Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6923/2024/1
Works approval holder	Collie Steel Mill – Green Steel of WA Collie Pty Ltd
ACN	668 113 728
Registered business address	U19 L2, 100 Railway Road, Subiaco WA 6008
DWER file number	DER2024/000142
Duration	26/08/2024 to 25/08/2027
Date of issue	26 August 2024
Premises details	Collie Steel Mill Part of Lot 2 on Deposited Plan 74040 154 Boys Home Road, Palmer As depicted by Figure 1 in Schedule 1 and defined by the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production / design capacity**
Category 45: Metal smelting or casting: premises on which metal or scrap metal is melted in furnaces or cast	450,000 tonnes per annual period
Category 62: Solid waste depot: premises on which waste is stored or sorted, pending final disposal or re-use, other than in the course of operating	500,000 tonnes per annual period

This works approval is granted to the works approval holder, subject to the attached conditions, on 26 August 2024, by:

Michael Greenslade
Digitally signed by Michael Greenslade
Date: 2024.08.26 16:43:10 +08'00'

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

Works approval history

Date	Reference number	Summary of changes
26/08/2024	W6923/2024/1	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 not undertake any clearing of native vegetation within the prescribed premises boundary until approval is obtained under s.51 of the *Environmental Protection Act 1986* (via a Native Vegetation Clearing Permit).

2. 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.	Melt Shop and Endless Charging System	(a) Contains the: (i) Endless Charging System and associated open and covered oscillating conveyors and scrap steel storage bays; (ii) Electric Arc Furnace; (iii) Ladle Furnace; (iv) Continuous Casting Machine; and (v) Slag Collection Bunker (b) The Electric Arc Furnace, Ladle Furnace and Continuous Casting Machine are constructed within an enclosed building that meets the following specifications: (i) External walls must meet the minimum external fabric sound requirements of 0.6mm steel (minimum 4.7 kg/m^2 surface mass) with 12 mm fiber cement (minimum 18.7 kg/m^2) surface mass; or constructed with equivalent materials to achieve the same standard of noise attenuation; and (ii) Roof and ceiling constructions must meet the minimum fabric sound requirements of 0.6 mm steel (minimum 4.7 kg/m^2 surface mass) and 2 layers of 13 mm standard plasterboard (minimum 8.4 kg/m^2 surface mass per sheet – i.e. 16.9 kg/m^2 for 2 sheets); or constructed with equivalent materials to achieve the same standard of noise attenuation. (c) Constructed on a bunded concrete hardstand;	"No 11" as depicted in Figure 2, Schedule 1

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		(d) Designed and constructed to ensure that all emissions from natural gas combustion are extracted by the FTP extraction system and conveyed to the FTP; (e) Designed and constructed to ensure that dust emissions generated during furnace charging are extracted and conveyed to the FTP; and (f) Designed and constructed to ensure that all process emissions from the: (i) Electric Arc Furnace; (ii) Ladle Furnace; (iii) Continuous Casting Machine; (iv) Ladle Wrecking station; and (v) Tundish Wrecking Station are captured and contained via appropriate ducting and collection hoods, and directed to the FTP for treatment.	
2.	Rolling Mill and finishing area	(a) Constructed on a bunded concrete hardstand, inside and enclosed shed; and (b) Constructed to ensure that any process water used is captured, contained and treated via the Water Treatment Plant	"No 9" as depicted in Figure 2, Schedule 1
3.	Fume Treatment Plant (FTP)	(a) Constructed to collect and filter gaseous emissions from the Melt Shop and Rolling Mill; (b) Must include a dioxin abatement system; (c) Constructed to ensure that gaseous emissions collected (via extraction fans, collection hoods ducts) are directed to a baghouse for treatment prior to discharge from the FTP stack; (d) Emissions via the FTP stack that is not less than 45 metres high[1]; (e) FTP stack must be fitted with a monitoring port that meets the requirements of AS4323.1; and (f) FTP baghouse to be constructed with: (i) A pulse jet air cleaning system and an enclosed chute or pipe that returns collected dust to the dust silo. (ii) The filter unit be divided into several compartments each comprising a pneumatic damper at the outlet for off-line bags cleaning; and (iii) Have automated controls with alarms to alert plant operators of malfunction.	"No 12" as depicted in Figure 2, Schedule 1

