



Amended Works Approval

Works approval number	W6176/2018/1
Works approval holder	Puma Energy (Australia) Kwinana Pty Ltd
ACN	167 227 858
Registered business address	'Grosvenor Pl' Level 12, 255 George Street SYDNEY, NSW 2000
DWER file number	DER2018/001333
Duration	16/01/2019 to 16/01/2023
Date of issue	16/01/2019
Date of last amendment	14/12/2021
Premises details	Puma Energy – Kwinana Fuel Terminal Kwinana Beach Road KWINANA WA 6167 Legal description – Part of Lot 108 on Plan 400167 As shown in the premises map in Schedule 1

Prescribed premises category description (Schedule 1, Environmental Protection Regulations 1987)	Assessed production capacity
Category 73: Bulk storage of chemicals etc.: premises on which acids, alkalis or chemicals that – (a) contain at least one carbon to carbon bond; and (b) are liquid at STP (standard temperature and pressure) are stored.	220,140 m ³ per annum

This amendment is granted to the works approval holder, subject to the attached conditions, on 14 December 2021, by:

Daniel Hartnup
A/MANAGER, PROCESS INDUSTRIES
REGULATORY SERVICES

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

Works approval history

Date	Ref number	Summary of changes
16/01/2019	W6176/2018/1	Works approval granted.
03/08/2020	W6176/2018/1	Works approval holder transfer of occupier name.
14/12/2021	W6176/2018/1	Works approval amended to update location and specifications of infrastructure, access new infrastructure and update legal location and extension to works approval.

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 equipment listed in Table 1:
 - (a) in accordance with the corresponding design and construction/installation requirements; and
 - (b) at the corresponding infrastructure location, as set out in that table.

Table 1: Infrastructure design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location as shown in Schedule 1
1	Diesel storage tanks	<p>Diesel storage tanks to be constructed as follows:</p> <ul style="list-style-type: none"> • 3 x above ground, vertical diesel storage tanks, each with a maximum fill volume of 37.2 mega litres (ML) and working net volume of 35.6 ML. • Located on impermeable graded floors with a closed drainage system and sump. • Surrounded by impermeable bund capable of containing 110% volume of the largest diesel storage tank. • Tank control instrumentation including radar tank level gauges, high-level alarm sensors (with site wide annunciator system), temperature transmitters and valve position indicators. • Tanks fitted with fail safe (normally fail closed) valves on tank draw offs. 	Diesel
2	Motor spirit storage tanks	<p>Motor spirit storage tanks to be constructed as follows:</p> <ul style="list-style-type: none"> • 4 x above ground vertical motor spirit storage tanks, each with a maximum fill volume of 19.6 ML and working net volume of 18.3 ML. • 2 x above ground vertical motor spirit storage tanks, each with a maximum fill volume of 9.9 ML and working net volume of 9.2 ML. • 2 x above ground vertical motor spirit storage tanks (toluene and naphtha/isomerate etc.), each with a maximum fill volume of 8.6 ML and working net volume of 8 ML. • 4 x above ground vertical motor spirit storage tanks, each with a maximum fill volume of 220 kL and working net volume of 190 kL. • Located on impermeable graded floors with a closed drainage system and sump. • Surrounded by an impermeable bund capable of containing 110% volume of the largest tank in the compound. • Tank control instrumentation including radar tank level gauges, high level alarm sensors (with site wide annunciator system), temperature transmitters and valve position indicators. • Tanks fitted with fail safe (normally fail closed) valves on draw off lines. • Floating internal covers to minimise evaporation loss. • Tank mixers installed in 2 x 20-ML and 1 x 8.4 ML motor spirit storage tanks. • Jet mixing nozzles installed on all motor spirit storage tanks. 	ULP PULP
3	Butane storage tank	<p>Butane tank to be constructed as follows:</p> <ul style="list-style-type: none"> • 1 x horizontal pressurised bullet tank with a maximum fill volume of 400 kL and working net volume of 360 kL. 	Butane

