



# Works Approval

<b>Works approval number</b>	W6823/2023/1	
<b>Works approval holder</b>	Woodside Energy Technologies Pty Ltd	
<b>ACN</b>	111 767 232	
<b>Registered business address</b>	Mia Yellagonga Karlak, 11 Mount Street Perth WA 6000	
<b>DWER file number</b>	DER2023/000421	
<b>Duration</b>	25/10/2024 to	24/10/2027
<b>Date of Issue</b>	25/10/2024	
<b>Premises details</b>	Hydrogen Refueller @H2Perth Alumina Road, East Rockingham Part of Lot 150 on Plan 69418 As defined by the premises maps in Schedule 1	

<b>Prescribed premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>)</b>	<b>Assessed design capacity</b>
Category 31: Chemical manufacturing: premises (other than premises within category 32) on which chemical products are manufactured by a chemical process.	388 tonnes per year

This works approval is granted to the works approval holder, subject to the attached conditions, on 25 October 2024, by:

**MANAGER, PROCESS INDUSTRIES**

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

## Works approval history

Date	Reference number	Summary
25/10/2024	W6823/2023/1	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 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; 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
1.	Water treatment plant	(a) The water treatment system must comprise of a de-mineralisation or reverse osmosis process that removes imperfections and impurities from the water feedstock; and (b) Treatment chemicals are stored within bunded containment.	As shown in Figure 2 in Schedule 1.
2.	Electrolyser	The electrolyser must be designed to receive feed water to produce hydrogen and oxygen through electrolysis using electrical power.	
3.	Hydrogen compression	(a) Must be designed to compress hydrogen for storage and to suit the standard pressures for hydrogen refuelling; and (b) Hydrogen storage not to exceed a total inventory of 1700 kg.	
4.	H <sub>2</sub> Vent	(a) Vent stack must be positioned on the Electrolyser skid and have a minimum height of 9 m (~10cm diameter); (b) Must be suitable for both incidental emissions during regular operations and emissions during facility start-up and shutdown; (c) Must be stabilised and secured by use of a stabilisation frame; and (d) Additional vents (associated with equipment PSVs) to be situated within the premises boundary. Vents to be installed to enable equipment isolation and allow for improved maintainability of infrastructure.	

	Infrastructure	Design and construction / installation requirements	Infrastructure location
5.	Wastewater storage	<p>(a) The wastewater storage system/holding tank must be constructed to accommodate treated feedstock with higher salt concentrations and trace amounts of treatment chemicals, as well as wastewater generated from the electrolysis process;</p> <p>(b) The tank must be constructed of materials that are resistant to corrosion and compatible with the wastewater composition;</p> <p>(c) All wastewater storage and holding tanks, transfer pipelines and conveyance infrastructure must be impermeable and free of leaks and defects;</p> <p>(d) Incorporate an alarm system of audible and visual alarms, which will activate in the event of high level or other parameter operating outside the design; and</p> <p>(e) All wastewater generated by the water treatment and electrolysis process is disposed offsite via submersible pump to the sewer main, or trucked offsite.</p>	

## Compliance reporting

2. The works approval holder must within 30 calendar days of all items 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.
3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:
  - (a) certification by a Chartered 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 phase

### Environmental commissioning requirements and emission limits

4. The works approval holder may only commence environmental commissioning of an item of infrastructure listed in condition 1 once the Environmental Compliance Report has been submitted for that item of infrastructure in accordance with condition 2 of this works approval.
5. Any environmental commissioning activities undertaken for an item of infrastructure specified in Table 2 may only be carried out:

- (a) in accordance with the corresponding commissioning requirements; and
- (b) for the corresponding authorised commissioning duration.

**Table 2: Environmental commissioning requirements**

Infrastructure	Commissioning requirements	Authorised commissioning duration
Hydrogen electrolyser and associated infrastructure	<ul style="list-style-type: none"> <li>(a) Vents are maintained to discharge gaseous emissions from the electrolysis process;</li> <li>(b) Wastewater generated from process activities to be appropriately contained or removed offsite to an approved facility;</li> <li>(c) Plant and equipment operated and maintained in accordance with manufacturers specifications; and</li> <li>(d) Any spills of treatment chemicals or wastewater (outside of containment) is immediately contained and cleaned up.</li> </ul>	For a period not exceeding 180 calendar days in aggregate.