	Infrastructure	Design and construction / installation requirements	Infrastructure location
4.	Dust storage silo	(a) Constructed to contain all dust from the FTP; and (b) Dust to be collected by chain conveyors to the silo where it is discharged through a screw conveyor to a transport truck.	"Dust silo", as depicted in Figure 3
5.	Scrap Steel Storage Area	(a) Located within a bunded hardstand for the containment of spillages and capture of water (walls and floors of bund to achieve a permeability of 1 x 10^{-9} m/s or less); and (b) Designed and constructed to ensure that potentially contaminated water and spills is contained and directed to an oily water treatment unit and a gross pollutant trap and before storage in Detention Basin E or re-use via the Water Treatment Plant.	"No 17" as depicted in Figure 2, Schedule 1
6.	Cold Slag Storage Area	(a) Located within a bunded hardstand for the containment of spillages and capture of water (walls and floors of bund to achieve a permeability of 1 x 10^{-9} m/s or less); and (b) Designed and constructed to ensure that potentially contaminated water and spills is contained and directed to an oily water treatment unit and a gross pollutant trap and before storage in Detention Basin E or re-use via the Water Treatment Plant.	"No 16" as depicted in Figure 2, Schedule 1
7.	Intermodal Transport Yard	(a) Located within a bunded area (walls and floors or bund to achieve a permeability of 1 x 10^{-9} m/s or less); and (b) Designed and constructed to ensure that potentially contaminated water and spills is contained and directed to an oily water treatment unit and a gross pollutant trap and before storage in Detention Basin E or re-use via the Water Treatment Plant.	"No 08" as depicted in Figure 2, Schedule 1
8.	Water Treatment Plant (WTP)	(a) To consist of: i. QW – Primary cooling circuit: closed loop cooling circuit dedicated to the CCM. ii. KW – Secondary cooling circuit: open circuit contact cooling system used for direct cooling of steel; and iii. CW – closed tertiary circuit: cooling circuit for equipment cooling. (b) Contain cooling towers, pumps, tanks, sand filters, clarifiers, oil skimmers and a dewatering system; (c) Located within a bunded area (walls and floors or bund to achieve a permeability of 1 x 10^{-9} m/s or less); and (d) All tanks, pipelines and conveyance infrastructure must be impermeable and free of leaks and defects.	"No 10" as depicted in Figure 2, Schedule 1

	Infrastructure	Design and construction / installation requirements	Infrastructure location
9.	Reverse Osmosis Plant	(a) Designed and installed to receive and treat 33 m^3/day; (b) Located within a bunded area (walls and floors or bund to achieve a permeability of 1 x 10^{-9} m/s or less); and (c) All pipelines and conveyance infrastructure must be impermeable and free of leaks and defects.	"No 21" as depicted in Figure 2, Schedule 1
10	Stormwater requirements	(a) Stormwater control infrastructure must be designed and constructed to capture all potentially contaminated stormwater from process plant areas, storage yards and associated plant infrastructure; (b) Stormwater Detention Basin W and E to be constructed to contain a 1% AEP rainfall event on the premises; (c) Designed and constructed to ensure that uncontaminated stormwater is diverted away from potentially contaminating areas of the premises and discharged via Stormwater Detention Basin W; (d) Designed and constructed to ensure that potentially contaminated stormwater is treated through an oily water separator and a gross pollutant trap and prior to transfer to the Stormwater Detention Basin E; (e) Stormwater Detention Basin E constructed to contain stormwater (post treatment) for re-use within the premises or discharge via infiltration; and (f) Stormwater Detention Basin W constructed to capture and allow for infiltration of clean uncontaminated stormwater.	Figure 4 in Schedule 1
11	Wastewater Treatment Plant (WWTP)	(a) Designed and installed to receive and treat 12 m^3/day; (b) All treated wastewater to be directed back through the Reverse Osmosis Treatment Plant and Water Treatment Plant for reuse; and (c) Located within a bunded area (walls and floors or bund to achieve a permeability of 1 x 10^{-9} m / s or less).	"No 21" as depicted in Figure 2, Schedule 1
12	Storage of environmental hazardous materials	Located within a bunded area (walls and floors or bund to achieve a permeability of 1 x 10^{-9} m / s or less).	"No 19" as depicted in Figure 2, Schedule 1

3. During construction activities, the works approval holder must manage dust emissions by:

(a) proactively wetting down unsealed roads and exposed areas with a water truck;

(b) limiting vehicle speeds to minimise dust generation; and

(c) conducting visual dust monitoring and implement additional dust controls where necessary to mitigate dust emissions from construction activities.

