Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6931/2024/1
Works approval holder	BP Refinery (Kwinana) Pty Ltd
ACN	008 689 763
Registered business address	Level 17, 717 Bourke Street Docklands VIC 3008
DWER file number	DER2024/000143
Duration	05/12/2024 to 04/12/2029
Date of issue	05/12/2024
Premises details	BP Kwinana Energy Hub 1 Mason Road, KWINANA BEACH WA 6167 Legal description - Lot 18 on Plan 17311 Certificate of Title Volume 2058 Folio 310 As defined by the premises maps attached to the issued works approval

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	**Assessed production capacity**
Category 31: Chemical manufacturing	17,520 tonnes per annum

This works approval is granted to the works approval holder, subject to the attached conditions, on 05 December 2024, by:

Alana Kidd

Digitally signed by Alana Kidd
Date: 2024.12.05 12:05:45 +08'00'

Alana Kidd
Manager, Green Energy
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Works approval history

Date	Reference number	Summary of changes
05/12/2024	W6931/2024/1	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, install or refurbish the infrastructure and/or equipment specified in Table 1;

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

(c) at the corresponding infrastructure location outlined in Table 1.

Table 1: Design and construction requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location
1.	Electrolyser package comprising of: six 17.2 MW electrolyser modules	a) Electrolysers must be constructed with Low Pressure Proton Exchange Membrane (LPPEM); and b) Must be designed to deliver not greater than 48 tonnes per day of hydrogen.	(a) as identified on Figure 2, Schedule 1.
2.	Cooling systems including: Cooling towers Chilling Unit HVAC (any supporting pipes, pumps etc.)	a) Must be installed to have one open loop cooling system to cool all infrastructure and one closed cooling loop through the electrolysers; b) HVAC system must be designed to hold no more than 93 kg of ammonia; and c) Chemical tanks and chemical/hydrocarbon storage must be bunded with a capacity not less than 110% of the capacity of the largest contained tank system and at least 25% of the total capacity of all tanks contained within the bunded area (for a multiple tank system) i. Areas of bulk chemical storage must be built on a hardstand with permeability of $1x10^{-9}$ or less. d) Non bulk chemical storage infrastructure built on hardstand area for containment of spillages (floors of hardstand to achieve permeability of $1x10^{-7}$ to $1x10^{-9}$ or less) e) HVAC area must be roofed and stormwater directed to soak wells.	(c) as identified on Figure 2, Schedule 1.

	Infrastructure	Design and construction / installation requirements	Infrastructure location
3.	Process effluent pit	a) Must be constructed of adequate materials to prevent the seepage or leak of process effluent to ground and groundwater; b) Must be designed to pipe process effluent to the KEH WWTP; c) Must only send wastewater to the KEH WWTP. d) Must be designed to accept all process water from H2 Kwinana operations. e) Must be fitted with a suitable flow meter measuring the rate of process effluent being sent to the KEH WWTP; and f) Must be designed to allow for process effluent sampling in accordance with AS/NZS 5667.10. g) Must be fitted with a flow meter and high level alarms	W1 as identified on Figure 2, Schedule 1.
4.	Low pressure hydrogen compression comprising of: Two five-stage reciprocating engines	a) Must be designed to compress hydrogen to a maximum of 40 barg; b) Hydrogen feed from the electrolyser package; c) Compression unit must be fitted with knock out vessels and coolers; and d) Compressors must be bunded with a capacity not less than 110% of the capacity of the largest contained tank system and at least 25% of the total capacity of all tanks contained within the bunded area (for a multiple tank system) e) Compressors must be constructed on a hardstand for containment of spillages (floors of hardstand to achieve permeability of $1x10^{-7}$ to $1x10^{-9}$ or less)	(e) as identified on Figure 2, Schedule 1.
5.	Purification drying unit (PDU) comprising of: A H2 purification reactor H2 dryer absorbers	a) PDU must route water from drying process to the water treatment package for reuse or disposal to the process effluent pit; and b) PDU blowers must be bunded with a capacity not less than 110% of the capacity of the largest contained tank system and at least 25% of the total capacity of all tanks contained within the bunded area (for a multiple tank	(h) as identified on Figure 2, Schedule 1.

