Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6506/2021/1
Works approval holder	IB Operations Pty Ltd
ACN	165 513 557
Registered business address	Ground Floor 256 St Georges Terrace Perth WA 6000
DWER file number	DER2021/000048 and INS-0002417
Duration	10/05/2022 to 09/05/2026
Date of amendment	17 April 2025
Premises details	North Star Magnetite Project Marble Bar WA 6760 Legal description – Part of Mining Tenement M45/1226 as granted under the *Mining Act 1978* and as defined by the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production or design capacity**
Category 52: Electric power generation: premises on which electrical power is generated using a fuel.	Design capacity: 44.8 Mwe per year (using diesel as a fuel) Assessed production capacity: not more than 400 cumulative operational hours during each annual period

This works approval is granted to the works approval holder, subject to the attached conditions, on 17 April 2025 by:

Richard Wilson
Digitally signed by Richard Wilson
Date: 2025.04.17 11:22:59 +08'00'

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 history

Date	Reference number	Summary of changes
10/05/2022	W6506/2021/1	Works approval granted.
17/02/2023	W6506/2021/1	Works approval amended to change time limited operations and emissions testing periods.
17/04/2025	W6506/2021/1	Works approval amended to extend time-limited operation and extend works approval expiry date.

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 equipment;

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

(c) at the corresponding infrastructure location; and

(d) within the corresponding timeframe,

as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
Stage 1			
1.	10 x 1.6 Mwe containerised Cat 3516B diesel generator units	Combined installed production capacity of not more than 16 Mwe Generator units must be contained within a bunded compound constructed in accordance with the requirements of AS 1940:2004 Each generation unit is to be constructed with two vertical exhaust stacks each with a minimum height of 2.5m above ground level Each exhaust stack to be fitted with an emission sampling port in accordance with AS4323.1	Generators: G1, G2, G3, G4, G5, G6, G7, G8, G9 and G10 as shown in Schedule 1 Figures 1,2, 3 20 vertical exhaust stacks E1-E20 as shown in Schedule 1 Figure 1.
2.	2 x 110 kL double skinned diesel fuel tanks	Each tank to be fitted with a leak monitoring and alarm shut down system Each tank to include primary and secondary containment measures in accordance with the requirements of AS 1940:2004 Each tank to have spill response equipment installed/constructed proportional to the volume of diesel stored within the tanks. Each tank shall be stored in a bund that can contain 110% the volume of the largest vessel, or 10% of the total volume (which-ever is larger).	110,000L Diesel Tanks as shown in Schedule 1 Figures 2 & 3

	Infrastructure	Design and construction / installation requirements	Infrastructure location
3.	1 x Self-bunded waste oil tank and 1 x new oil storage tank	Waste oil and new oil storage tanks to be fitted with a high-level alarm. Storage tanks include primary and secondary containment measures in accordance with the requirements of AS 1940:2004 Each tank to have spill response equipment installed/constructed proportional to the volume of diesel stored within the tanks. Each tank shall be stored in a bund that can contain 110% the volume of the largest vessel, or 10% of the total volume (which-ever is larger).	Waste Oil (tank) and New Oil tank as shown in Schedule 1 Figures 2 & 4
4.	5 x, insulated transformers positioned within a concrete containment area	Transformers must be positioned within a bunded concrete containment area. The concrete containment area must have a containment capacity of at least 2000L Each transformer unit to have spill response equipment installed/constructed proportional to the volume of diesel stored within the tanks. Each transformer unit shall be stored in a bund that can contain 110% the volume of the largest vessel, or 10% of the total volume (which-ever is larger).	Transformers T1-T5 and bund for transformers as shown in Schedule 1 Figures 2 & 3
5.	33kV switch room, including switch gear and control panels	The switchroom shall be designed and constructed to divert stormwater runoff from the roof and surrounds away from the operational areas and shall include a drain or culvert which runs the length of the building to divert this water away.	HV/ LV Switchroom as shown in Schedule 1 Figures 2 & 3
6.	Site storm water drainage.	Site road and paths must be constructed to divert stormwater towards culverts that convey stormwater away from operational areas Drainage infrastructure location and design to minimise interference and disruption of natural surface water flows and to avoid excessive ponding against structures and bunds Protect natural drainage lines from construction impacts where possible to minimise impacts to water quality.	Not shown
Stage 2			
7.	18 x 1.6 Mwe containerised Cat 3516B diesel generator units	Combined installed production capacity of not more than 28.8 Mwe Generator units must be contained within a bunded compound constructed in accordance with the requirements of AS 1940:2004 Each generation unit is to be constructed with two vertical exhaust stacks each with a minimum height of 2.5m above ground level	Generators: G11, G12, G13, G14, G15, G16, G17, G18, G19, G20, G21. G22, G23, G24, G25, G26, G27 and G28 as shown in