		<ul style="list-style-type: none"> • Located on concrete footing with blue metal gravel surround. • Tank control instrumentation including radar tank level gauges, high level alarm sensors (with site wide annunciator system), temperature transmitters and valve position indicators. • Tank fitted with fail safe (normally fail closed) valves on draw off lines. • Butane storage tank will contain all vapour produced; tank is fitted with a PRV (pressure relief valve) for emergency venting (not an operational vent). 	
4	Loading gantry	<p>Loading gantry facilities to be constructed as follows:</p> <ul style="list-style-type: none"> • Fuel compatible concrete floor with bunded area. • Self-draining floor into local drainage pits connecting to an effluent holding tank. • Roofed truck loading bays. • Tanker bottom fill with overfill and earth protection. • Vapour recovery system. • Operation instrumentation including emergency shutdown systems. 	Fuel gantry
5	Effluent tank	<p>Effluent tank to be constructed as follows:</p> <ul style="list-style-type: none"> • 1 x underground horizontal double wall FRP (fibre-reinforced plastic) effluent tank with a maximum fill volume of 110 kL. • Tank control instrumentation including tank level gauges, high level alarm sensors (with site wide annunciator system). • Vent line sizes appropriately to maintain atmospheric pressure during loading, unloading, and temperature fluctuation. 	Gantry effluent disposal tank
6	Slops tank	<p>Slops tank to be constructed as follows:</p> <ul style="list-style-type: none"> • 1 x underground horizontal double wall FRP (fibre-reinforced plastic) slops tank with a maximum fill volume of 40 kL and working net volume of 38 kL. • Tank fitted with overflow prevention valve. • Tank control instrumentation including tank level gauges, high level alarm sensors (with site wide annunciator system). • Vent line sizes appropriately to maintain atmospheric pressure during loading, unloading, and temperature fluctuation. 	Slops tank
7	Additive storage	<p>Additive storage tanks to be constructed as follows:</p> <ul style="list-style-type: none"> • 8 x above ground horizontal self-bunded carbon steel additive tanks with a maximum fill volume of 45 kL and working net volume of 42.7 kL per tank. • Located on concrete footings with blue metal gravel surround. • Concrete bund for unloading facilities. • Vent line and Pressure / Vacuum vents are sizes appropriately to maintain small (9.5 to -0.5 kPa) pressure during loading, unloading, and temperature fluctuation, to minimise evaporation loss. 	Additive tanks
8	Stadis tank	Stadis tanks to be constructed as follows:	Stadis

		<ul style="list-style-type: none"> 1 x above ground vertical stainless steel Stadis tanks with a maximum fill volume of 4 kL. Surrounded by an impermeable bund capable of containing 110% volume of the largest tank in the compound. Located on concrete foundation. Vent line and Pressure / Vacuum vents are sizes appropriately to maintain small (10 to -0.5 kPa) pressure during loading, unloading, and temperature fluctuation, to minimise evaporation loss. Tank control instrumentation including tank level gauges and high level alarm sensors. 	
9	Dewatering tanks	<p>Dewatering tanks to be constructed as follows:</p> <ul style="list-style-type: none"> 3 x above ground vertical stainless steel dewatering tanks with a maximum fill volume of 5 kL per tank. Surrounded by an impermeable bund capable of containing 110% volume of the largest tank in the compound. Located on concrete foundation with blue metal gravel surround. Vent line and Pressure / Vacuum vents are sizes appropriately to maintain a small pressure during operation. Tank control instrumentation including tank level gauges and high level alarm sensors. 	TK-310 5kL TK-620 5kL TK-621 5kL
10	Surface water management system	<p>Surface water management system to be constructed as follows:</p> <ul style="list-style-type: none"> Bunding to prevent the incursion of water into tanks storage areas. Engineered drainage system designed to contain and treat potentially contaminated stormwater. Oily water separators (1x 6 L/s, 1x 35 L/s). 4,970 m² of surface water infiltration areas. 	Bund area Infiltration area
11	Firefighting system	<p>Firefighting system to be constructed as follows:</p> <ul style="list-style-type: none"> 2 x fire water tanks. Pumps to supply water to the fire water system. Firefighting foam including foam pourers. Ring main and hydrant system. Gantry foam deluge system. Tank cooling water system. 	Firewater
12	Administration area and driver amenities	<p>Administration area to be constructed as follows:</p> <p>Aerated Treatment Unit (ATU) in line with Department of Health approved systems.</p>	N/A

Compliance reporting

2. The works approval holder must within 30 calendar days of the infrastructure and 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 suitably 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 that condition;
- (b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1;
- (c) submit all water quality data, volume and dates of dewatering for the installation of groundwater tanks in condition 5;
- (d) submit details of asbestos exposed during excavation and action taken in accordance with condition 4; and
- (e) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Dewatering and soil excavation - construction

4. During soil excavation works, the works approval holder must undertake the minimum requirements specified in Table 2 for the installation of underground tanks on the premises.