	Infrastructure	Design and construction / installation requirements	Infrastructure location
		system) c) PDU blowers must be constructed on a hardstand for containment of spillages (floors of hardstand to achieve permeability of $1x10^{-7}$ to $1x10^{-9}$ or less)	
6.	High pressure hydrogen compression and storage comprising of: Two compressors One Aircooler Up to fourteen pressure vessels	a) Must be designed to compress and store hydrogen at 90 barg; b) Storage must be designed to be capable of storing up to 8 tonnes of hydrogen across; c) Compressors must be bunded with a capacity not less than 110% of the capacity of the largest contained tank system and at least 25% of the total capacity of all tanks contained within the bunded area (for a multiple tank system) d) Compressors must be constructed on hardstand for containment of spillages (floors of hardstand to achieve permeability of $1x10^{-7}$ to $1x10^{-9}$ or less) e) Compressor area must be roofed.	(f) as identified on Figure 2, Schedule 1.
7.	Water treatment package Including: reverse osmosis package Electro-deionisation package	a) Chemical tanks and chemical/hydrocarbon storage must be bunded with a capacity not less than 110% of the capacity of the largest contained tank system and at least 25% of the total capacity of all tanks contained within the bunded area (for a multiple tank system); i. Areas of bulk chemical storage must be built on a hardstand with permeability of $1x10^{-9}$ or less. b) Non bulk chemical storage areas built on hardstand for containment of spillages (floors of hardstand to achieve permeability of $1x10^{-7}$ to $1x10^{-9}$ or less) c) Wastewater must drain to the process effluent pit.	(b) as identified on Figure 2 Schedule 1. Process effluent pit as identified on Figure 2, Schedule 1.
8.	Emergency diesel generator	a) Must be designed and installed for emergency lighting and uninterruptable power supply (UPS) backup only.	(g) as identified on Figure 2, Schedule 1.
9.	Hydrogen vent	a) Must be designed to have a	A2 as identified on

	Infrastructure	Design and construction / installation requirements	Infrastructure location
	stack	continuous nitrogen feed to vent headers preventing oxygen ingress to the vent line during abnormal operation conditions; and b) Vent stack must be constructed to be at 30 metres above ground level.	Figure 2, Schedule 1.
10.	Oxygen vent stack	a) Vent stack must be constructed to be at 30 metres above ground level; and b) Must be designed to be able to continuously vent 16.5 tonnes of oxygen per hour.	A1 as identified on Figure 2, Schedule 1.
11.	Liquid nitrogen package	a) Must be designed to meet and supply nitrogen requirements of the demineralisation water tank and electrolyser and for abnormal operation such as startup, shutdown and maintenance activities, as required; and b) Must be constructed on a concrete hardstand	(d) as identified on Figure 2, Schedule 1.
12.	Oily Water Sewer Pit	a) Must be constructed of adequate materials to prevent the seepage or leak of stormwater to ground and groundwater; b) Must only send contaminated stormwater and runoff to the KEH WWTP; c) Must be designed to allow for water sampling in accordance with AS/NZS 5667.10; d) Must be designed to not overflow; and e) Must be fitted with high level alarms.	W2 identified on Figure 2, Schedule 1.
13	Supporting infrastructure Including: Pumps Pipes Transformers Electrical cables Filters Meters Storage tanks Substation	a) Storage tanks must be installed within bunding capable of storing 110% of tank volume; b) Storage tanks must be installed on hardstands made of material with a permeability suitable for containment of respective hydrocarbons or chemicals being stored; and c) Storage tanks must be fitted with overfill alarms.	Illustrated by the plot plan Figure 2, Schedule 1.

