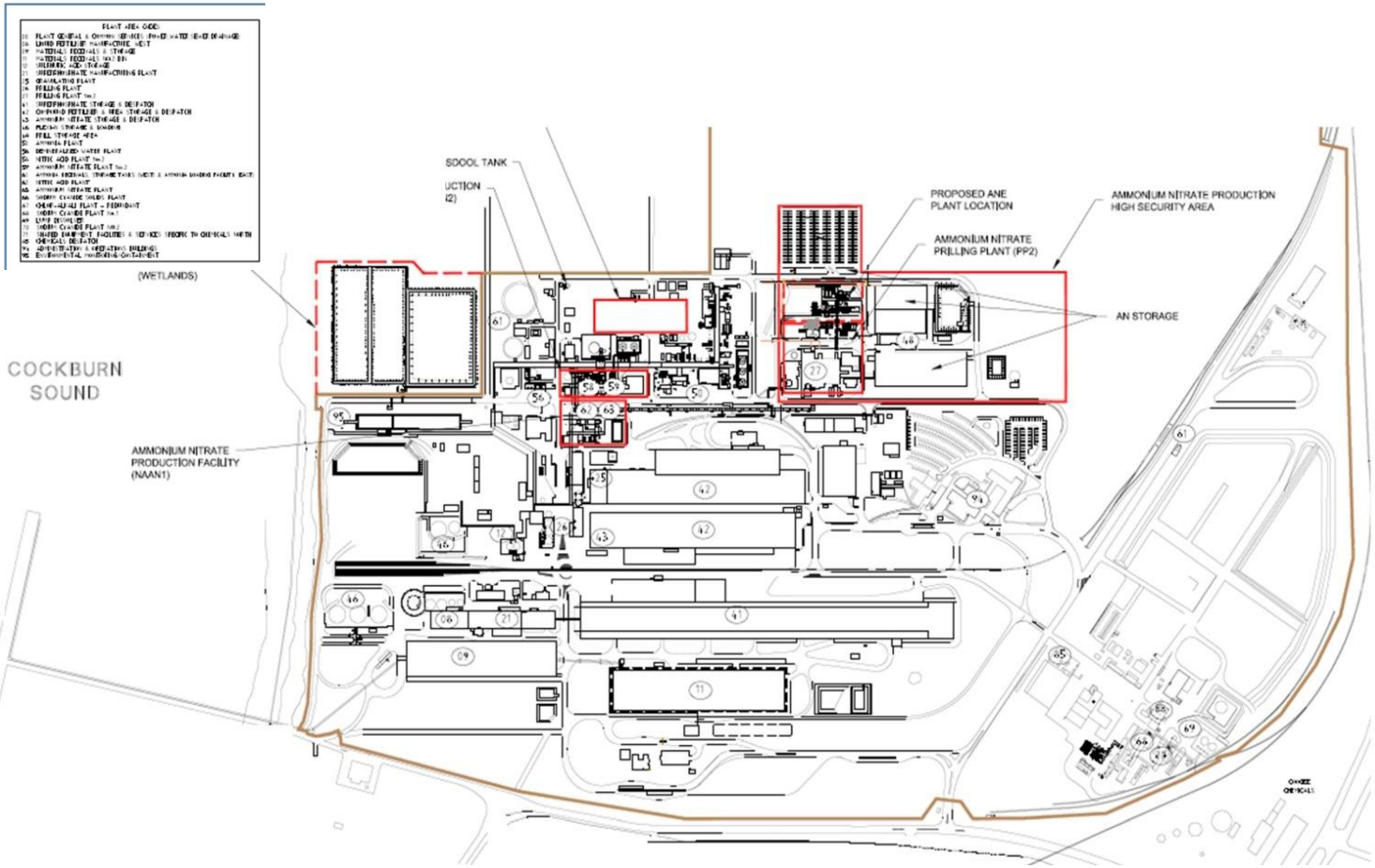
Emission point	Emission point abbreviation	Stack height above ground level (m)	Density range (kg/m^3)	Efflux velocity (m/s)	Volume (m^3/s)	Exit Temp (^oC)
Superphosphate Scrubber Stack	SMP	37.4	1.01		19.3	55
Superphosphate Regenerative Thermal Oxidiser Stack	SMP	27				136
Granulation Plant Scrubber Stack	GP	43.1	1.01		36.0	54
Granulation Plant Deduster Stack	GPDS					
2008 Prilling Plant Stack	PP2	65			62.7	35
Nitric Acid Plants stacks: • during startup • 100% load(1) • 70% load(2)	NAP1, NAP2 & NAP3	64.5	 0.957 0.897 0.854	 27.5	 17.2 26.2 19.3	 60 109 128
2000 Ammonia plant Primary reformer stack CO_2 recovery system Flare tower (two) Auxiliary boiler stack No.2 Tank Flare (flares gas from Tanks 1 & 2 in an emergency situation)	KAP	 30 21 40 30	 0.77 2.03		 37 4.79	 162 50

