



Works approval number	W6525/2021/1
Works approval holder	Greenstone Resources (WA) Pty Ltd
ACN	100 341 599
Registered business address	Level 2 35 Ventnor Avenue WEST PERTH, WA 6005
DWER file number	DER2021/000040
Duration	2/06/2021 to 2/06/2024
Date of issue	2/06/2021
Premises details	King of the Hills Gold Project Power Station Part of M37/90 and M37/547 LEONORA WA 6438 As defined by the coordinates contained in Schedule 3

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed design capacity
Category 52: Electric power generation: premises (other than premises within category 53 or an emergency or standby power generating plant) on which electrical power is generated using a fuel.	Up to 45.3 megawatts in aggregate.

This works approval is granted to the works approval holder, subject to the attached conditions, on 2 June 2021, by:

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
2/06/2021	W6525/2021/1	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 the infrastructure;
 - (b) in accordance with the corresponding design and construction requirements; and
 - (c) at the corresponding infrastructure location; as set out in Table 4 in Schedule 2.
2. The works approval holder must within 30 calendar days of constructing the Stage 1 infrastructure and Stage 2 infrastructure specified in condition 1:
 - (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 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.

Environmental Commissioning

Commencement and duration

4. The works approval holder may only commence environmental commissioning of Stage 1 infrastructure and Stage 2 infrastructure listed in condition 1 once the respective Environmental Compliance Report for Stage 1 infrastructure and Stage 2 infrastructure has been submitted in accordance with condition 2 of this works approval.
5. The works approval holder may conduct environmental commissioning for the Stage 1 infrastructure and Stage 2 infrastructure specified in condition 1 for a period not exceeding 30 calendar days in aggregate for each of Stage 1 infrastructure and Stage 2 infrastructure.
6. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 1 may only be carried out in accordance with the corresponding commissioning requirements.

Table 1: Environmental commissioning and operation requirements

Site infrastructure and equipment	Commissioning and operation requirements
Diesel generators	May only be used for power station start-up, to support power demand during maintenance of the gas-fired generators or during emergencies.
Gas generators	Must be tuned using exhaust NO _x emissions to ensure optimal efficiency and emissions performance during commissioning and every 2,000 hours of operating thereafter.

7. The works approval holder must maintain records of gas generator NO_x emissions tuning during environmental commissioning.

Emissions

8. During environmental commissioning, the works approval holder must ensure that the emissions specified in Table 2 are discharged only from the corresponding discharge points and only at the corresponding discharge point locations.

Table 2: Authorised discharge points

Emissions	Discharge point	Discharge point height (magl)	Discharge point location
PM, SO ₂ , CO and NO _x	EP03 – EP13	8.5	As shown in Figure 2

Environmental commissioning report

9. 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 Stage 1 and Stage 2 infrastructure specified in Table 4.
10. The works approval holder must ensure the Environmental Commissioning Report required by condition 9 of this works approval includes the following:
- a summary of the environmental commissioning activities undertaken, including timeframes and MWe of electricity produced;
 - a summary of the environmental performance of all items of infrastructure as constructed or installed, as applicable;
 - a review of the works approval holder's performance and compliance against the conditions of this works approval; and
 - where they have not been met, measures proposed to meet the manufacturer's design specifications and the conditions of this works approval, together with timeframes for implementing the proposed measures.

Time limited operations phase

Commencement and duration

11. The works approval holder may only commence time limited operations for Stage 1 infrastructure and Stage 2 infrastructure identified in condition 1 where the respective Environmental Commissioning Report for Stage 1 infrastructure and Stage 2 infrastructure as required by condition 9 has been submitted by the works approval holder.
12. The works approval holder may conduct time limited operations for Stage 1

infrastructure and Stage 2 infrastructure specified in Table 4 (as applicable):

- (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 9 for Stage 1 infrastructure and Stage 2 infrastructure; 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*, if one is granted before the end of the period specified in condition 12(a).

Time limited operations requirements and emissions

- 13. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in condition 1 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 1.
- 14. During time limited operations, the works approval holder must ensure that the emissions specified in Table 2 are discharged only from the corresponding discharge points and only at the corresponding discharge point locations.
- 15. The works approval holder must maintain records of gas generator NOx emissions tuning during time limited operations.

Time limited operations report

- 16. The works approval holder must submit to the CEO a report on the time limited operations within 60 calendar days of the completion date of time limited operations or 60 calendar days before the expiration date of the works approval, whichever is sooner.
- 17. The works approval holder must ensure the report required by condition 16 includes the following:
 - (a) a summary of the time limited operations, including timeframes and MWe of electricity produced;
 - (b) a summary of the environmental performance of all items of infrastructure as constructed or installed, as applicable; and
 - (c) a review of performance and compliance against the conditions of the works approval.