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		Each exhaust stack to be fitted with an emission sampling port in accordance with AS4323.1	Schedule 1 Figures 1, 2, 4 36 vertical exhaust stacks E21-E56 as shown in Schedule 1 Figure 1.
8.	5 x 68 kL bulk fuel storage tanks, double skinned and self-bunded	Each tank to be fitted with a leak monitoring and alarm shut down system Each tank to include primary and secondary containment measures in accordance with the requirements of AS 1940:2004 Each tank to have spill response equipment installed/constructed proportional to the volume of diesel stored within the tanks. Each tank shall be stored in a bund that can contain 110% the volume of the largest vessel, or 10% of the total volume (which-ever is larger).	Schedule 1 Figures 2 & 4
9.	9 x insulated transformers positioned within a concrete containment area	Transformers must be positioned within a bunded concrete containment area. The concrete containment area must have a containment capacity of at least 2000L Each transformer unit to have spill response equipment installed/constructed proportional to the volume of diesel stored within the tanks. Each transformer unit shall be stored in a bund that can contain 110% the volume of the largest vessel, or 10% of the total volume (which-ever is larger).	Transformers T6-T14 and bund for transformers as shown in Schedule 1 Figures 2 & 4
10	Diesel unloading area (concrete pad)	Skid mounted fuel transfer pump to be placed on the concrete pad Concrete pad to be constructed with dimensions of at least 3m x 3m	Diesel Fuel Offload Area and Fuel Unloading Skid as shown in Schedule 1 Figures 2 & 3.

Compliance reporting

2. The works approval holder must within 60 calendar days of the Stage 1 and Stage 2 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.

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 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.

Time limited operations phase

Commencement and duration

4. The works approval holder may only commence time limited operations for the Stage 1 or Stage 2 infrastructure identified in condition 1 after the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for all the items of infrastructure contained in that stage.

5. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 1 (as applicable) from the day the works approval holder meets the requirement of condition 4 for the Stage 1 or Stage 2 infrastructure:

(a) until such time as the works approval expires; or

(b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*;

whichever occurs first.

Time limited operations requirements

6. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 2 is operated in accordance with the corresponding operational requirement set out in Table 2

Table 2: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	Operational requirement
1.	28 x Diesel generators G1-G28	Generators may not be operated for more than 400 hours in any annual period.
2.	Diesel Storage tanks 5 x 68 kL bulk fuel 2 x 110 kL diesel fuel tanks	Leak monitoring and alarm shut down systems for each tank to be maintained in working order Each bund maintained so that it can contain 110% the volume of the largest vessel, or 10% of the total volume (which-ever is larger). Spills to be immediately recovered
3.	Diesel unloading area	Diesel fuel transfer only be undertaken via skid mounted fuel transfer pump situated on a concrete pad Spills and leaks of diesel to be immediately recovered.
4.	Waste oil tanks	Each bund maintained so that it can contain 110% the volume of the largest vessel, or 10% of the total volume (which-ever is

	Site infrastructure and equipment	Operational requirement
		larger). Spills to be immediately recovered

Time limited operations requirements and emission limits

7. During time limited operations, the works approval holder must ensure that the emissions specified in Table 3, are discharged only from the corresponding discharge points and only at the corresponding discharge point locations.

Table 3: Authorised discharge points

Emission	Discharge point	Discharge point location - Schedule 1, Figure 1
Waste gasses from the diesel generator sets including: NOx CO TPM SOx Total VOCs	Exhaust stacks of the diesel generator sets	Emission points E1-E56

8. During time limited operations, the works approval holder must undertake the process monitoring in Table 2 according to the specifications in that table.