Compliance reporting

4. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required 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.

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

(a) certification by a suitably qualified engineer that the items of infrastructure or component(s) thereof, as specified in condition 2, have been constructed in accordance with the relevant requirements specified in condition 2;

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

6. The works approval holder must, at least three months prior to the commencement of environmental commissioning, provide to the CEO an Environmental Commissioning Plan.

7. The Environmental Commissioning Plan required by condition 6, must include as a minimum the following:

(a) the stages, processes, expected timeframes and description of the activities conducted during environmental commissioning;

(b) how accidents or malfunctions will be managed;

(c) start up and shut down procedures and how emissions will be manged during start up and shut down;

(d) procedures for monitoring and managing emissions and discharges during environmental commissioning including but not limited to:

i. a description of the proposed emissions monitoring to be undertaken during environmental commissioning (including stack testing frequency and methods);

ii. a description of the proposed monitoring to be undertaken during environmental commissioning for the verification of stormwater treatment effectiveness (included sampling locations, frequency and methods);

iii. details of the parameters to be included in any monitoring programs for both emissions to air and discharges to the environment that are reflective of the process undertaken on the premises (including consideration of scrap steel feedstock and potential contaminants

(including VOC's, heavy metals, hydrocarbons), process activities and inputs, and expected parameters/contaminants in wastes generated);

iv. targets and/or triggers for each parameter, referenced against relevant environmental standards for the emission to air or discharge to the environment; and

v. contingency actions to be implemented if target and/or trigger levels are exceeded.

(e) a description of corrective actions that will be taken in the event of abnormal operations or failure.

(f) contingency plans and/or proposed actions to ensure emissions during environmental commissioning activities from the steel manufacturing process are appropriately contained and controlled in the event of a breakdown of the Fume Treatment Plant or damage to bag filters is identified.

8. The works approval holder may only commence environmental commissioning of an item of infrastructure listed in condition 2 once the:

(a) Environmental Compliance Report has been submitted for that infrastructure in accordance with condition 4 of this works approval;

(b) the Environmental Commissioning Plan has been submitted in accordance with 6; and

(c) the CEO has notified the works approval holder that the Environmental Commissioning Plan required by condition 6 meets the requirements of that condition.

9. The works approval holder must notify the CEO:

(a) at least 7 days prior to, the commencement date of environmental commissioning; and

(b) within 7 days after, the completion date of environmental commissioning.

10. During environmental commissioning activities, the works approval holder must ensure that the premises infrastructure and equipment listen in Table 2 is maintained and operated in accordance with the corresponding operational requirements set out in Table 2.

Table 2: Infrastructure and operational requirements during environmental commissioning

	Site infrastructure and equipment	**Operational requirement**
1.	Fume Treatment Plant	(a) Must be in operation at all times while the Melt Shop and Endless Charging System are operating to ensure that any emissions generated from the steel manufacturing process are treated prior to discharge; (b) The baghouse/dust filtration system is to be maintained in accordance with the manufacture's specification to ensure optimal performance; (c) Broken or faulty filters/bags must be repaired or replaced when detected; (d) Dioxin abatement system to be operational at all times; and (e) Dust silo to be operated via a closed conveying system where dust is it is discharged through a screw conveyor to a transport truck for removal offsite to a suitably licensed facility;