Records and reporting (general)

- 18. 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.
- 19. 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 1;
- (c) records of gas generator NO_x emissions tuning activities undertaken in accordance with conditions 7 and 15 ; and
- (d) complaints received under condition 18.

20. The books specified under condition 19 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
annual period	a 12 month period commencing from 1 January until 31 December of the same year.
AS 1940	means <i>Australian Standard 1940 – 2004: The storage and handling of flammable and combustible liquids</i> , as amended from time to time.
AS 4323.1-1995	means <i>Australian Standard 4323.1:1995: Stationary source emissions, selection of sampling positions</i> , as amended from time to time.
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
CO	means Carbon Monoxide
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 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 has been constructed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA).
mAGL	means metres above ground level
m ³ /s	means cubic metres per second
mg/m ³	means milligrams per cubic metre
MWe	means power output (electricity generated) in megawatts
NO _x	means oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide.
O ₂	means Oxygen
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.
PM	means particulate matter
prescribed premises	has the same meaning given to that term under the EP Act.

Term	Definition
Qualified professional engineer	means a person who holds a tertiary academic qualification in engineering and has a minimum of three years of experience working in the area of civil / construction engineering.
SO ₂	means Sulphur Dioxide
Stage 1 infrastructure	refers to infrastructure items 1 to 7 in Table 4 of Schedule 2.
Stage 2 infrastructure	refers to infrastructure items 8 and 9 in Table 4 of Schedule 2.
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.
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).

