



Works approval number	W6607/2021/1
Works approval holder	Alcoa of Australia Limited
ACN	004 879 298
Registered business address	Wagerup Alumina Refinery South West Highway WAROONA, Western Australia
DWER file number	DER2021/000579
Duration	03/08/2022 to 02/08/2024
Date of issue	03/08/2022
Premises details	Wagerup Alumina Refinery Willowdale Road WAROONA WA 6215 Legal description – Lot 700 on Plan 59305 As defined by Schedule 1 Figure 1

Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)	Assessed production capacity
Category 46: Bauxite refining: premises (other than premises within paragraph (b) of category 5) on which alumina is produced from bauxite refining.	2.9 million tonnes per annum

This works approval is granted to the works approval holder, subject to the attached conditions, on 03/08/2022, by:

**Manager, Process Industries
Regulatory Services**

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

Works approval history

Date	Reference number	Summary of changes
03/08/2022	W6607/2021/1	Works approval granted

Interpretation

In this works approval:

- (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 works approval:
 - (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 works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

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

Construction phase

Infrastructure and equipment

1. The works approval 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 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	"25A-2" and "25A-4" bauxite slurry storage tanks and stacks	<ol style="list-style-type: none">(a) The existing stack on each tank must be removed;(b) A new stack must be installed on each tank to a height of at least RL72.15 m;(c) Each new stack must be fitted with a sampling port that is compliant with AS 4323;(d) The slurry storage tank vents must be connected to the powerhouse boilers 2 and 3 via the 35N system.	As shown in Schedule 1 Figure 2 as 25A-2, and 25-4
2.	"35N" reticulation system	<ol style="list-style-type: none">(a) A knockout pot with a mercury trap must be installed and connected to the 35N system;(b) Existing and new drain legs must be added or modified to the 35N system pipework.	As shown in Schedule 1 Figure 2 as Boiler 2 and Boiler 3 Mercury knockout pot 35N

Compliance reporting

2. The works approval holder must within 60 calendar days of the infrastructure and equipment specified by condition 1 being constructed and/or installed:
 - (a) undertake an audit of their compliance with the requirements of condition 1; and
 - (b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.
3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:
 - (a) certification that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;
 - (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and
 - (c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Infrastructure and equipment

4. The works approval holder must ensure the infrastructure listed in Table 2, once installed, or removed, is maintained, and operated in accordance with the corresponding operational requirement set out in that table.

Table 2: Infrastructure operational requirements

	Site infrastructure and equipment	Operational requirements	Infrastructure location
1	25A-2 and 25A-4 slurry storage vent tanks	(a) All vapours must be directed to the powerhouse boilers 2 and 3 via the 35N system except when required for sampling or any part of the connecting system is under maintenance.	As shown in Schedule 1 Figure 2 as 25A-2, 25A-4
2	35N system	(a) All pipework, valves and connections must be maintained to allow vapours to be directed to the powerhouse boilers	As shown in Schedule 1 Figure 2 as 35N
3	Knockout pot with mercury trap	(a) Must be capable of collecting condensed mercury from the 25A-2 and 25A-4 tank vents.	As shown in Schedule 1 Figure 2 as Mercury knockout pot
4	Powerhouse boilers 2 and 3	(a) The 35N system must not be offline for more than a total of 21 days for the connection of the new infrastructure to the existing system	As shown in Schedule 1 Figure 2 as Boiler 2 Boiler 3

Compliance reporting

5. The works approval holder must submit to the CEO a report within 300 calendar days of the installation of the equipment listed in Table 1, or 30 calendar days before the expiration date of the works approval, whichever is the sooner.
6. The works approval holder must ensure the report required by condition 5 includes a summary of the environmental performance of each item of infrastructure or equipment as constructed and / or installed, which at minimum includes records detailing the:
- (a) performance of the connection and redirection of vapours from the 25A-2 and 25A-4 to the 35N system;
 - (b) summary of the emission differences between 25A-2 and 25A-4;
 - (c) testing the boilers 2 and 3 for thermal destruction;
 - (d) volume of mercury collected from the mercury trap;
 - (e) performance of the emission reduction project;
 - (f) a review of the works approval holder's performance and compliance against the conditions of this works approval; and
 - (g) where they have not been met, measures proposed to meet the conditions of this works approval, together with timeframes for implementing the proposed measures.