	Site infrastructure and equipment	Operational requirement
2.	Waste storage areas (cold slag storage)	(a) Slag stockpiles to be stored in a bunded low permeability hardstand area; (b) Slag stockpiles to be treated with periodic watering and / or dust suppression capping as required to minimise dust generation; (c) Solid waste to be removed offsite to a suitably licensed facility; and (d) Dust suppression water and stormwater to be captured and directed to an and oily water separator and a gross pollutant trap prior to transfer to the Stormwater Detention Basin E or reuse within the premise via the Water Treatment Plant.
3.	Waste storage areas (scrapyard)	(a) Scrap steel to be received and stored within the Scrap Steel Storage Yard for processing through the Endless Charging System; (b) Dust suppression water and stormwater to be captured and directed to an oily water separator and a gross pollutant trap and prior to transfer to the Stormwater Detention Basin E or reuse within the premise via the Water Treatment Plant.
4.	Waste storage areas (spent refractories, mill scale)	(a) Spent refractories to be stored in an enclosed, undercover location prior to removal offsite to a suitably licensed facility; and (b) Mill scale to be stored in a bunded, covered hardstand and removed offsite to a suitably licensed facility.
5.	Water treatment plant and reverse osmosis treatment plant	(a) Water treatment plant to be maintained in accordance with the manufacture's specification to ensure optimal performance; (b) Any solid waste produced (e.g. filter cake) must be removed off site and taken to a suitably licensed facility.
6.	Stormwater	(a) Uncontaminated stormwater to be directed to Detention Basin W (b) Potentially contaminated stormwater collected from throughout the premises to be treated via an oily water separator and a gross pollutant trap prior to transfer to Detention Basin E; (c) Stormwater collected in Detention Basin E to be re-used within the process plant or discharged via infiltration; and (d) Maintain vegetation within and around the detention basins to assist in infiltration.
8.	Environmental hazardous materials	Immediately recover or remove and dispose of spills of environmentally hazardous materials including fuel, oil or other hydrocarbons, whether inside or outside of an engineered containment system.

Commissioning – emissions

11. During environmental commissioning activities, the works approval holder must ensure that the emission(s) specified in Table 3, are discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location(s).

Table 3: Authorised discharge points

	Discharge point	Emission	Discharge height (metres)	Discharge point location
1.	Fume Treatment Plant	NOx, SOx, CO, PM_{10}, VOCs	45	As shown in Figure 3, in Schedule 1

Commissioning - waste acceptance

12. During environmental commissioning activities, the works approval holder must only accept waste onto the premises that meets waste category, at the specified rate at which rate is received and for the corresponding acceptance specification as specified in Table 4.

Table 4: Types of waste to be accepted onto the premises

Waste category	Rate at which waste is received	Acceptance specification
Scrap steel	≤500,000 tonnes per annum	(a) Must be free of soil, non-ferrous metals, foreign materials (non-metallics), residual alloys, closed containers (gas bottles and fuel tanks), flammable materials, oil, refrigerants and liquid of any type; (b) Must be stored in a low permeability hardstand; and (c) Only accepted for the purposes of commissioning the steel mill and associated process infrastructure.

13. The works approval holder must visually inspect incoming scrap waste to ensure it meets the acceptance specification as specified in Table 4 and is free from contamination.

14. The works approval holder must ensure that scrap steel that does not meet the acceptance specification as specified in Table 4 is suitably quarantined and removed from the premises to a suitably licensed facility.

Commissioning - general

15. The works approval holder must ensure that wastes generated during environmental commissioning activities are disposed of at an appropriate authorised waste facility.

Records and reporting (general)

16. 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.

17. 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 2;

(b) any monitoring undertaken in accordance with the Environmental Commissioning Plan submitted in accordance with condition 6;

(c) any maintenance of infrastructure that is performed in the course of complying with condition 10;

(d) the quantity of scrap steel (in tonnes) accepted during commissioning activities in accordance with condition 12;

(e) the details of non-conforming waste that is removed from the premises in accordance with condition 14;

(f) complaints received under condition 16.

18. The books specified under condition 17 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 5 have the meanings defined.

Table 5: Definitions

Term	Definition
AEP	means Annual Exceedance Probability
AS4323.1	Australian Standard AS4323.1 1995 Stationary Source Emissions – Selection of Sampling Positions
AS1940:2017	Australian Standard AS1940:2017 The Storage and handling of flammable combustible liquids
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 *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
Department	means the department established under section 35 of the *Public Sector Management Act 1994* 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 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 and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	*Environmental Protection Act 1986* (WA).
EP Regulations	*Environmental Protection Regulations 1987* (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.