6. During environmental commissioning, 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 during commissioning**

Emission	Discharge point	Discharge point location
Gaseous emissions (hydrogen) from electrolysis process	H <sub>2</sub> Vent stack (9 metres)	Discharge point as shown in Figure 2

### Environmental commissioning reporting

7. 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 each item of infrastructure specified in Table 2.
8. The works approval holder must ensure the Environmental Commissioning Report required by condition 7 of this works approval includes the following:
- (a) a summary of the environmental commissioning activities undertaken, including timeframes and performance;
  - (b) a summary of the environmental performance of each item of infrastructure or equipment as constructed or installed.
  - (c) a review of the works approval holder's performance and compliance against the conditions of this works approval; and
  - (d) 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

9. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1, where the Environmental Commissioning Report has been submitted by the works approval holder.
10. The works approval holder may conduct time limited operations for each of the infrastructure specified in condition 1:
  - (a) For a period not exceeding 180 calendar days from the day the works approval holder meets the requirements of condition 9; 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 10(a).

### Time limited operations infrastructure requirements

11. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 1 and Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding requirement set out in Table 1 and Table 2.

### Time limited operations – authorised emission points and limits

12. During time limited operations, the works approval holder must ensure that the emissions specified in Table 3 are discharge only from the corresponding discharge point(s) and only from the corresponding discharge point location(s).

### Compliance reporting

13. 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 sooner.
14. The works approval holder must ensure the report required by condition 13 includes the following:
  - (a) a summary of the time limited operations, including timeframes and amount of material processed or manufactured;
  - (b) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable);
  - (c) a review of performance and compliance against the conditions of the works approval and the Environmental Commissioning Report; 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)

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 1 and condition 11; and
  - (c) 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
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 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Chartered Engineer	Means a Chartered Engineer registered with Engineers Australia ( <a href="http://www.engineersaustralia.org.au/">http://www.engineersaustralia.org.au/</a> )
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 and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	<i>Environmental Protection Act 1986 (WA)</i> .
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i> .
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map (Figure) in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
time limited	refers to the operation of the infrastructure and equipment identified under this works approval that is authorised for that purpose, subject



Term	Definition
operations	to the relevant conditions.
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.