Table 2: Process monitoring – diesel generators

Emission point reference	Parameter	Units	Frequency	Averaging Period
E1-E56 (as depicted in Schedule 1 Figure 1: Premises layout map)	Generator run time (dates and hours operated)	Hours	Continuous	Hourly
	Fuel flow rate	Litres/hour		
	Electricity generated	MWh		
	Percentage load	%		

Monitoring during time limited operations (emissions to air)

9. The works approval holder must monitor emissions during time limited operations in accordance with Table 3.

Table 3: Emissions and discharge monitoring during time limited operations

Emission point reference	Parameter	Units[1]	Averaging period	Frequency[2]	Method
E1-E56 exhaust stacks from containerised diesel generator sets G1- G28	NOx	mg/m^3 and g/s	30 minute	Once, within 36 weeks of commencing time limited operations	USEPA Method 7E
	CO				USEPA Method 10
	TPM				ESEPA Method 17

	SOx				USEPA Method 6 or 6C
	Total VOCs				USEPA Method 18

Note 1: All units are referenced to STP dry and15% O_2.
Note 2: Monitoring shall be undertaken to reflect normal operating conditions and any limits or conditions on inputs or production

10. The works approval holder must ensure that all non-continuous sampling and analysis undertaken pursuant to condition 9 is undertaken by a holder of a current accreditation from the NATA for the methods of sampling and analysis relevant to the corresponding relevant parameter

11. The works approval holder must record the results of all monitoring activity required by condition Table 3.

Compliance reporting

12. 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 30 calendar days before the expiration date of the works approval, whichever is the earliest.

13. The works approval holder must ensure the report required by condition 12 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of electricity generated;

(b) a summary of emission monitoring results obtained during time limited operations under conditions 8, 9 and 11.

(c) a review of performance and compliance against the conditions of the works approval; and

(d) where 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.

14. The works approval holder must submit to the CEO a report on the summary of emission monitoring results obtained during time limited operations under conditions 8, 9 and 11 within 30 calendar days of the completion date of emission monitoring or 30 calendar days before the expiration date of the works approval, whichever is the earliest.

Records and reporting (general)

15. 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.

16. 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 6;

(c) monitoring programmes undertaken in accordance with condition 8 and 9; and

(d) complaints received under condition 15.

17. The books specified under condition 16 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 4 have the meanings defined.

Table 4: Definitions

Term	Definition
Annual period	means a 12-month period commencing from the date time limited operations commenced until 12 calendar months later of the immediately following year
AS 1940:2004	means Australian Standard AS 1940 The storage and handling of flammable and combustible liquids
AS 4323.1 - 1995	means the Australian Standard: Stationary source emissions Selection of sampling positions (Reconfirmed 2014)
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 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).
MWe	means power output (electricity generated) in megawatts
NATA	means the National Association of Testing Authorities, Australia
NATA accredited	means in relation to the analysis of a sample that the laboratory is NATA accredited for the specified analysis at the time of the analysis
NOx	means oxides of nitrogen, calculated as the sum of nitric oxide and

Term	Definition
	nitrogen dioxide and expressed as nitrogen dioxide;
premises	the premises to which this works approval applies, as specified at the front of works approval and as shown on the premises map Figure 1 in Schedule 1 to this works approval.
SOx	means oxides of sulphur, calculated as the sum of
STP dry	means standard temperature and pressure (0°Celsius and 101.325 kilopascals respectively), dry
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.
TPM	Total Particulate Matter
USEPA Method 6	means United States (of America) Environmental Protection Agency Method 6 – Determination of sulfur dioxide emissions from stationary sources
USEPA Method 6C	means United States (of America) Environmental Protection Agency Method 6C – Determination of sulfur dioxide emissions from stationary sources (Instrumental Analyzer Procedure)
USEPA Method 7E	means United States (of America) Environmental Protection Agency Method 7E - Determination of nitrogen oxides emissions from stationary sources (instrumental analyzer procedure)
USEPA Method 10	means United States (of America) Environmental Protection Agency Method 10 - Determination of carbon monoxide emissions from stationary sources (instrumental analyzer procedure)
USEPA Method 17	means United States (of America) Environmental Protection Agency Method 17 - Determination of particulate matter emissions from stationary sources
USEPA Method 18	means United States (of America) Environmental Protection Agency Method 18 - Measurement of gaseous organic compound emissions by gas chromatography
VOC	Volatile Organic Compounds
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).