	Infrastructure	Design and construction / installation requirements	Infrastructure location
	Electrical rooms Workshop		

Fugitive dust - construction

2. The works approval holder must undertake the minimum requirements specified in Table 2 for the works to minimise the generation of airborne dust from the premises.

Table 2: Fugitive dust management requirements during construction

Dust control	Requirements
Water carts	Proactively wetting down unsealed roads and exposed areas with a water cart.
Monitoring	Conduct daily visual dust monitoring and implement additional dust controls where necessary to mitigate dust emissions from construction activities.
Vehicles	Limiting vehicle speeds in accordance with KEH traffic management plan to minimise dust generation. Cover any potentially dust generating loads prior to transportation.

3. The works approval holder must meet the following outcomes during construction to manage emissions:

(a) Construction equipment, vehicles and machinery must be maintained to manufacturer specifications;

(b) Implementation of construction waste management plan;

(c) written communication with industry neighbours is maintained regarding noise generating activities.

(d) Construction wastes must be appropriately recycled and disposed of using adequate number of bins and skips to ensure they do not overflow and wastes do not remain exposed on the premises; and

(e) Hydrotesting water must be disposed of at the existing KEH WWTP or at an appropriate offsite facility.

Contaminated Site – specified actions

4. The Works approval holder must implement the *bp Kwinana Energy Hub Procedure for the Management of Soil and Groundwater (ENV-PR-075)* to ensure works do not spread contamination to the environment, including:

(a) Completion of contamination assessment of soil and/or groundwater where intrusive or disturbing works are planned;

(b) Provide contamination assessment required by condition 4(a) to the department within 28 days of completion, including detailed management measures for the excavation of contaminated soil and/or abstraction of groundwater prior to works commencing; and

(c) Conduct the requirements of condition 4(a) and 4(b) in accordance with the published Guideline: Assessment and management of contaminated sites,

DWER 2021.

5. The works approval holder must not undertake dewatering of groundwater or excavation of contaminated soils as part of construction activities on the premises until the requirements of condition 4 have been met and any subsequent approvals.

Construction completion requirements

6. The works approval holder must undergo construction completion activities of the infrastructure identified in condition 1, including hydrotesting with water of appropriate quality.

Waste requirements

7. The works approval holder must ensure that any wastes generated during construction are disposed of at an appropriately authorised waste facility.

Compliance reporting

8. Following construction completion of all infrastructure or equipment required by condition 1, the works approval holder must within 60 calendar days:

(a) undertake an audit of their compliance with the requirements of conditions 1, 2, 3, 4, 5, 6 and 7; and

(b) prepare and submit to the CEO an Environmental Compliance Report(s) on that compliance.

9. The Environmental Compliance Report(s) required by condition 8(b), must include as a minimum the following:

(a) certification by a qualified professional engineer that the items of infrastructure or components 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;

(c) a summary of the outcomes of construction completion activities required by condition 6; and

(d) 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

10. The works approval holder must only commence time limited operations for infrastructure identified in condition 1, where the Compliance Report as required by condition 9 has been submitted by the works approval holder to the department for that item of infrastructure.

11. The works approval holder must notify the CEO:

(a) at least 7 days prior to, the commencement date of TLO; and

(b) within 7 days after, the completion date of TLO

12. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 1 (as applicable):

(a) for a period not exceeding 18 months from the day the works approval holder meets the requirements of condition 10 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*, if one is granted before the end of the period specified in condition 13(a).

13. The period of time limited operations specified in condition 12(a) must finish within 6 months of the hydrogen plant achieving intended operational design capacity (48 tonnes per day hydrogen production).

Time limited operations requirements and emission limits

14. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 3 is maintained and operated in accordance with the corresponding operational requirement set out in Table 3.