Records and reporting (general)

7. The works approval holder must maintain accurate and auditable books including the following records, information, reports and data required by this works approval:
- (a) the works conducted in accordance with condition 1; and

- (b) any maintenance of infrastructure that is performed while complying with condition 4.

8. The books specified under condition 7 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 works approval holder for the duration of the works approval; and
- (d) be available to be produced to an inspector or the CEO as required.

Definitions

In this works approval, the terms in Table 3 have the meanings defined.

Table 3: Definitions

Term	Definition
AS 4323.1	means the most recent version and relevant parts of the Australian Standard AS 4323.1 <i>Stationary Source Emissions- selection of sampling positions</i>
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the <i>Environmental Protection Act 1986</i> Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V Division 3 of the EP Act.
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 works approval
EP Act	<i>Environmental Protection Act 1986</i> (WA).
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure 1) in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
RL	means relative level
time limited operations	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject to the relevant conditions.
VOCs	means volatile organic compounds
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is outlined in pink within the map below.

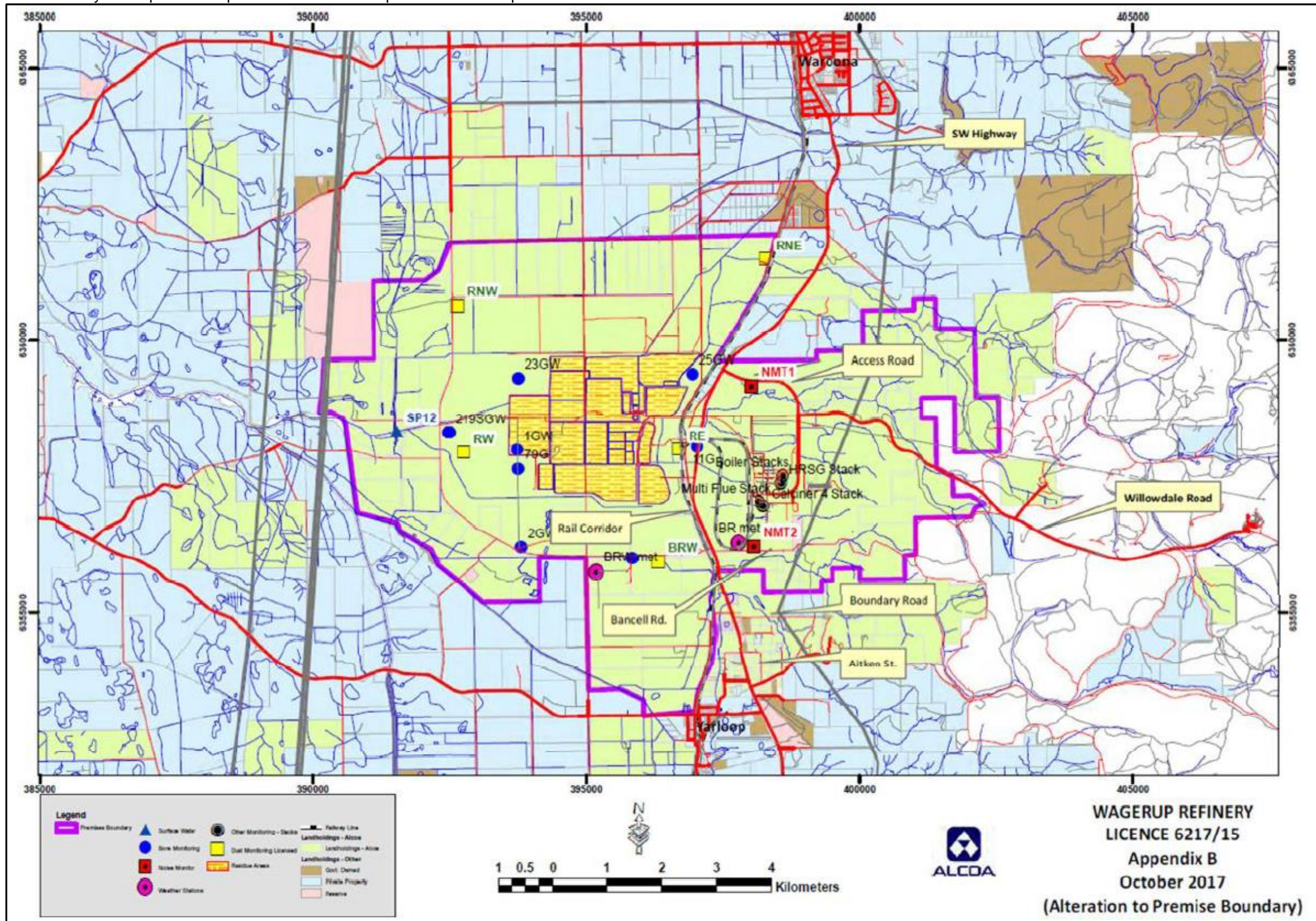


Figure 1: Map of the boundary of the prescribed premises are area of works.