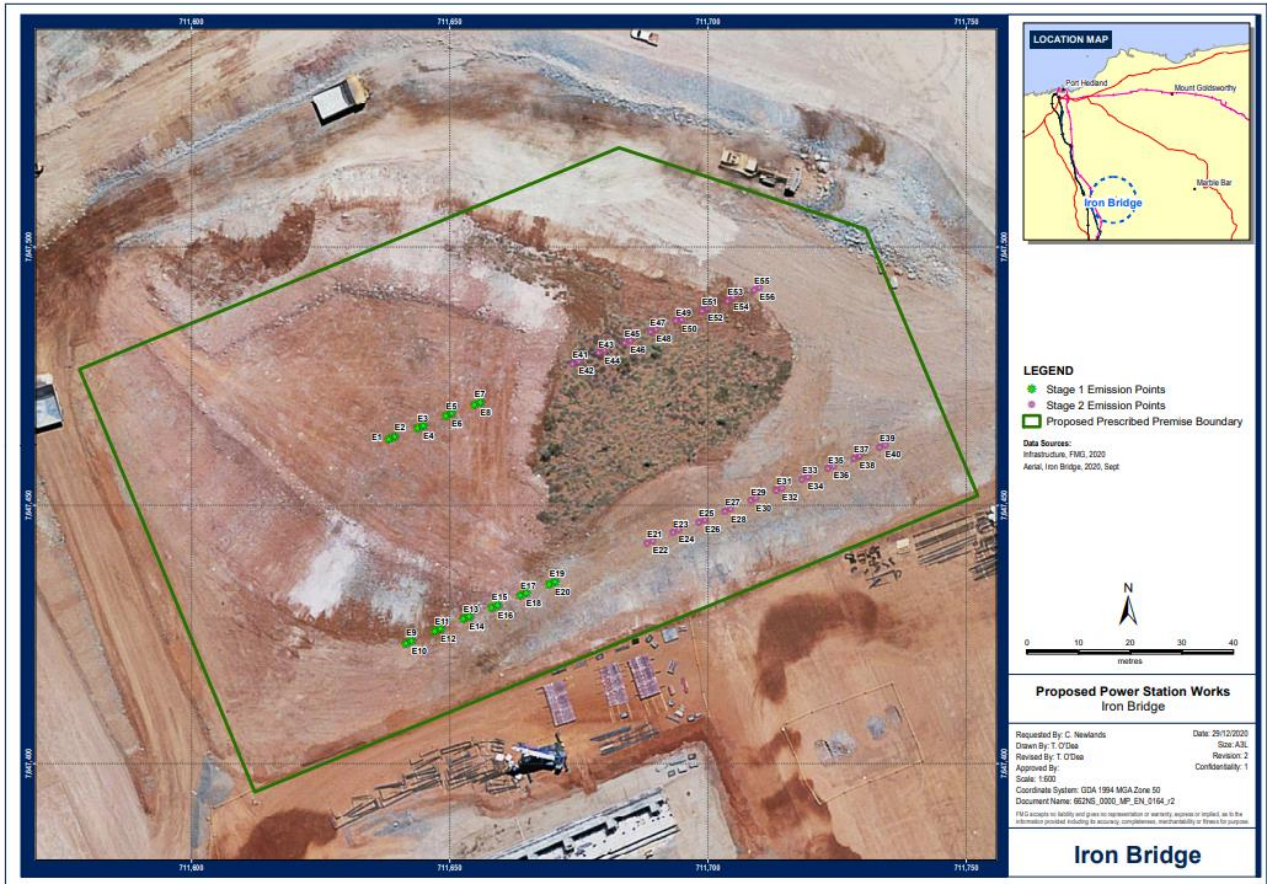

Figure 1: Map of the boundary of the prescribed premises and diesel generator exhaust emission points E1- E40