Table 2: Dewatering and soil management requirements during construction

Construction control	Requirements
Dewatering - infiltration basin (D1)	<ul style="list-style-type: none"> (i) All groundwater abstracted as part of dewatering activities must only be discharged to the existing stormwater infiltration basins on the premises; (ii) Dewatering must not occur for more than thirty days (total); (iii) The dates of any discharge from groundwater dewatering must be recorded.
Excavation of soil	<ul style="list-style-type: none"> (i) If suspected asbestos containing material (ACM) is unearthed, excavation must cease, and a licensed asbestos removalist employed to remove it in accordance with the Code of Practice for the Safe Removal of Asbestos; (ii) The area must then be re-inspected and cleared by a competent person before works resume.

Monitoring

General monitoring

5. The works approval holder must ensure that:
- (a) all water samples are collected and preserved in accordance with AS/NZS 5667.1;
 - (b) all groundwater sampling is conducted in accordance with AS/NZS 5667.11; and
 - (c) all laboratory samples are submitted to and tested by a laboratory with current NATA accreditation for the parameters being measured.
6. The works approval holder must ensure that all monitoring equipment used on the premises to comply with conditions of this works approval is calibrated in accordance with the manufacturer's specifications.
7. The works approval holder must, where the requirements for calibration cannot be practicably met, or a discrepancy exists in the interpretation of the requirements, bring these issues to the attention of the CEO accompanied with a report comprising details of any modifications to the methods.

Groundwater monitoring

8. The works approval holder must monitor and record the results of groundwater abstracted as part of dewatering activities for concentrations of the identified

parameters in accordance with Table 3.

Table 3: Emissions and discharge monitoring

Monitoring location	Parameter	Unit	Frequency	Averaging period
Discharge pipe into the infiltration basin at the points depicted in Figure 1 in Schedule 1 (D1)	pH	No unit	At least one sample taken on the last day of dewatering	Spot sample, in-field measurement
	Electrical conductivity	µS/cm		Spot sample, laboratory analysis
	Ammonia	mg/L		
	Sulfate			
	Cobalt			
	Nickel			

Records and reporting (general)

9. 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.
10. 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) construction dewatering monitoring undertaken in accordance with condition 5; and
 - (d) complaints received under condition 7.
11. The books specified under condition 8 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 have the meanings defined.

Table 3: Definitions

Term	Definition
ACM	means asbestos containing materials as defined in the Department of Health 2009, <i>Guidelines for Assessment, Remediation and Management of Asbestos Contaminated Sites, Western Australia</i>
AS/NZS 5667.1	means the Australian Standard AS/NZS 5667.1 Water quality – sampling – guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples, as amended from time to time
AS/NZS 5667.11	means the Australian Standard AS/NZS 5667.11 Water quality – sampling – guidance on sampling groundwater, as amended from time to time
averaging period	means the time over which a limit or target is measured or a monitoring result is obtained
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
Code of Practice for the Safe Removal of Asbestos	means the <i>Code of Practice for the Safe Removal of Asbestos</i> , 2 nd Edition [NOHSC:2002(2005)]
competent person	means a person who has acquired through training or experience the knowledge and skills of relevant asbestos removal industry practice and holds: (a) a certification in relation to the specified VET course for asbestos assessor work; or (b) a tertiary qualification in occupational health and safety, occupational hygiene, science, building, construction or environmental health.
condition	means a condition to which this works approval is subject under s.62 of the EP Act
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 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	<i>Environmental Protection Act 1986</i> (WA).
EP Regulations	Environmental Protection Regulations 1987 (WA).
Licensed asbestos removalist	means a person who holds a current unrestricted asbestos removal licence issued under Regulation 5.44 of the <i>Occupational Safety and Health Regulations 1996</i>
NATA	National Association of Testing Authorities, Australia
NATA accreditation	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

Term	Definition
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.
prescribed premises	has the same meaning given to that term under the EP Act.
qualified professional engineer	means a person who holds a tertiary academic qualification in engineering; and has a minimum of 3 years of experience working in their area of expertise
spot sample	means a discrete sample representative at the time and place at which the sample is taken
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.
µS/cm	microSiemens per centimeter

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 and discharge points

Premises layout

The layout of the prescribed premises is shown in the map below (Figure 2).

