



Works approval number W2874/2025/1

Works approval holder Doral Fused Materials Pty Ltd

ACN 009 415 025

Registered business address 1 Alumina Road
EAST ROCKINGHAM WA 6168

Duration 08/09/2025 to 07/09/2030

Premises details Doral Fused Materials
1 Alumina Road
EAST ROCKINGHAM WA 6168

Legal description -
Lot 6 on Deposited Plan 85297

Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)	Assessed production capacity
Category 31: Chemical Manufacturing	20,000 tonnes per annum
Category 44: Metal Refining	1,000 tonnes per annum

This works approval is granted to the works approval holder, subject to the attached conditions, on 08 September 2025, by:

A/MANAGER, PROCESS INDUSTRIES

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

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 or install the infrastructure and equipment;
 - (b) in accordance with the corresponding design and construction / installation requirements; and
 - (c) at the corresponding infrastructure location; andas set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction requirements	Infrastructure location
1.	Feedstock handling and storage area	(a) Must be enclosed; (b) Hopper feed entry points and swirl hopper must be connected to a disc and donut scrubber;	Labelled Feed In in Schedule 1 Figure 2
2.	Acid leaching tanks	(a) Must be bunded to 110% of largest tank; (b) Bunding must comply with AS3780; (c) All gaseous emissions from the acid tank must be directed to the acid gas scrubber;	Labelled Leach in Schedule 1 Figure 2
3.	Oxidation Leach reactors	(a) Must be bunded to 110% of largest vessel; (b) Bunding must comply with AS3780; (c) All gaseous emissions from the oxidation reactors must be directed to the acid gas scrubber;	
4.	Manganese	(a) Must be bunded to 110% of largest vessel;	NA

	Infrastructure	Design and construction requirements	Infrastructure location
	oxidation reactors	(b) Bunding must comply with AS3780; (c) All gaseous emissions from the oxidation reactors Must be directed to the acid gas scrubber;	
5.	Solvent extraction organic storage tanks	Connected to packed bed carbon filter scrubbers;	Labelled Cobalt Recovery in Schedule 1 Figure 2
6.	Cobalt solvent extraction strip storage feed and exit tanks, crystal conveyors, crystal hopper, and bagging station	Connected to re-circulating water packed bed scrubber;	
7.	Magnesium recovery circuit	Must be equipped with a dedicated droplet scrubber;	In the area labelled Crystallisation in Schedule 1 Figure 2
8.	Acid gas scrubber	Venturi design to provide negative pressure on connected tanks and vessels.	Off gas scrubber-stack in Schedule 1 Figure 1

Compliance reporting

2. The works approval holder must within 60 calendar days of an item of infrastructure or equipment required by condition 1 being constructed 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 by a qualified professional engineer that the items of infrastructure or component(s) thereof, as specified in condition1, have been constructed in accordance with the relevant requirements specified in condition1;
 - (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.

Environmental commissioning phase

Environmental commissioning requirements and emission limits

4. The works approval holder may only commence environmental commissioning of the infrastructure listed in Table 1 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with condition 2 of this works approval.
5. The works approval holder must ensure that environmental commissioning lasts not more than 180 calendar days.

Authorised emission points to air

6. During environmental commissioning, the works approval holder must ensure that the emission(s) specified in Table 2, are discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location(s).

Table 2: Authorised discharge points during commissioning

	Emission	Discharge point	Discharge point location
1	HCl	Off-gas scrubber stack	As shown in Schedule 1 Figure 1

Emission limits during commissioning and Time limited operations

7. During environmental commissioning and time limited operations, the works approval holder must ensure that the emissions from the discharge point listed in Table 3 do not exceed the corresponding limit.

Table 3: Emission and discharge limits

	Discharge point	Parameter	Limit
1	Off gas scrubber stack	HCl	100 mg/m3

Environmental commissioning report

8. The works approval holder must submit to the CEO an Environmental Commissioning Report within 30 calendar days of the completion date of environmental commissioning for the infrastructure specified in Table 3.
9. The works approval holder must ensure the Environmental Commissioning Report required by condition 8 of this works approval includes the following:
- (a) a summary of the environmental commissioning activities undertaken, including timeframes;
 - (b) a summary of the environmental performance of all items of infrastructure as constructed or installed;
 - (c) a review of the works approval holder's performance and compliance against the conditions of this works approval; and
 - (d) where conditions of this works approval have not been met, the measures that are proposed to meet them and the timeframes required to implement those measures.