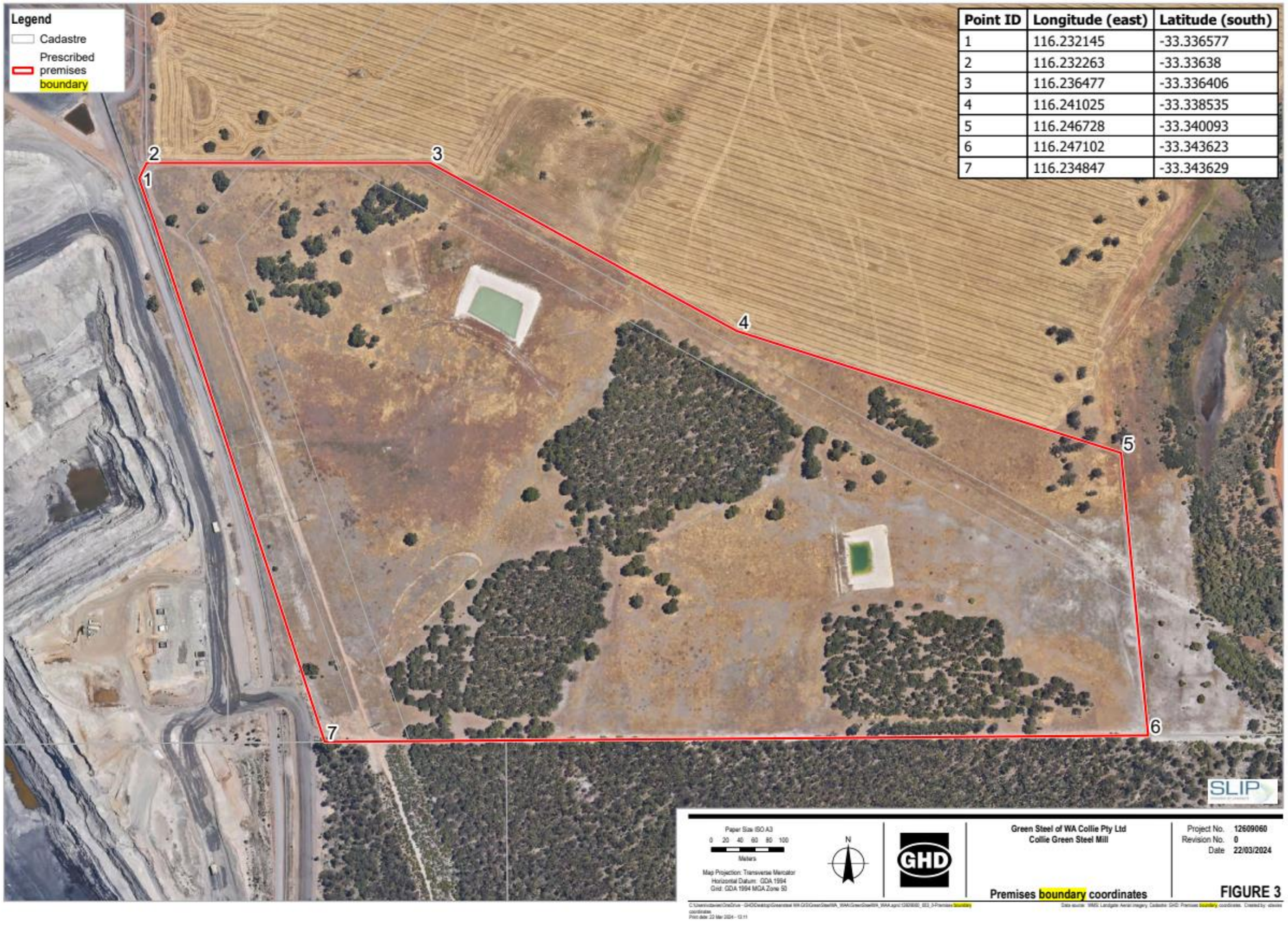
Term	Definition
prescribed premises	has the same meaning given to that term under the EP Act.
waste	has the same meaning given to that term under the EP Act.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the 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