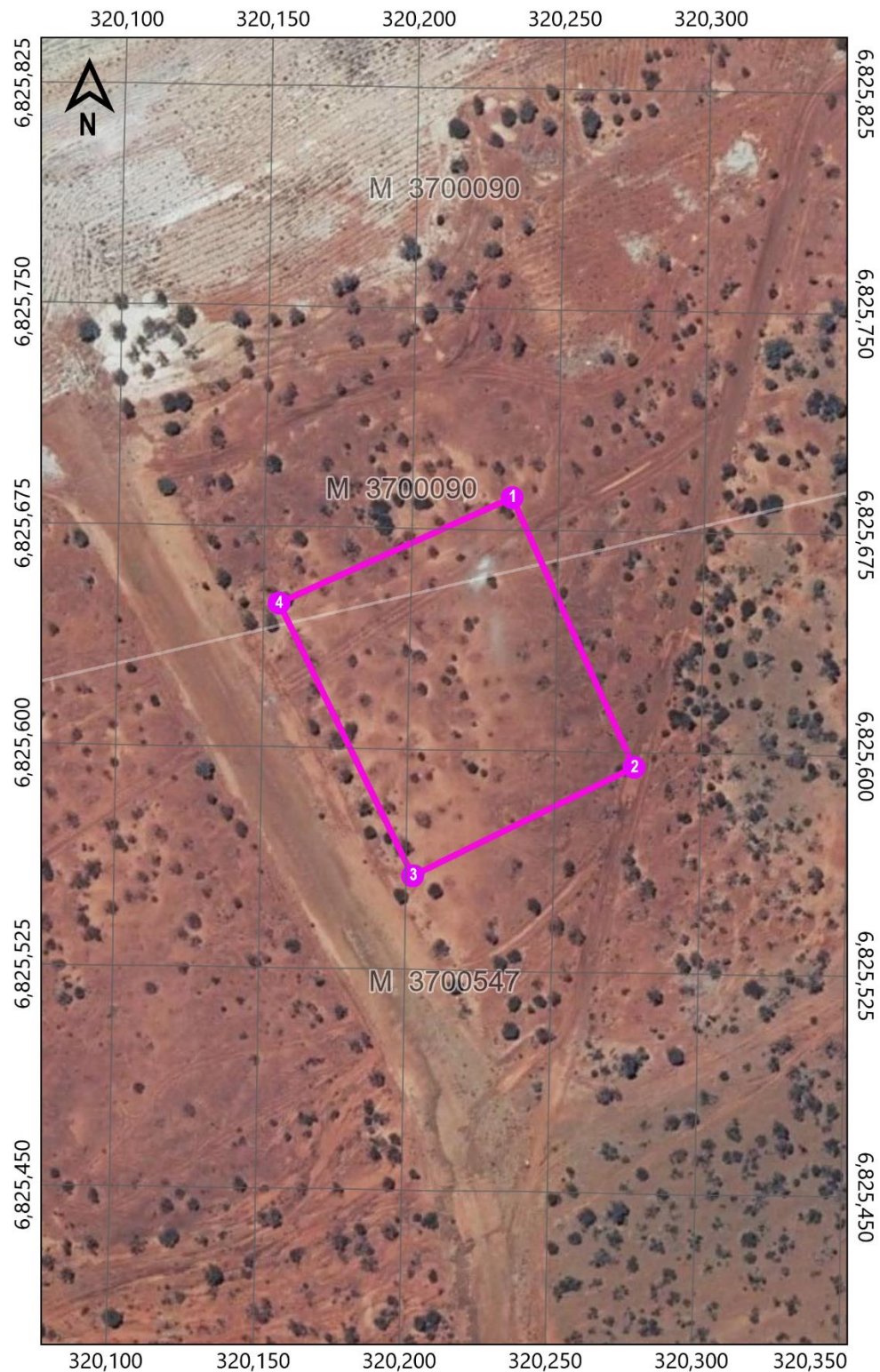


Figure 1: Map of the boundary of the prescribed premises (shown in magenta). The coordinates of the nodes shown in this map are contained in Schedule 3.

Infrastructure Map

The infrastructure to be established at the premises is shown in Figure 2

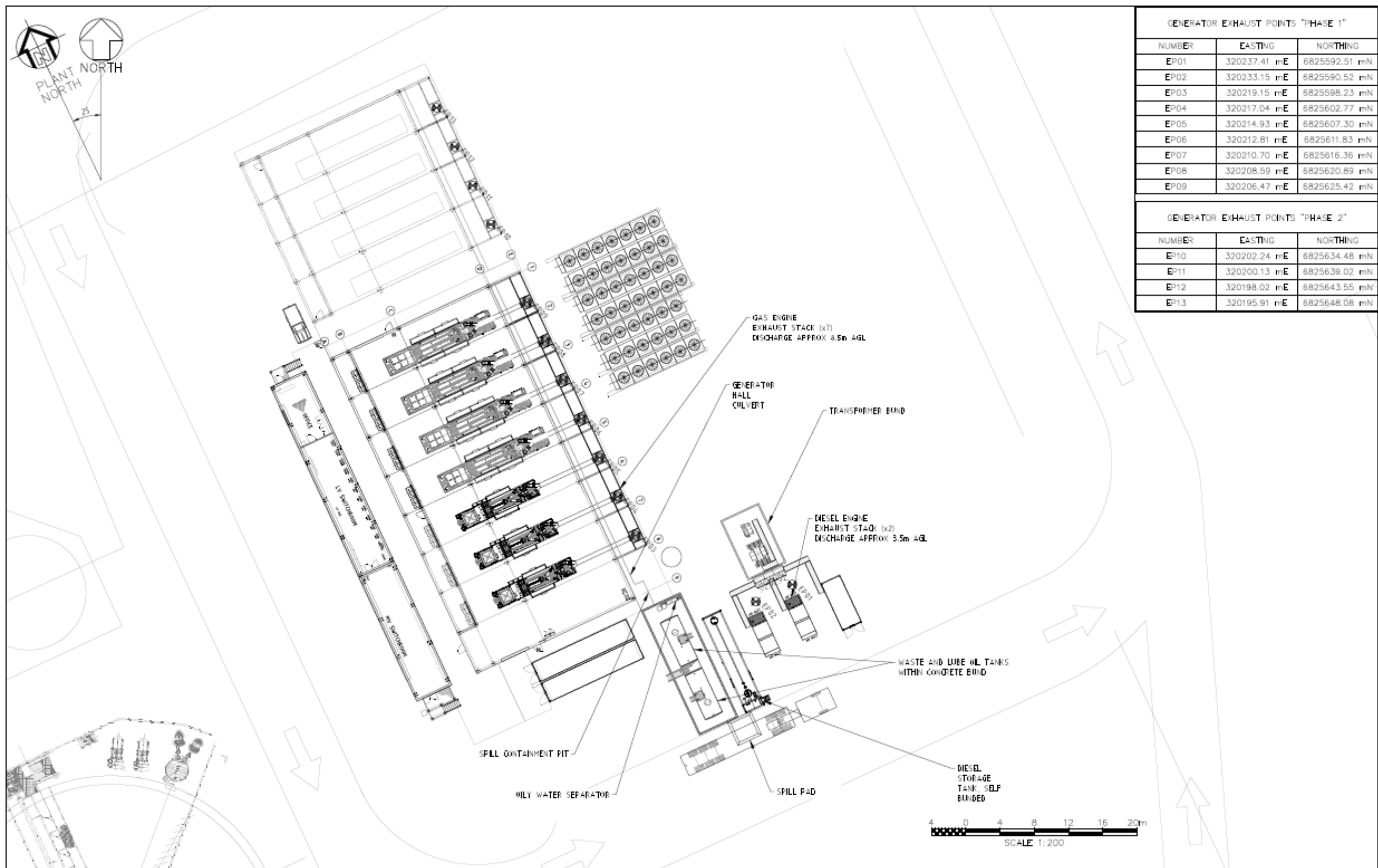


Figure 2: Premises layout map depicting the location of the proposed infrastructure.