Time limited operations phase

Commencement and duration

10. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1 where the Environmental Commissioning Report for that item of infrastructure as required by condition 8 has been submitted by the works approval holder.
11. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 12:
- (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 8 for that item of infrastructure; or
 - (b) until such time as a licence amendment for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 11(a).

Time limited operations requirements and emission limits

12. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 4 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in that table.

Table 4: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	Operational requirement
1.	Dust Scrubber	(a) Must operate at all times that bags are being unloaded, or the feed hopper or swirl hopper is in use (b) The residual scrubbed gas must be directed to the main plant scrubber.
2.	Recirculating water packed bed scrubber	(a) Must operate at all times cobalt sulphate is being produced (b) The residual scrubbed gas must be directed to the main plant scrubber.
3.	Packed bed carbon filters	(a) Must be maintained so that absorbent material is replaced or reactivated to maintain efficient adsorption. (b) Must operate at all times solvent extraction is taking place. (c) The residual scrubbed gas must be directed to the main plant scrubber.
4.	Main plant scrubber, venturi eductor lime scrubber	(a) Must operate at all times that plant or part thereof is operating. (b) Recirculating lime slurry must be maintained between pH 10 and pH 11.

Monitoring during time limited operations

13. The works approval holder must monitor emissions during time limited operations in accordance with Table 5.

Table 5: Emissions and discharge monitoring during time limited operations

Discharge point	Parameter	Frequency	Averaging Period	Unit	Method
Off gas scrubber stack	HCl	Once, within 4 weeks of commencing time limited operations and Once, between 15 and 20 weeks of commencing time limited operations	>60 minutes	mg/m ³ and g/s	USEPA Method 26 or USEPA Method 26A
	Co and Ni	Once, within 4 weeks of commencing time limited operations	>60 minutes	µg/m ³ and g/s	USEPA Method 29

14. The works approval holder must record the results of all monitoring activity required by condition 13.

Compliance reporting

15. The works approval holder must submit to the CEO a report on the time limited operations within 30 calendar days of the completion date of time limited operations or 20 calendar days before the expiration date of the works approval, whichever is the sooner.

- 16.** The works approval holder must ensure the report required by condition 15 includes the following:
- (a) a summary of the time limited operations, including timeframes and amount of material processed;
 - (b) a summary of HCl, Co and Ni results obtained during monitoring condition 13;
 - (c) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable);
 - (d) a review of performance and compliance against the conditions of the works approval and the Environmental Commissioning Report; and
 - (e) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting (general)

- 17.** The works approval holder must record the following information in relation to complaints received by the works approval 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 works approval holder to investigate or respond to any complaint.
- 18.** 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
 - (b) any maintenance of infrastructure that is performed in the course of complying with condition 12;
 - (c) monitoring programmes undertaken in accordance with condition 13; and
 - (d) complaints received under condition 17.
- 19.** The books specified under condition 18 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 6 have the meanings defined.

Table 6: Definitions

Term	Definition
AS3780	means Australian Standard AS 3780 The Storage and Handling of Corrosive Substances – Western Australia
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.
environmental commissioning	means the sequence of activities to be undertaken to test equipment integrity and operation, or to determine the environmental performance, of equipment and infrastructure to establish or test a steady state operation and confirm design specifications.
Environmental Commissioning Report	means a report on any commissioning activities that have taken place and a demonstration that they have concluded, with focus on emissions and discharges, waste containment, and other environmental factors.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure or equipment has been constructed or installed 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.
Qualified professional engineer	means a person who holds a tertiary academic qualification in engineering and a minimum of three years experience working in the area of civil/construction engineering.
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.
USEPA Method 26	means USEPA Method 26 – Hydrogen Chloride, Halides, Halogens
USEPA Method 26A	means USEPA Method 26A – Hydrogen Chloride, Halides, Halogens – isokinetic method
USEPA Method 29	means USEPA Method 29 - Determination Of Metals Emissions From Stationary Sources
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 shown in the map below.

