



Works approval number	W6500/2020/1
Works approval holder	Mid-West LNG Property Pty Ltd
ACN	639 456 812
Registered business address	Unit 6, 63 Knutsford Avenue, Rivervale WA 6103
DWER file number	DER2020/000326
Duration	01/04/2021 to 31/03/2024
Date of issue	01/04/2021
Premises details	Mid-West LNG Legal description - Lot 500 on Deposited Plan 411758 As defined by the coordinates in Schedule 2

Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)	Assessed production / design capacity
Category 34: Oil or Gas refining	83,731 tonnes per year
Category 87: Fuel Burning	1,037 Kg/hr

This works approval is granted to the works approval holder, subject to the attached conditions, on 01/04/2021, 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
01/04/2021	W6500/2021/1	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 construct and/or install the infrastructure and/or equipment:
 - (a) in accordance with the corresponding design and construction / installation requirements; and
 - (b) 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 on Schedule 1 Maps: Premises layout
Stage 1			
1.	Containerised Modular LNG production facility	48 tonnes per day of LNG production capacity	LNG Plant
2.	Two Gas generators (retired when stage two generators are operational)	Two Generators each up to 2 Megawatt capacity Each with a stack no less than 8.6 m high Sampling ports on each generator stack installed in accordance with AS4323.1	Gas power plant
3.	One 1 MW diesel generator	Only designed to operate as a back-up power source when gas fired generators are unable to be operated	Gas power plant
4.	4,500 L diesel storage tank	Compliant to AS 1940 AS 1692	
5.	Bunded shipping container for chemical storage	Compliant to AS 1940 AS 1692	DG Storage
6.	One 370m ³ LNG storage tank	Double walled	LNG Tanks Farm
Stage 2			
7.	LNG production facility	250 tonnes per day of LNG production capacity	LNG Plant
8.	Four Gas generators	2 Megawatt per generator Each with a stack no less than 8.6m high Sampling ports on each generator stack installed in accordance with AS4323.1	Gas power plant
9.	Five 370m ³ LNG storage tanks	Double walled	LNG Tanks Farm

Compliance reporting

2. The works approval holder must within 20 calendar days of each stage of the infrastructure specified in 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:
 - (a) certification by a suitably qualified engineer that the infrastructure, 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 infrastructure identified in condition 1 where the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for that stage of infrastructure;
5. The works approval holder may conduct time limited operations for each stage of the infrastructure specified in condition Table 1 (as applicable):
 - (a) for a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 4 for that item of 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* whichever occurs first.

Emissions

6. During time limited operations, the works approval holder must ensure that the emissions specified in Table 2, are emitted only from the corresponding emission points and only at the corresponding emission point locations.

Table 2: Authorised discharge points during time limited operations

Emission point	Emission	Emission point location (as shown in Schedule 1: Maps)
Stage 1		
MR Compressor – Compressor cube	N ₂ and Mixed Refrigerant	4
Flare	NO _x , CO, PM	10
Diesel backup generator	NO _x , CO, PM and SO ₂	24
Gas generator 1 and 2	NO _x , PM, HCHO and CO	25 and 26
Stage 2		
Amine Regeneration package stack	NO _x and CO	13
Regen Gas Heater stack	NO _x and CO	14
MR Compressor (Drive seal)	N ₂ and Mixed Refrigerant	18
Cold box	N ₂	21
Gas generator 3 and 4	NO _x , PM, HCHO and CO	27 to 28

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

Table 3: Air emission monitoring during time limited operations

Discharge point (as shown in Schedule 1: Maps: emission points)	Parameter ¹	Frequency	Averaging Period	Unit ²	Sampling and analysis method ^{2,3,4}
Stage 1: 25 & 26	Volumetric flow rate	Once during time limited operation	>30 minutes	m ³ /s and g/s and mg/m ³	USEPA Method 2
	NO _x				USEPA Method 7D or 7E
Stage 2: 27 & 28	CO				USEPA Method 10
	HCHO				USEPA Method 323

Note 1: all units are referenced to STP dry

Note 2: Concentration units for all gases are referenced to 15% O₂

Note 3: Monitoring shall be undertaken to reflect normal operating conditions

Note 4: Where any USEPA method refers to USEPA Method 1 for the sampling plane, this must be read as a referral to AS 4323.1

8. The works approval holder must ensure all sampling and analysis undertaken pursuant to Condition 7 is undertaken by a holder of NATA accreditation for the relevant methods of sampling and analysis.