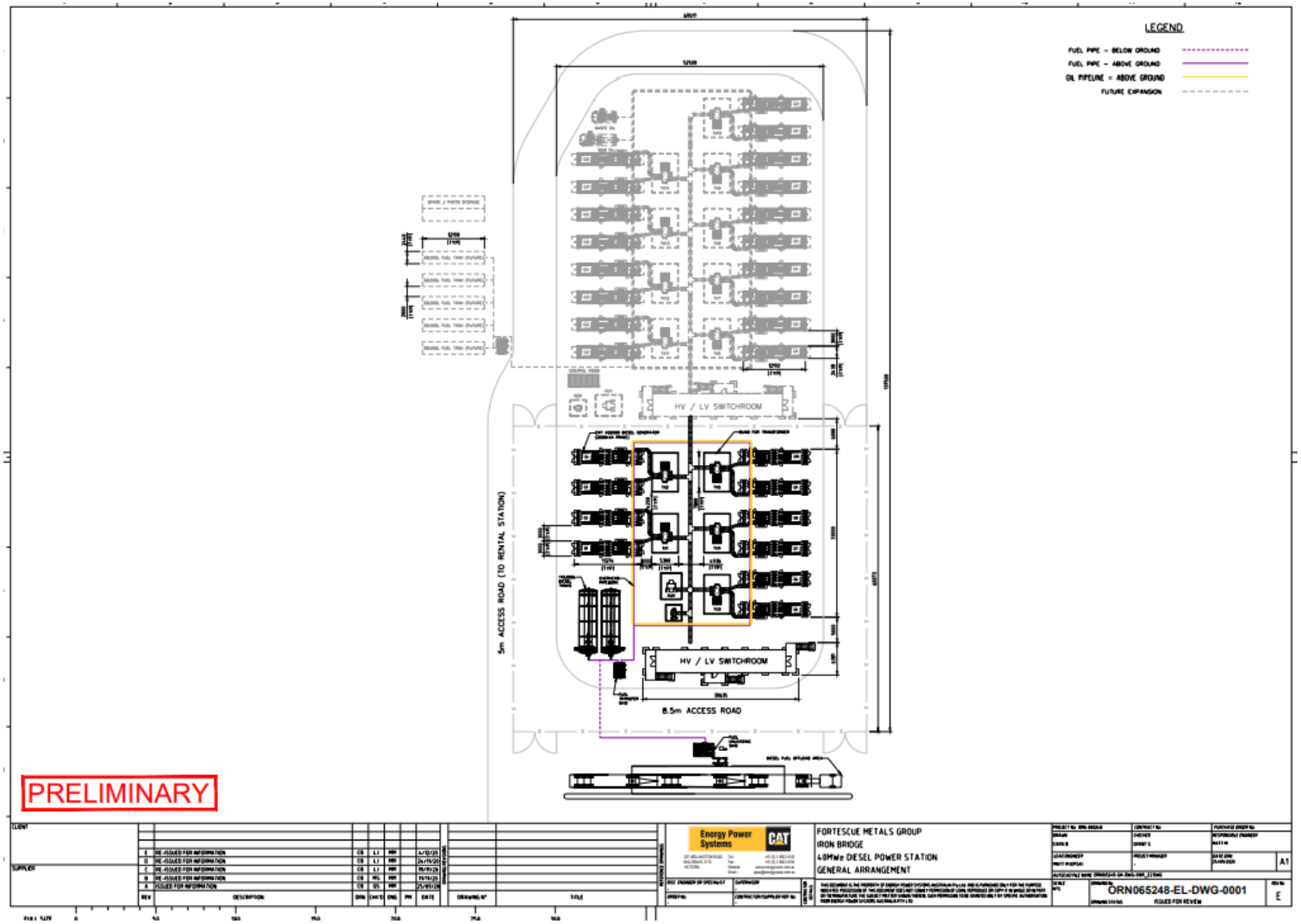

Figure 2: General arrangement of Diesel Power Station

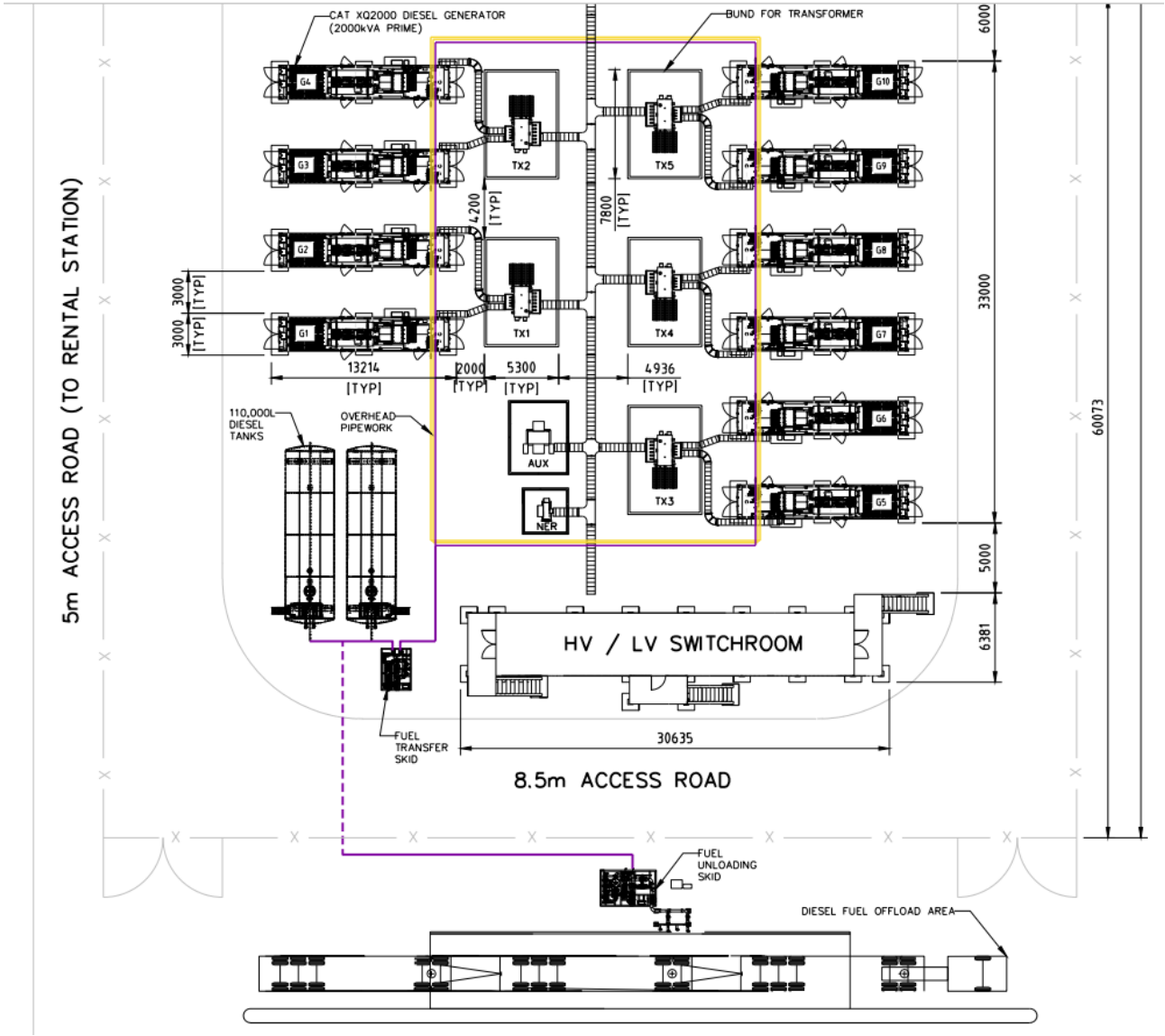

Figure 3: Close up of Stage 1 general arrangement of Diesel Power Station