Schedule 2: Proposed Works

The works proposed to be undertaken at the premises are detailed in Table 4.

Table 4: Design and construction requirements

Items	Infrastructure	Design and construction requirements	Infrastructure location as shown in Figure 2
Stage 1 infrastructure			
1.	Power station building	<ul style="list-style-type: none"> The building foundations must be constructed of concrete with a minimum elevation of 100 millimeters above ground level. The building floor must drain to a culvert which runs the length of the building, with a minimum width of 600mm. The culvert must drain to a concrete spill containment pit with a minimum capacity of 2 m³. 	Engine hall
2.	Gas powered generators	<ul style="list-style-type: none"> All gas-powered generators must be contained within an enclosed building. Up to four Jenbacher J624 reciprocating gas generators, each with a maximum output of no more than 4.4 MW. Up to three Jenbacher J620 reciprocating gas generators, each with a maximum output of no more than 3.36 MW. Each Jenbacher J624 generator must have an exhaust stack with a minimum height of 8.5 metres above ground level and an internal diameter of at least 600 mm. Each Jenbacher J620 must have an exhaust stack with a minimum height of 8.5 metres above ground level and an internal diameter of at least 500mm. All stacks constructed on the gas generators must be constructed in accordance with AS 4323.1:1995. All generators must have acoustic air inlets installed. All stacks must have mufflers installed. All gas-powered generators must be situated on concrete foundations. 	EP03 – EP09
3.	Diesel powered generators	<ul style="list-style-type: none"> Up to two Cummins QSX15-G8 diesel powered generators; Each diesel-powered generator must have an exhaust stack with a minimum height of 3.5 metres above ground level. Diesel generator enclosures must be self-bunded. All generators must have acoustic air inlets installed. All stacks must have mufflers installed. 	EP01 and EP02
4.	1x 20,000L lubrication oil storage tank 1 x 20,000L waste oil tank	<ul style="list-style-type: none"> Lubrication oil and waste oil tanks must be located within a concrete bund. All bowsers and delivery inlets must be situated on a concrete pad with dimensions of at least 3 metres by 3 metres. 	Waste and Lube oil tanks within concrete bund
5.	1x 68,000L diesel storage tank	<ul style="list-style-type: none"> Tank must be self-bunded in accordance with the requirements of AS 1940. All bowsers and delivery inlets must be situated on a concrete pad with dimensions of at least 3 metres by 3 metres. 	Diesel storage tank self bunded
6.	Transformer	<ul style="list-style-type: none"> The transformer must be established in a bund constructed of concrete. 	Transformer bund
7.	Oil-water separator	<ul style="list-style-type: none"> A Baldwin MPV-12 oil water separator, or model of equivalent specification. The oil water separator must be placed within the bund containing 	Oily water separator

Items	Infrastructure	Design and construction requirements	Infrastructure location as shown in Figure 2
		the lubrication oil and waste oil tanks.	
Stage 2 infrastructure			
8.	Power Station Building	<ul style="list-style-type: none"> •The building foundations must be constructed of concrete with a minimum elevation of 100 millimeters above ground level. •The building floor must drain to a culvert which runs the length of the building, with a minimum width of 600mm. • The culvert must drain to a concrete spill containment pit with a minimum capacity of 2 m³. 	Future engine hall expansion
9.	Generators	<ul style="list-style-type: none"> •All gas-powered generators must be contained within an enclosed building. •Up to four Jenbacher J624 reciprocating gas generators, each with a maximum output of no more than 4.4 MW. •Each Jenbacher J624 generator must have an exhaust stack with a minimum height of 8.5 metres above ground level and an internal diameter of at least 600 mm. •All stacks constructed on the gas generators must be constructed in accordance with AS 4323.1:1995. •All generators must have acoustic air inlets installed. •All stacks must have mufflers installed. •All gas-powered generators must be situated on concrete foundations. 	EP10 - EP13

Schedule 3: Premises boundary

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

Table 5: Premises boundary coordinates

Node	Easting	Northing
1	320,234	6,825,686
2	320,277	6,825,595
3	320,202	6,825,557
4	320,155	6,825,649