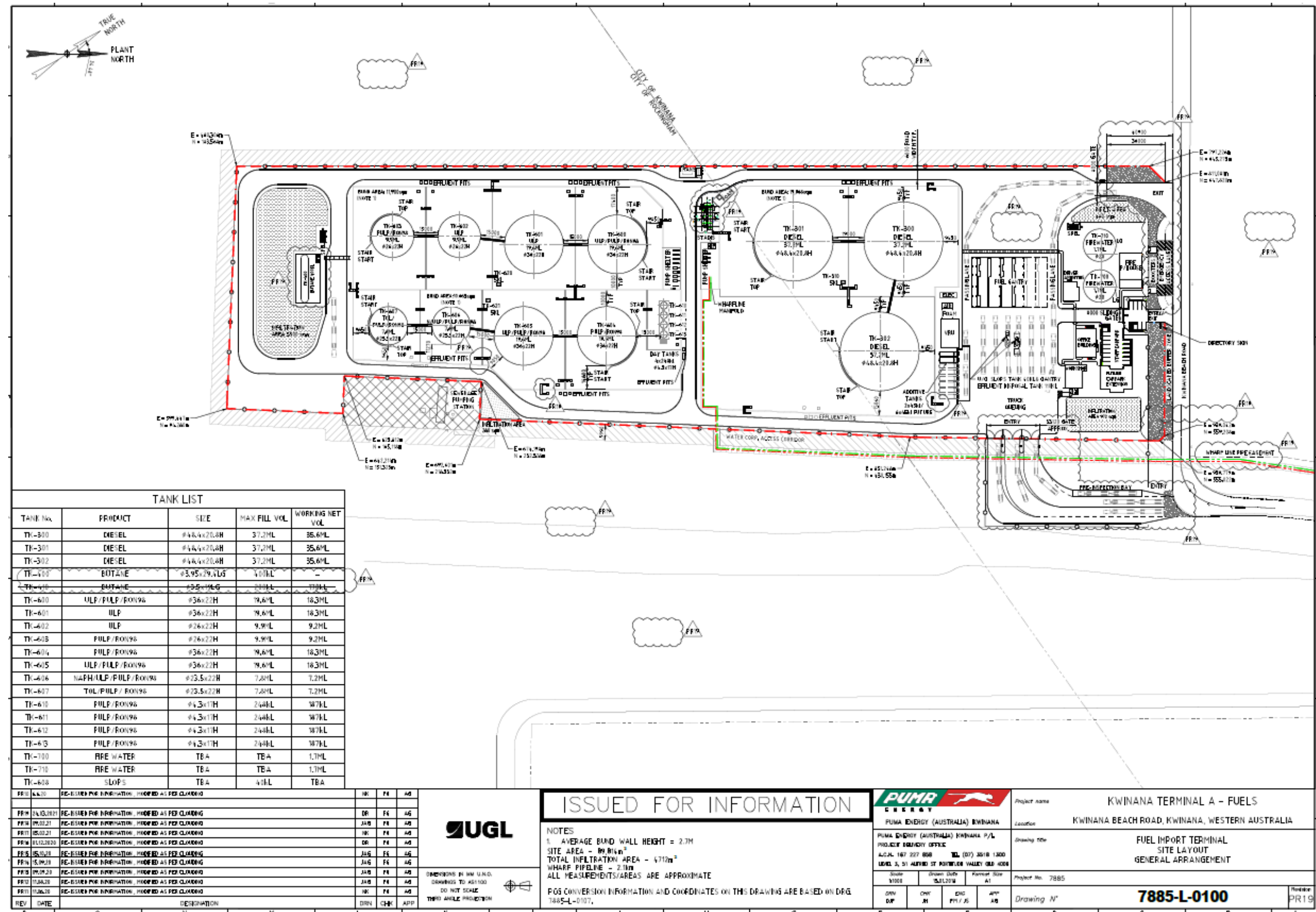


Figure 2: Map of the boundary of the prescribed premises