Table 3: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	**Operational requirement**	**Infrastructure location identified by figure 2, Schedule 1.**
1.	Electrolyser package comprising of: six 17.2 MW electrolyser modules	Operational production must not exceed 48 tonnes per day of hydrogen. Electrolyser package and associated infrastructure must be maintained such that there are no leaks or discharges to the environment.	(a)
2.	Water treatment package Including reverse osmosis package Electro-deionisation package Ultra-pure water storage tank	Operational process water must be sourced from the Kwinana Water Reclamation Plant (KWRP) or potable water supply if KWRP supply is unavailable. Infrastructure must be maintained such that there are no leaks or discharges to the environment. Wastewater must be routed via the process effluent pit to the Kwinana Energy Hub Wastewater Treatment Plant operated under licence L5938/1967/12 or any superseding revision.	(b)
3.	Cooling systems including: cooling towers Chilling Unit HVAC (any supporting pipes, pumps etc.)	HVAC system must use no more than 93 kg of ammonia. Wastewater must be routed to the Kwinana Energy Hub Wastewater Treatment Plant operated under licence L5938/1967/12 (and any superseding revision). Infrastructure must be maintained such that there are no leaks or discharges to the environment.	(c)
4.	Process effluent pit	All process wastewaters must pass via the process effluent pit prior to being sent to the KEH WWTP.	W1

		The process effluent pit and connections must be maintained such that there are no discharges or leaks to the environment. Must be accessible for water quality monitoring as required by condition 15.	
5.	Liquid Nitrogen package	Nitrogen must only be supplied to the demineralised water tank and electrolyser for abnormal operation such as startup, shutdown and maintenance. Infrastructure must be maintained such that there are no discharges or leaks to the environment.	(d)
6.	Low pressure hydrogen compression comprising of: Three five-stage reciprocating engines	Infrastructure must be maintained such that there are no discharges or leaks to the environment. Water and/or condensate must be recycled to process water at the Water Treatment Package identified by condition 1 or disposed of to the process effluent pit. Stormwater must be contained, diverted to the oily water sewer, and tested for contamination prior to release.	(e)
7.	High Pressure compression and Storage comprising of: Two compressors One Aircooler Up to fourteen pressure vessels	Hydrogen must be compressed to a maximum final pressure of 90 barg during operation. Infrastructure must be maintained such that there are no discharges or leaks to the environment.	(f)
8.	Emergency diesel generator	Infrastructure must be maintained such that there are no discharges or leaks to the environment. During operation, electricity must only be provided to emergency lighting and the uninterruptable power supply (UPS).	(g)
9.	Hydrogen vent stack	Hydrogen must only be vented during upset and maintenance events. Infrastructure must be maintained such that there are no discharges or leaks to the environment other than discharges authorised under Table 4.	A2
10	Purification drying unit (PDU) comprising of: A H2 purification reactor	Infrastructure must be maintained such that there are no discharges or leaks to the environment other than discharges authorised under Table 4. Water and/or condensate must be recycled to process water at the Water Treatment	(h)

	H2 dryer absorbers	Package identified by condition 1 or disposed of to the KEH WWTP.	
11.	Instrument air	Infrastructure must be maintained such that all gauges and monitoring devices are accurate and in operable condition.	(i)
12.	Oxygen vent stack	Infrastructure must be maintained such that there are no discharges or leaks to the environment other than discharges authorised under Table 4.	A1
13.	Oily water Sewer	Infrastructure must be maintained such that there are no discharges or leaks to the environment other than discharges authorised under Table 4. Must only divert contaminated stormwater and runoff to the KEH WWTP. Must not allow contaminated water to be discharged to ground.	W2
14.	Supporting infrastructure Including: Pumps Pipes Transformers Electrical cables Filters Meters Storage tanks	Stormwater from transformers and safety showers must be contained, diverted to the oily water sewer, and tested for contamination prior to release. All supporting infrastructure must be maintained such that there are no leaks or discharges to the environment.	
15.	Infrastructure identified by condition 1	Must only operate within the optimal operating envelope specified by the manufacturer or within engineered specifications. Must be operated to adhere to the Environmental Protection (Noise) Regulations 1997. All process effluent generated by infrastructure must be collected by the process effluent pit.	