Time limited operations reporting

9. The works approval holder must submit to the CEO a report on the time limited operations for each stage 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 the sooner.
10. The works approval holder must ensure the report required by condition 9 includes the following:
 - (a) a summary of the time limited operations, including timeframes and MWe of electricity produced;
 - (b) a summary of monitoring results as recorded in accordance with condition 7;
 - (c) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable); and
 - (d) 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)

11. 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.
12. 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 to comply with condition 1; and
 - (c) complaints received under condition 11.
13. The books specified under condition 12 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
AS 1940	the <i>Australian Standard AS1940 The storage and handling of flammable and combustible liquids</i>
AS 1692	the <i>Australian Standard AS1692 Steel tanks for flammable and combustible liquids</i>
AS 4323.1	the <i>Australian Standard AS4323.1 Stationary Source Emissions Method 1: Selection of sampling positions</i>
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	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.
HCHO	means formaldehyde
LNG	means liquefied natural gas
MWe	means power output (electricity generated) in megawatts
N ₂	means nitrogen
NO _x	oxides of nitrogen, calculated as the sum of nitric oxide and nitrogen dioxide and expressed as nitrogen dioxide
PM	means particulate matter
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.
SO ₂	means sulfur dioxide
STP, dry	means standard temperature and pressure (0°C and 101.325 kilopascals respectively), dry
suitably qualified engineer	a person who: a) holds a Bachelor of Engineering; and b) has a minimum of five years of working experience in the area of civil 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	United States (of America) Environmental Protection Agency
USEPA Method 2	USEPA Method 2 Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)
USEPA Method 7D	USEPA Method 7D Determination of Nitrogen Oxide Emissions from Stationary Sources (Alkaline-Permanganate/Ion Chromatographic Method)
USEPA Method 7E	USEPA Method 7E Determination of Nitrogen Oxides Emissions from Stationary Sources (Instrumental Analyzer Procedure)
USEPA Method 10	USEPA Method 10 Determination of Carbon Monoxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)
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).