(1) operating at 100% of full load

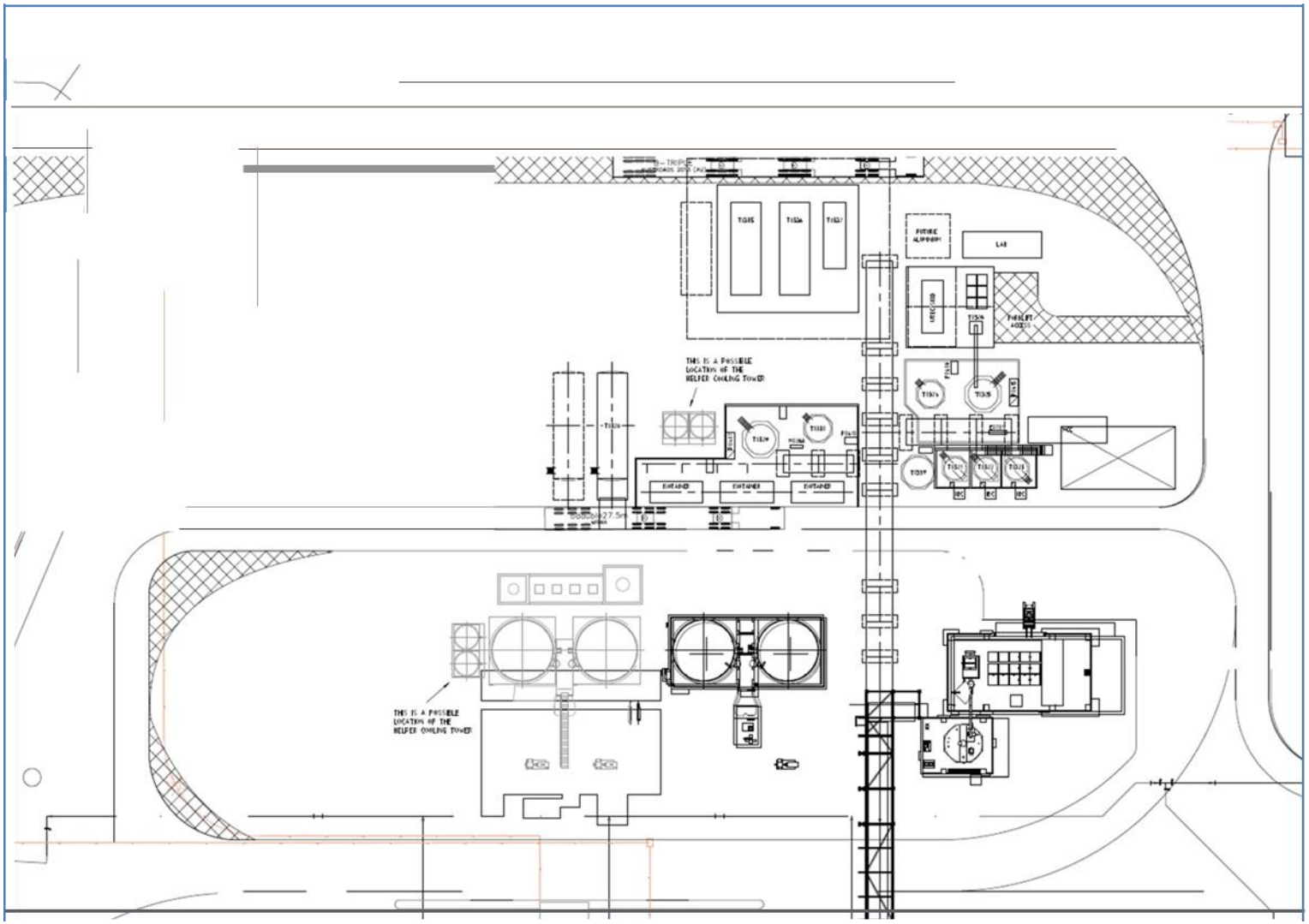
(2) operating at 70% of full load

Attachment 3- ANE Plant Maps

Map: ANE Plant Location