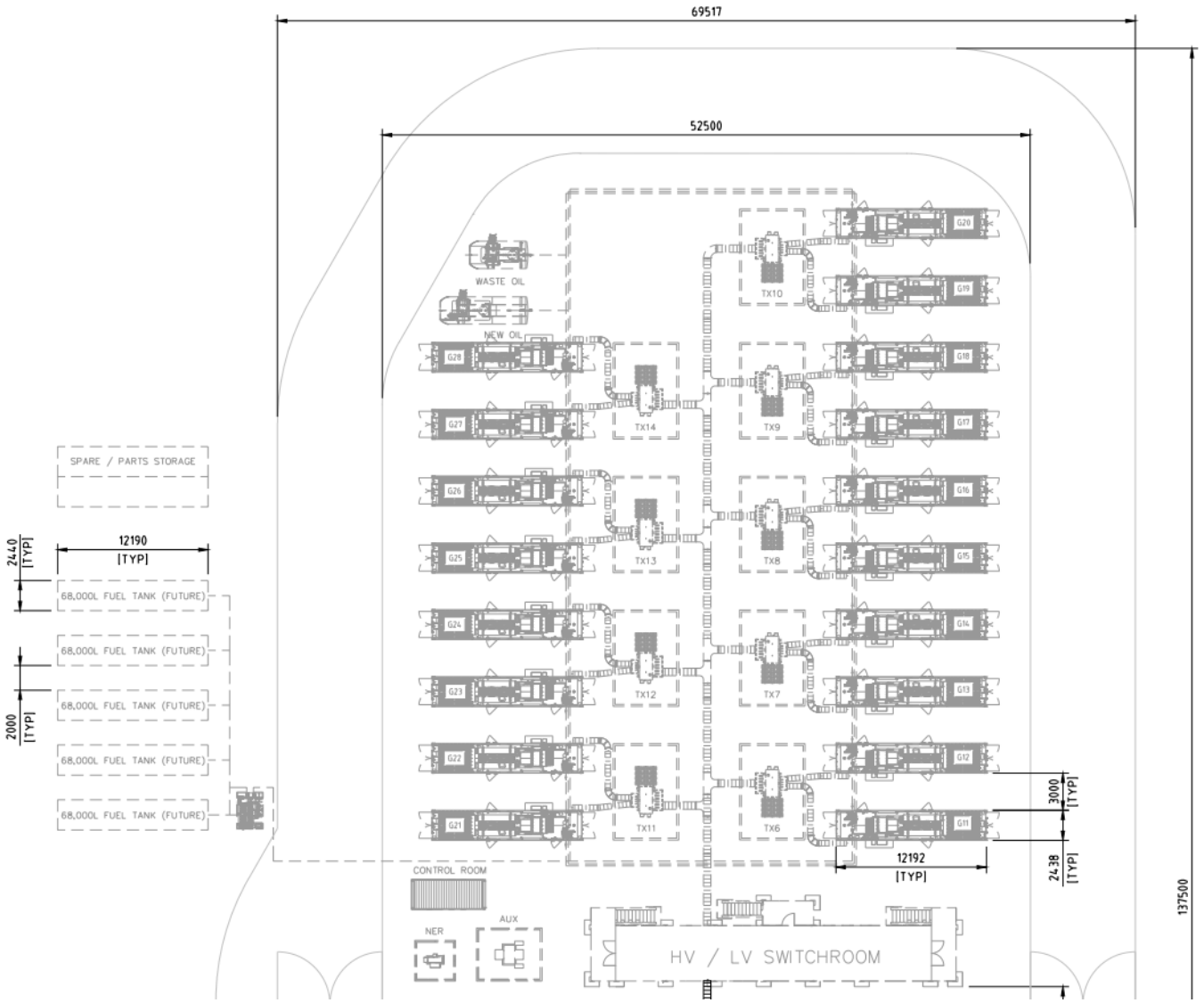

Figure 4: Close up of Stage 2 general arrangement of Diesel Power Station

Schedule 2: Premises boundary

The premises boundary is defined by the coordinates in Table 5.

Table 5: Premises boundary coordinates

Easting	Northing
711585.1003	7647460.229
711578.3263	7647476.302
711682.7954	7647519.214
711730.5297	7647503.464
711752.2272	7647451.872
711612.2622	7647394.494
711585.1003	7647460.229