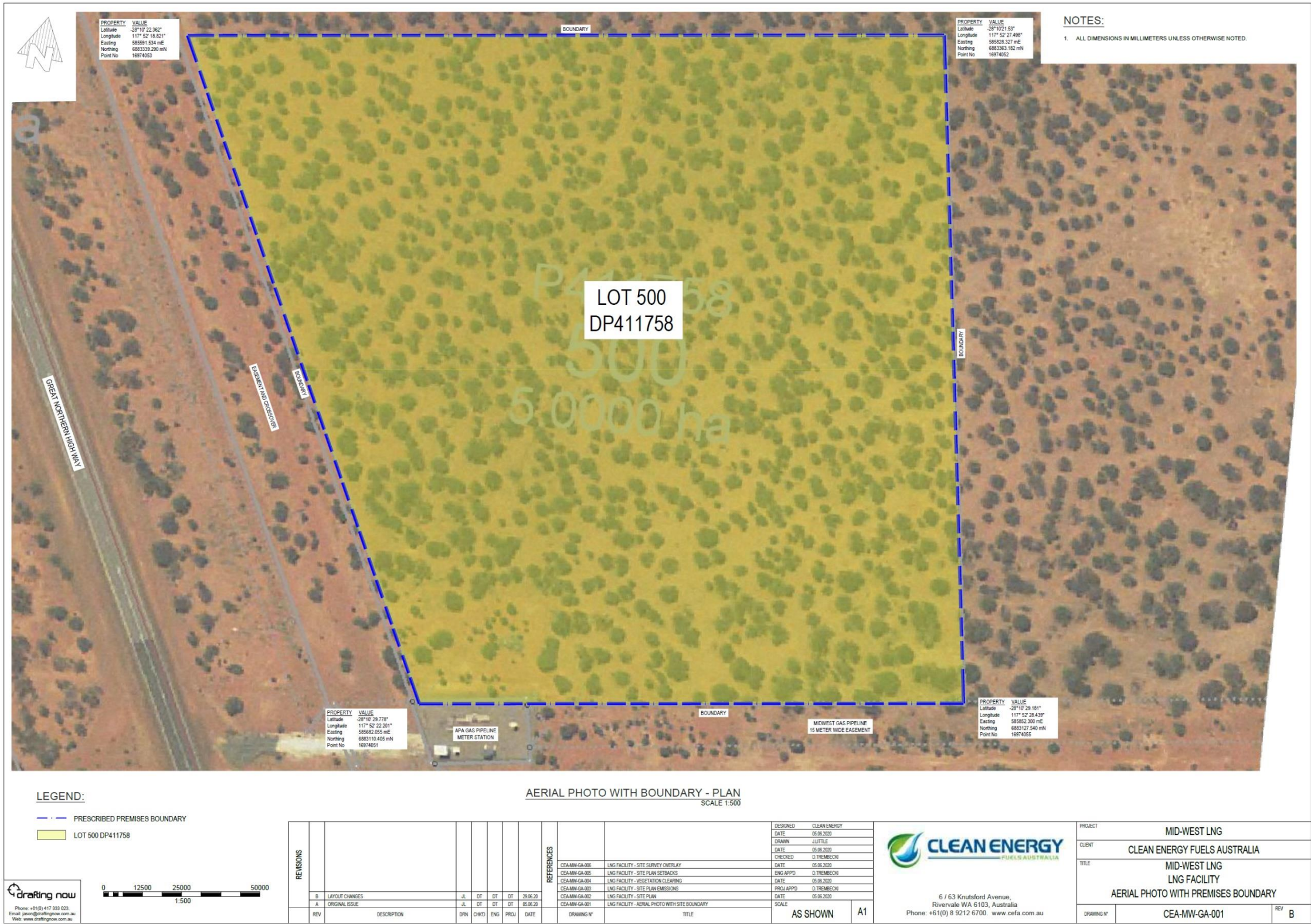


Figure 1: Map of the boundary of the prescribed premises

Premises layout and emission points

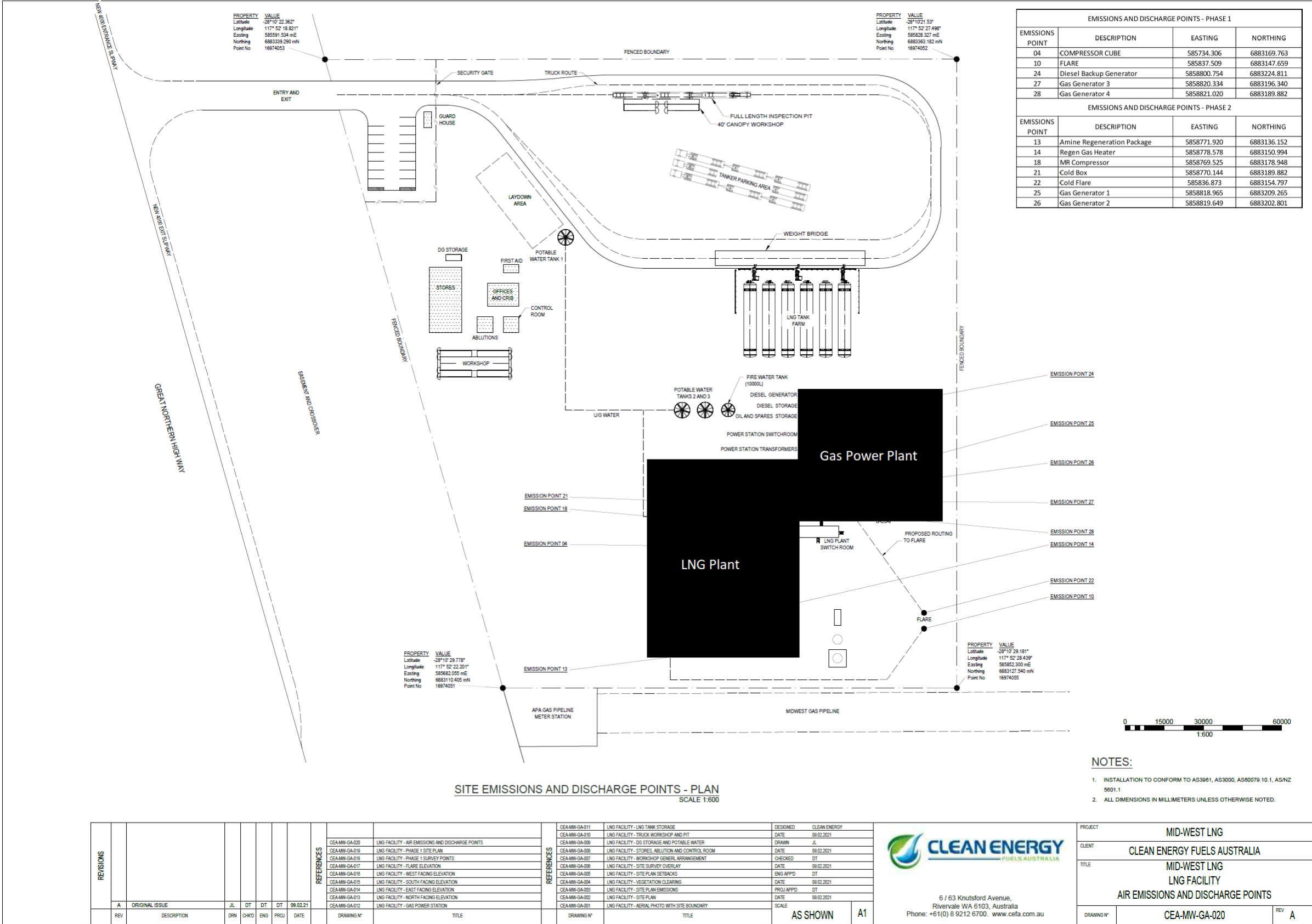


Figure 2: Premises layout and emission points

Schedule 2: Premises boundary

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

Table 5: Premises boundary coordinates

Easting	Northing
585587.632	6883342.991
585828.022	6883368.272
585853.163	6883129.077
585680.332	6883110.943