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**END OF CONDITIONS**

# Schedule 1: Maps

## Premises map

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

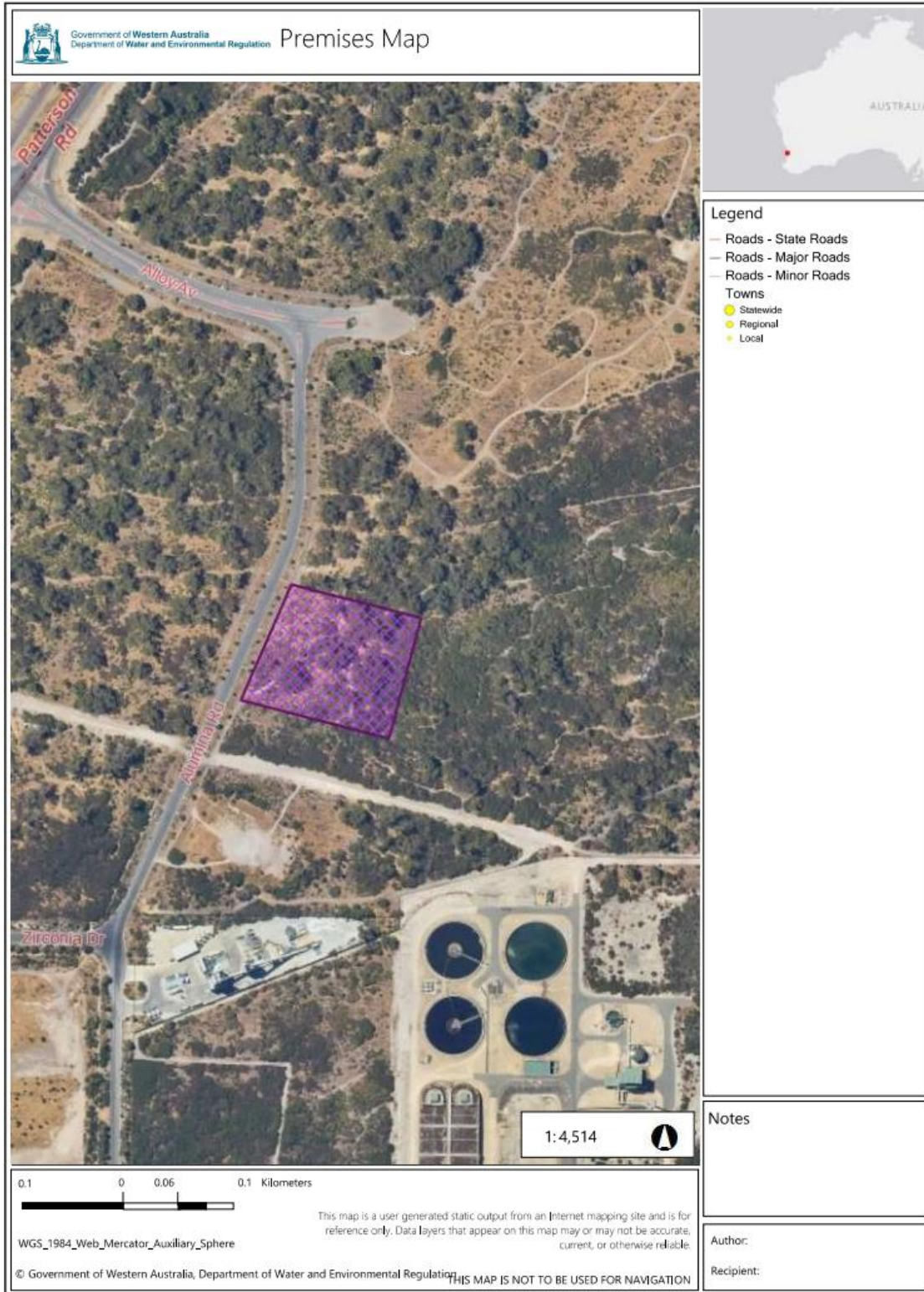


Figure 1: Premises map

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IR-T05 Works approval template (v6.0) (September 2022)

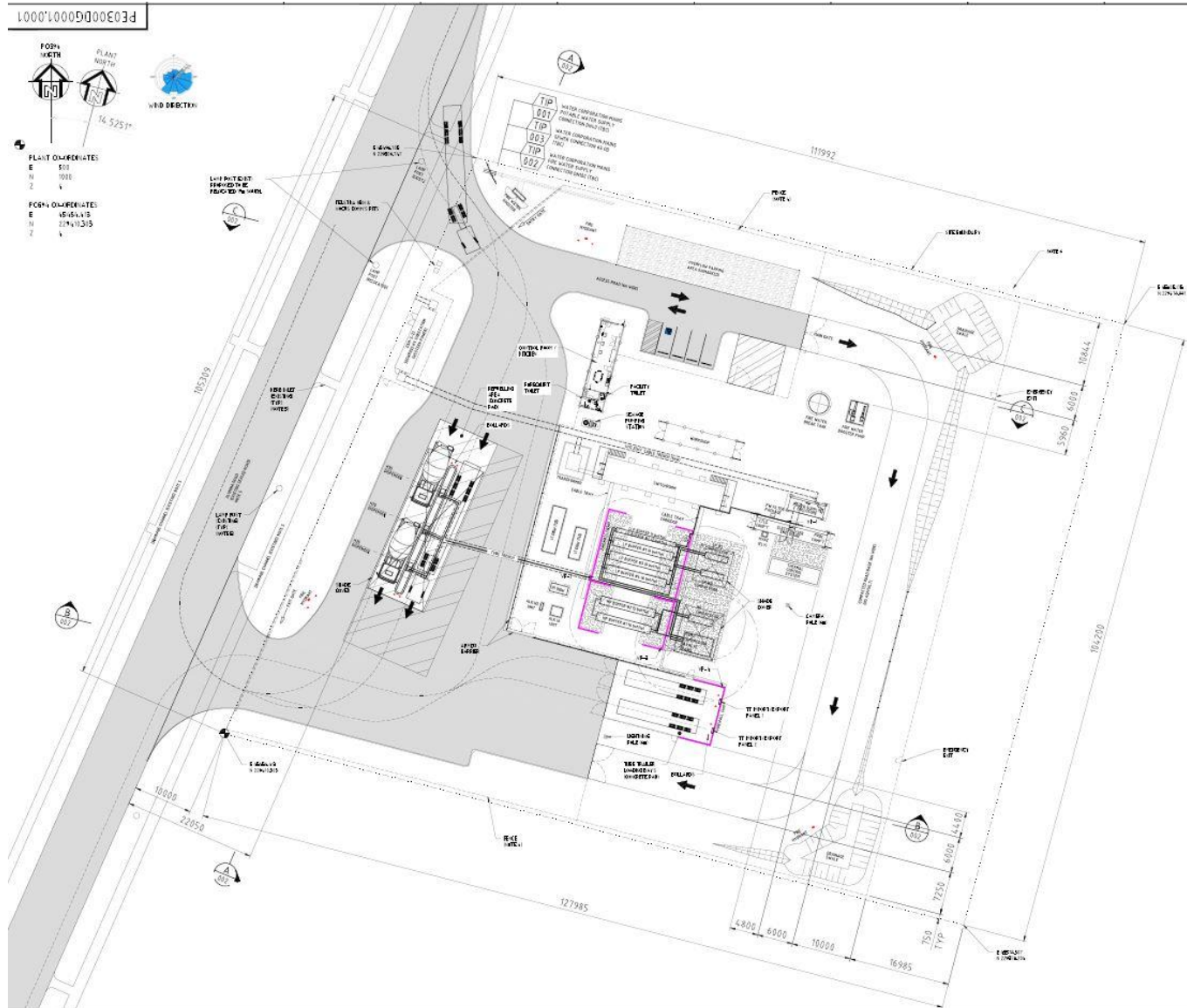


Figure 2: Indicative site layout – General

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IR-T05 Works approval template (v6.0) (September 2022)