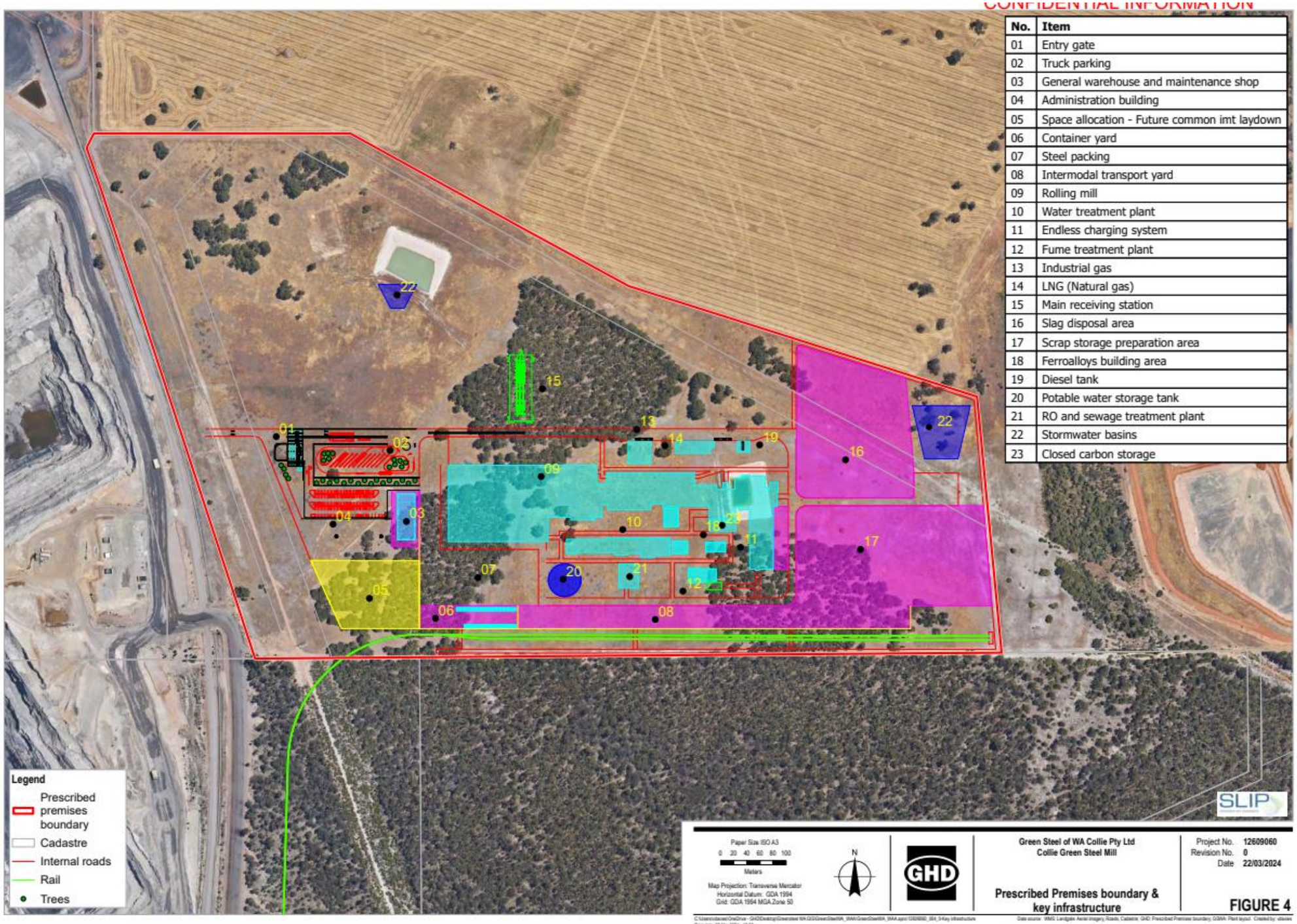
Premises map

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



Point ID	Longitude (east)	Latitude (south)
1	116.232145	-33.336577
2	116.232263	-33.33638
3	116.236477	-33.336406
4	116.241025	-33.338535
5	116.246728	-33.340093
6	116.247102	-33.343623
7	116.234847	-33.343629

Figure 1: Map of the boundary of the prescribed premises



No.	Item
01	Entry gate
02	Truck parking
03	General warehouse and maintenance shop
04	Administration building
05	Space allocation - Future common imt laydown
06	Container yard
07	Steel packing
08	Intermodal transport yard
09	Rolling mill
10	Water treatment plant
11	Endless charging system
12	Fume treatment plant
13	Industrial gas
14	LNG (Natural gas)
15	Main receiving station
16	Slag disposal area
17	Scrap storage preparation area
18	Ferroalloys building area
19	Diesel tank
20	Potable water storage tank
21	RO and sewage treatment plant
22	Stormwater basins
23	Closed carbon storage