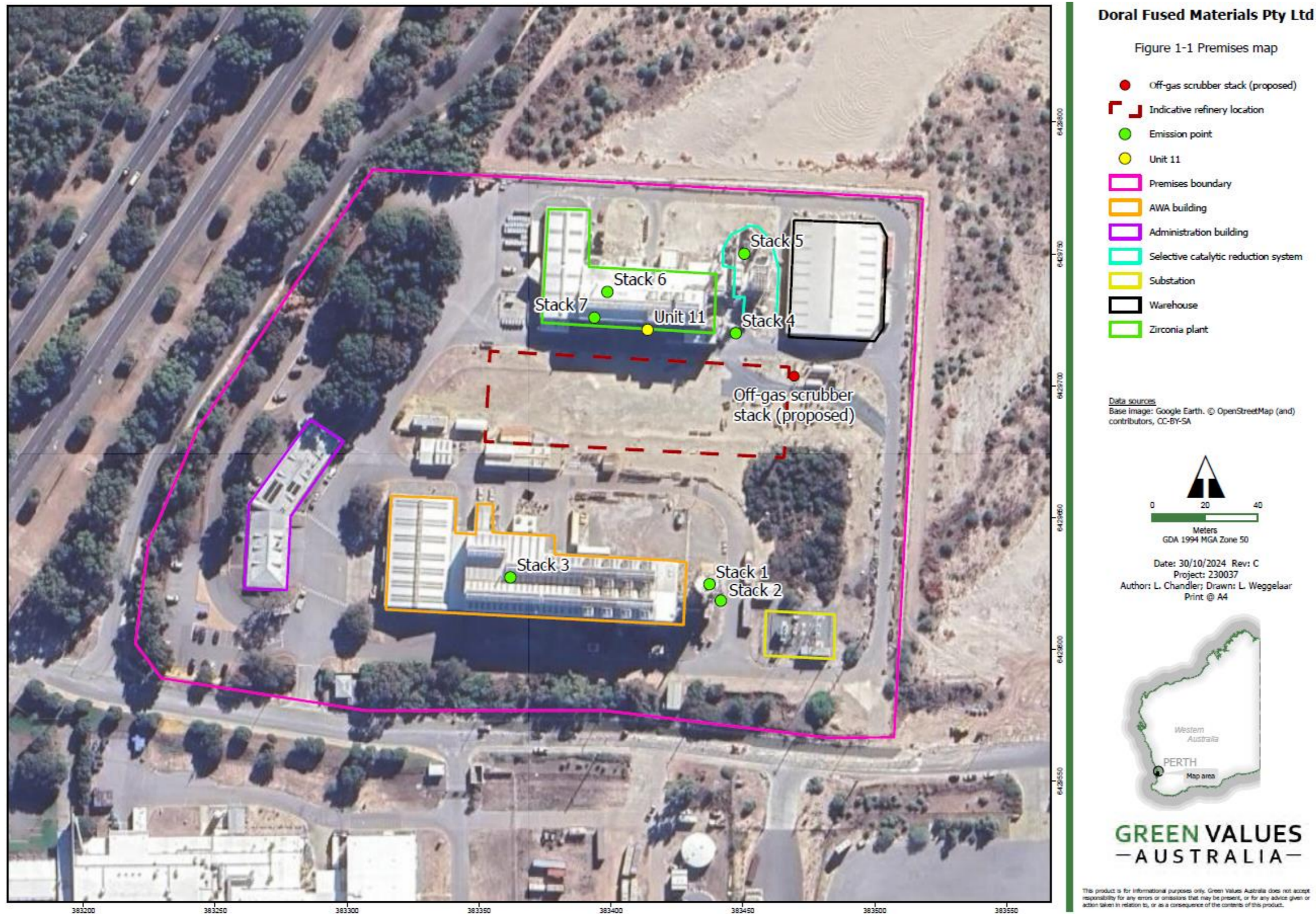


Figure 1: Map of the boundary of the prescribed premises