15. During time limited operations, the works approval holder must ensure that the emission(s) specified in Table 4, are discharged only from the corresponding discharge point(s) and only at the corresponding discharge point location(s).

Table 4: Authorised discharge points

	Discharge point	**Emission**	**Discharge Height (metres)**	**Discharge point location**	**Emission rate**

1.	Oxygen stack vent	Oxygen	30 magl	A1 as identified on Figure 2	16.5 tonnes per hour
2.	Hydrogen stack vent	Hydrogen	30 magl	A2 as identified on Figure 2, Schedule 1.	11,095 tonnes per annum
	Hydrogen stack vent	Nitrogen	30 magl	A2 as identified on Figure 2, Schedule 1.	2,722 tonnes per annum
3.	Process effluent pit	Process wastewater	N/A	W1 as identified on Figure 2, Schedule 1.	0.135 ML per day
4.	Oily Water Sewer	Contaminated Stormwater and/or contaminated runoff originating from chemical storage areas, compressor areas. main transformer areas and safety showers.	N/A	W2 as identified on Figure 2, Schedule 1.	Up to the volume of stormwater runoff from low pressure hydrogen compression, PDU and main transformer areas, plus required safety shower operation.

16. Throughout time limited operations, the works approval holder must monitor the wastewater effluent from the process infrastructure outlined in Table 3 via a NATA accredited laboratory prior to being sent to the Kwinana Energy Hub Wastewater Treatment Plant of the identified parameters in accordance with Table 5.

Table 5: Wastewater monitoring

Discharge Point	Monitoring Location	Parameters	Frequency	Units	Sampling methods
Kwinana Energy Hub Wastewater Treatment Plant	W1 identified in Schedule 1, Figure 2.	Temperature	Monthly	Degrees Celsius	AS/NZS 5667.1 and AS/AZS 5667.10
		Flow		m^3/hr	
		pH		pH*	
		Conductivity		uS/cm*	
		Turbidity (max)		NTU	
		Total dissolved solids		mg/L	
		Total suspended solids		mg/L	
		Total chemical oxygen demand		mg/L	

		Total organic carbon		mg/L	
		Nitrates (NO3)		mg/L	
		Total Nitrates (TN)		mg/L	
		Phosphates (PO4)		mg/L	
		Total Phosphates (TP)		mg/L	
		Silicates		mg/L	

*Temperature, Flow, pH and conductivity may be measured in field/outside of NATA standards.

17. The works approval holder must implement the *Project Environmental Management Plan H2 Kwinana bp Kwinana Energy Hub* throughout time limited operation such that:

(a) Stormwater or runoff from contaminated and potentially contaminated areas (including safety showers, reciprocating compressors, PDU and transformers) must be collected in the oily water sewer pit identified by condition 1 and sampled in accordance with AS/NZS 5667.1 and AS/NZS 5667.10.

(b) Stormwater and runoff sampled by condition 17(a) must be tested by a NATA accredited laboratory prior to disposal.

(c) If stormwater and runoff sampled by condition 17(a) is not tested by a NATA accredited laboratory in accordance with condition 17 (b), it must be discharged to the KEH WWTP for treatment.

(d) Testing required by 17(b) must include parameters identified by Table 5 in addition to: gross contamination, surfactants, polycyclic aromatic hydrocarbons, and metals.

(e) Stormwater tested under condition 17(d) identified as contaminated must be discharged to the KEH WWTP for treatment.

(f) Works approval holder must discharge stormwater from clean areas (including liquid nitrogen package, substations, building roofs and HVAC) to ground via soakwells.

(g) Process wastewater must remain within expected effluent quantity and quality specified in Table 6.

(h) If process wastewater exceeds parameters under condition 17(g), the works approval holder must treat the process wastewater at the KEH WWTP such that parameters are within specified values in Table 6.

(i) Spill kits must be present and maintained at all infrastructure identified by condition 1 that contains or may contain process fluids.