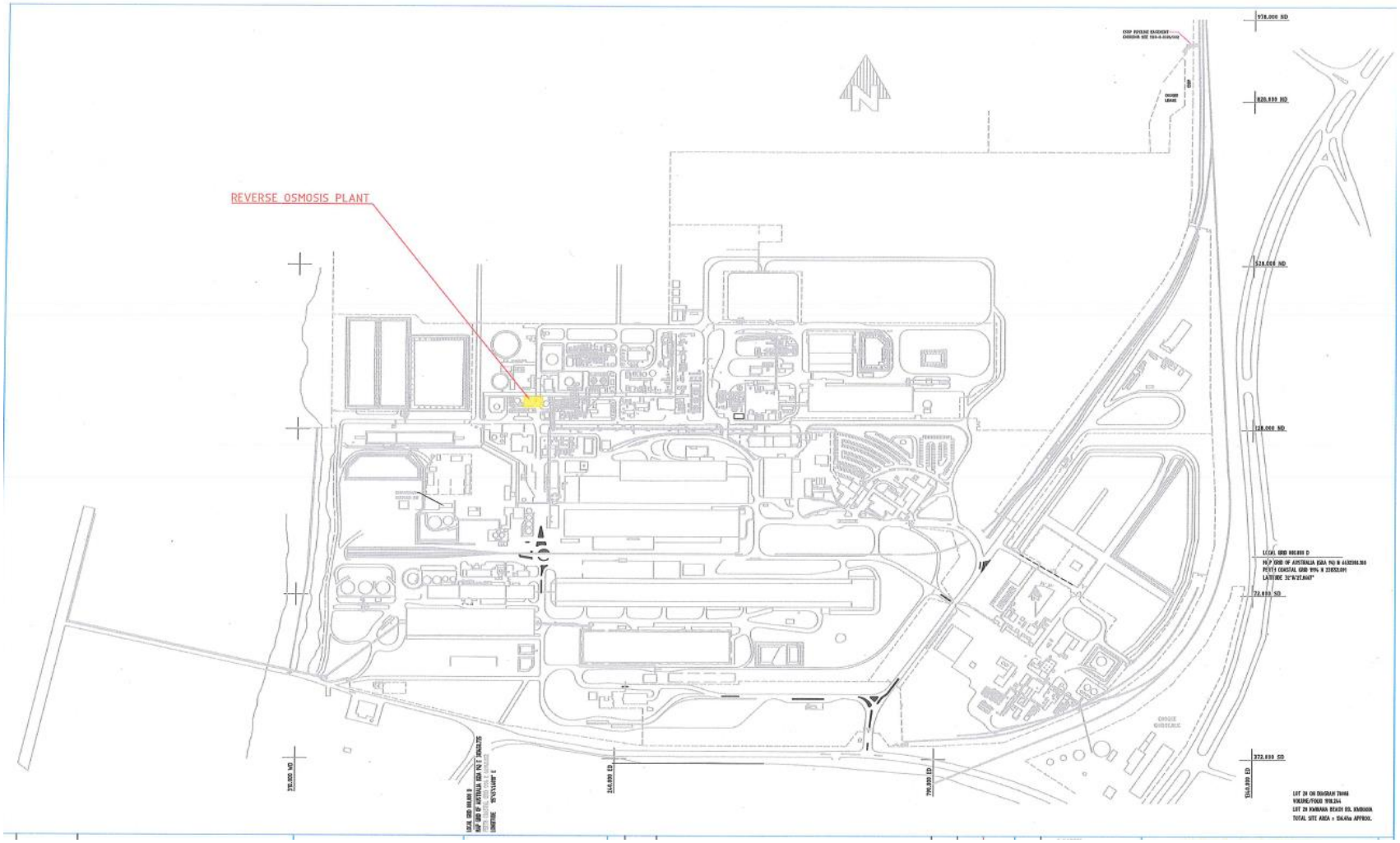


ANE Plant layout map



Attachment 4 – Water Treatment Plant Maps

Water Treatment Plant location



Water Treatment – general layout