Site layout map

The site layout of the key infrastructure is shown in the map below.

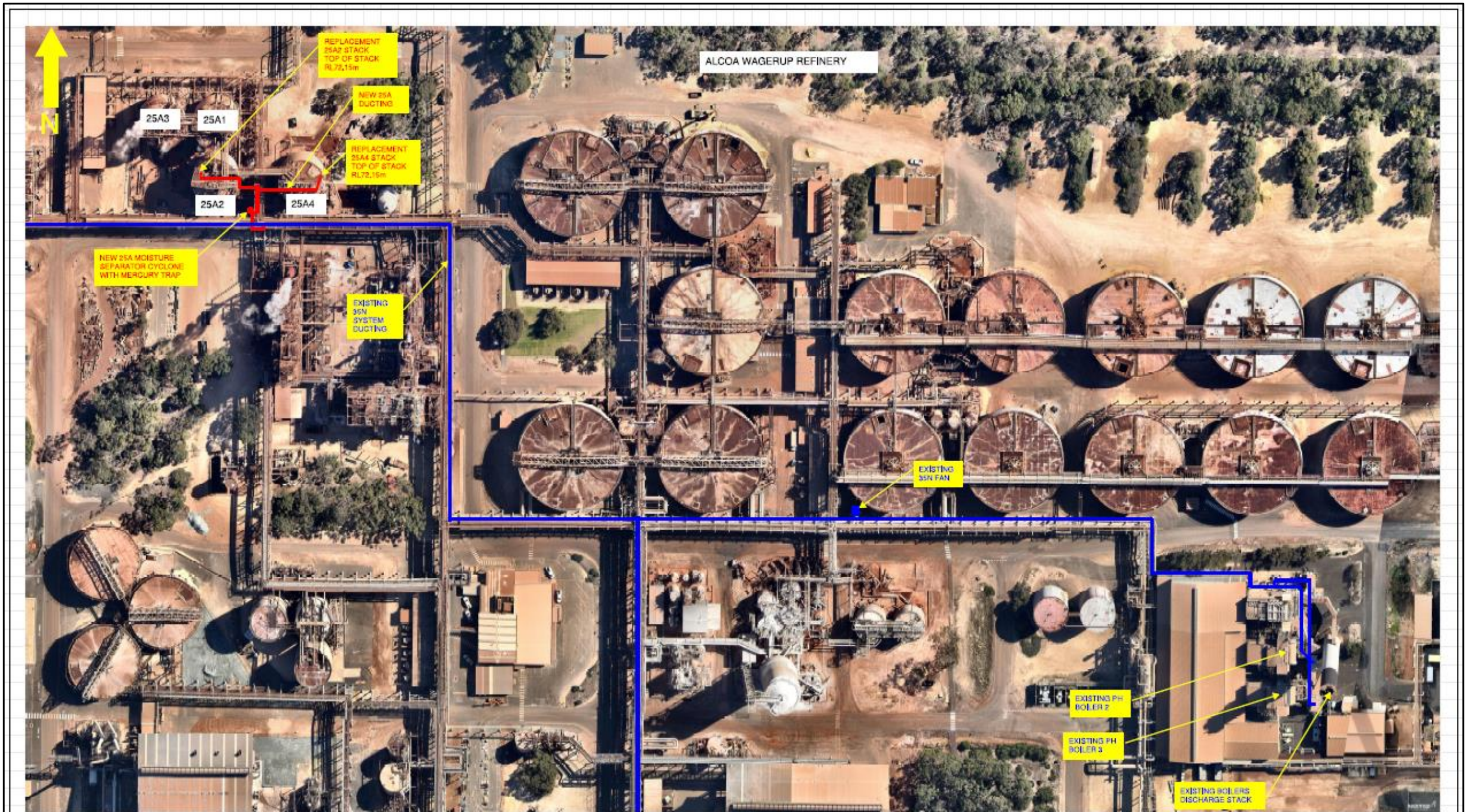


Figure 2: Outline of the site layout of infrastructure within the prescribed premises