Figure 2: Infrastructure location

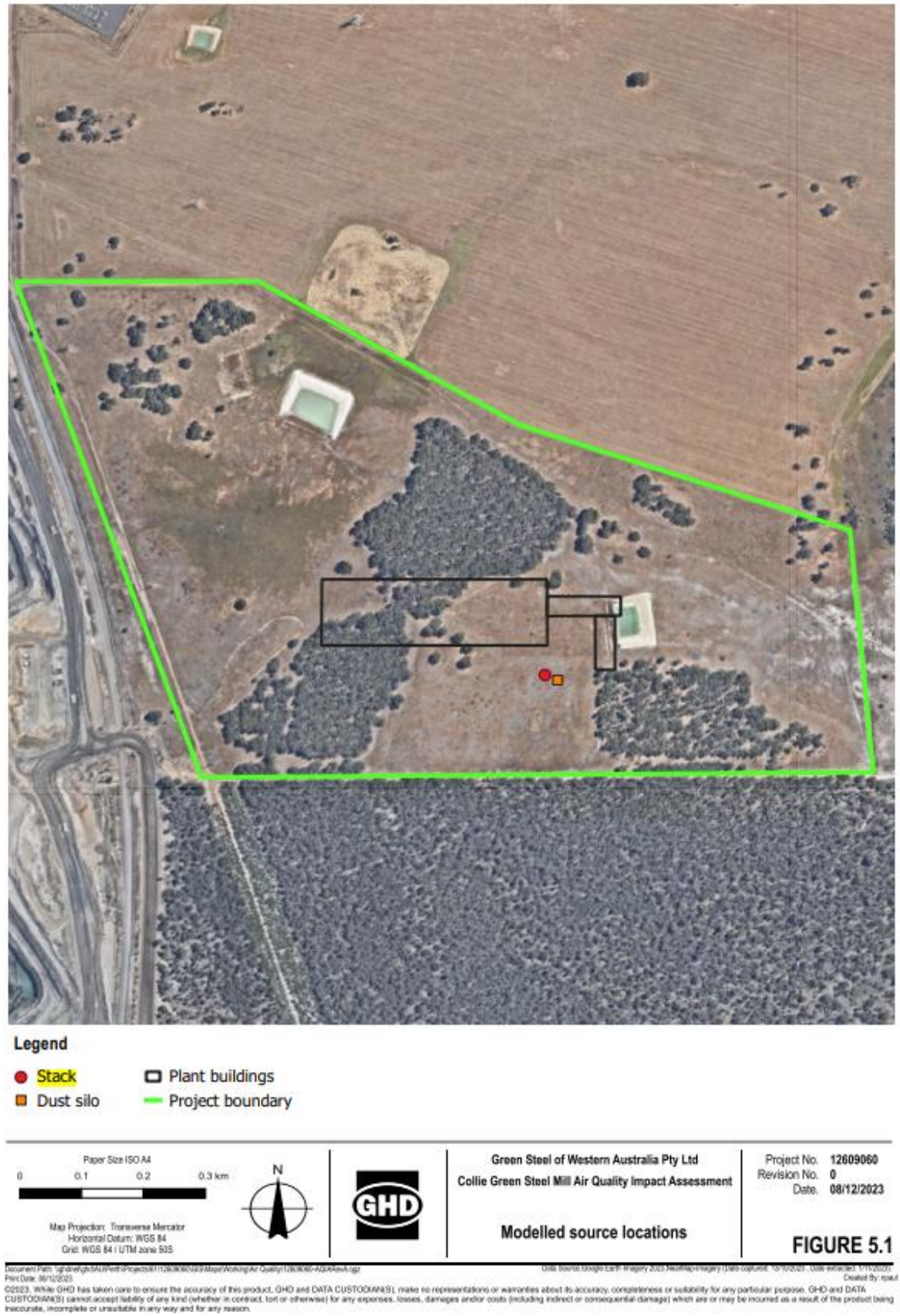


Figure 3: Indicative location of the FTP Stack

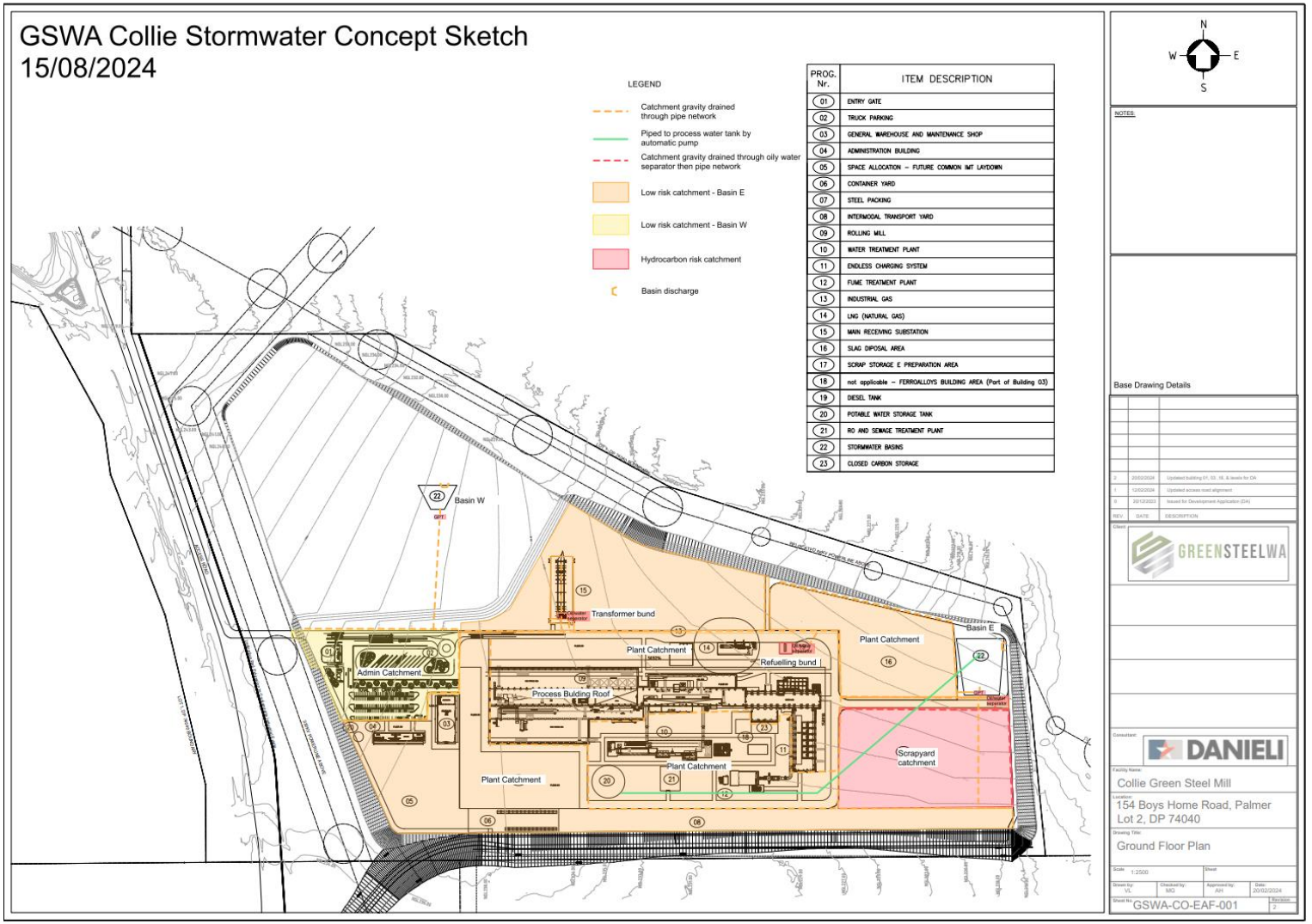


Figure 4: Stormwater Detention basins

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 6.

Table 6: Premises boundary coordinates (GDA2020)

	Latitude	Longitude	Zone
1.	116.232145	-33.336577	50
2.	116.232263	-33.336380	50
3.	116.236477	-33.3364046	50
4.	116.241025	-33.338535	50
5.	116.246728	-33.340093	50
6.	116.247102	-33.343623	50
7.	116.234847	-33.343629	50