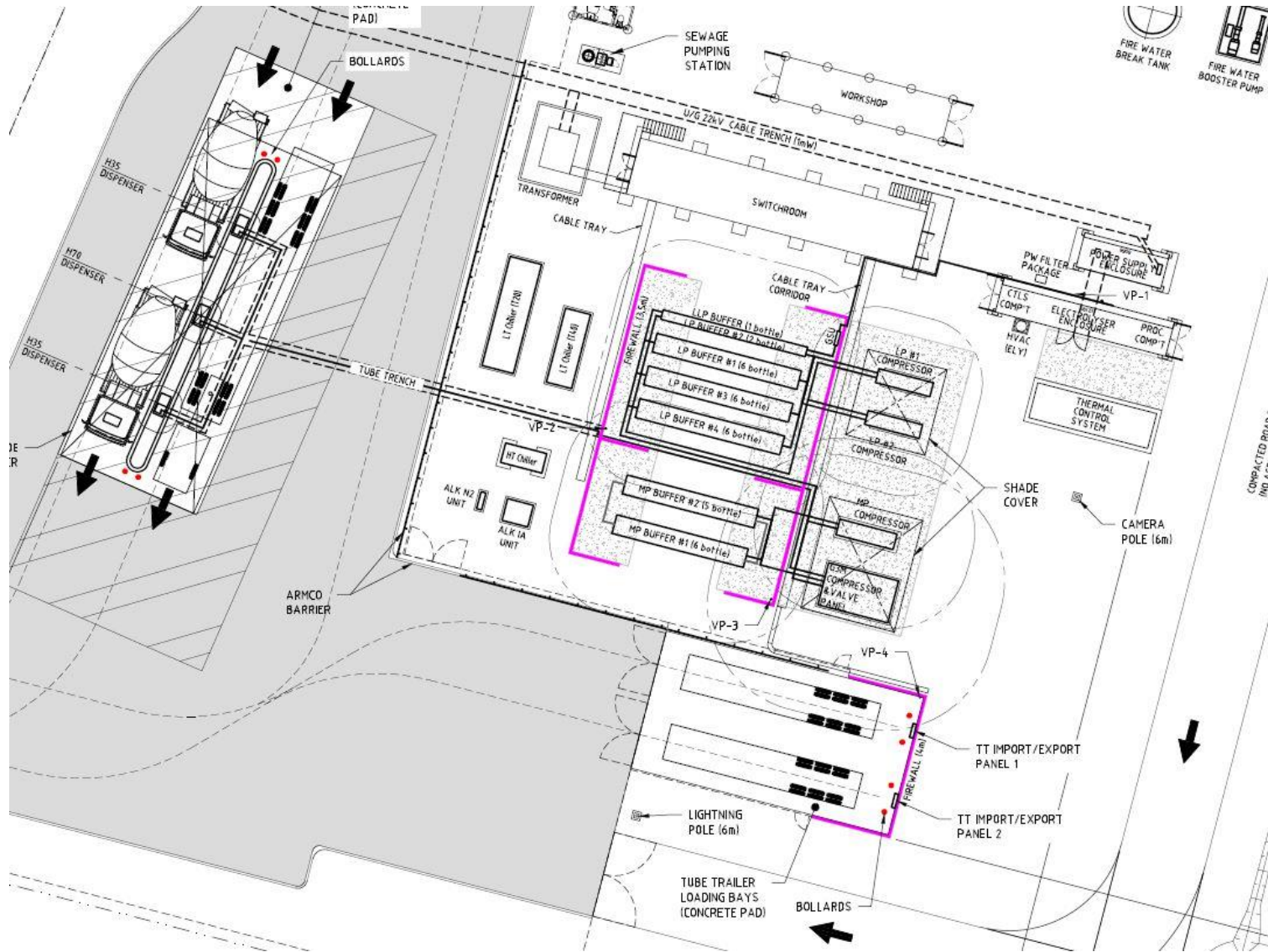


Figure 3: Indicative site layout - detail

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IR-T05 Works approval template (v6.0) (September 2022)