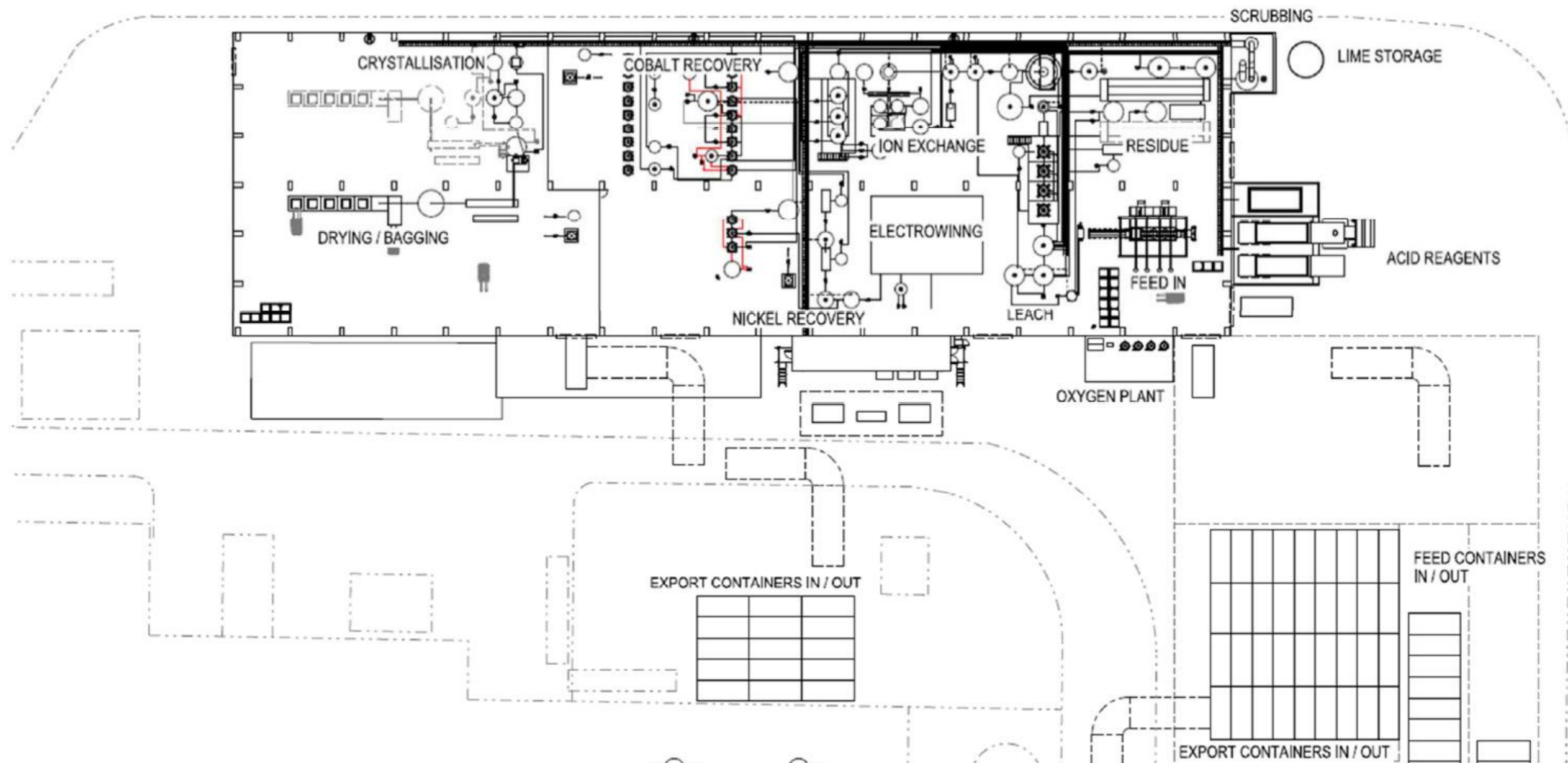


Figure 2: Detail of proposed plant