(j) Operators must have daily routine visual inspections for leaks at infrastructure identified by condition 1.

(k) Existing BP Kwinana waste permitting system must be maintained during operation.

(l) Waste on the premises must be appropriately segregated into recycling/waste bins or skips.

(m) Wastes generated during operation must be disposed of to an appropriately authorised waste facility.

Table 6: H2 Kwinana process effluent stream volume and parameters

Parameter	Unit	H2 Kwinana effluent stream
Volume	ML/day	0.135
Flow rate	m^3/hour	5.3
Temperature	Celsius	30
pH	pH	6-8
Conductivity	uS/cm	<1500
Turbidity (max)	NTU	5
Total dissolved solids (TDS)	mg/litre	312
Total suspended solids (TSS)	mg/litre	<37.4
Total chemical oxygen demand	mg/litre	<80
Total organic carbon (TOC)	Kg/day	3.1
Nitrates	Kg/day	3.6
Phosphates	ppm	13.8
Silicates	ppm	12.9

Noise Validation and reporting

18. Within 30 days of the hydrogen plant commencing operation at the intended capacity (i.e plant achieving 48 tonnes per day production, during the period of time limited operations specified in condition 13), the works approval holder must retain the services of a person qualified and experienced in environmental noise assessment and who by their qualifications and experience is eligible to hold membership of the Australian Acoustical Society or the Australian Association of Acoustical Consultants to:

(a) investigate the nature and extent of noise emissions from the premises to verify the inputs and conclusions of the *Noise Assessment of H2K Project 25 March 2023*, including;

i) measurement of sound power levels for all noise sources associated with the operation of H2 Kwinana and comparison with sound power levels modelled for those noise sources.

ii) Measurement of noise along the prescribed premises boundary at N1, N2, N3 and N4 identified by Figure 1, Schedule 1 and comparison with modelled noise contours.

(b) assess in accordance with the methodology required in the *Environmental Protection (Noise) Regulations 1997*, the compliance of the noise emissions from the primary activities, against the relevant assigned levels specified in those Regulations; and

(c) compile and submit to the works approval holder within 90 days of the hydrogen plant commencing operation at the intended capacity (i.e plant

achieving 48 tonnes per day production, during the period of time limited operations specified in condition 13), a report in accordance with condition 18.

19. A report prepared pursuant to condition 18(c) is to include:

(a) a description of the methods used for monitoring and/or modelling of noise emissions from the premises;

(b) details and the results of the investigation undertaken pursuant to condition 18(a); and

(c) details and results of the assessment of the noise emissions from the premises, against the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997* undertaken pursuant to condition 18(b).

20. The works approval holder must submit to the CEO the report prepared pursuant to condition 18 (c) within 14 days of receiving it.

21. Where an assessment pursuant to condition 18(b) indicates that noise emissions do not comply with the relevant assigned levels in the *Environmental Protection (Noise) Regulations 1997*, the works approval holder must:

(a) within 10 days of receiving an assessment report pursuant to condition 18(c) prepare a plan to ensure the undertaking of the activity will no longer lead to any contravention of the *Environmental Protection (Noise) Regulations 1997;* and

(b) provide to the CEO a copy of the plan prepared pursuant to condition 21(a) within 14 days of its preparation.

Monitoring during time limited operations

22. Monitoring required by Condition 16 and Condition 18 must be conducted during time limited operations.

Compliance reporting

23. The works approval holder must submit to the CEO a report on the time limited operations within 40 calendar days of the completion date of time limited operations or 14 calendar days before the expiration date of the works approval, whichever is the sooner.

24. The works approval holder must ensure the report required by condition 23 includes the following:

(a) identification of any failures (including leaks) of infrastructure during operation, including the volumes and substances involved if released.

(b) An audit and review of the operational requirements under condition 14;

(c) a review of the implemented environmental management measures in compliance with condition 17;

(d) a summary of the time limited operations, including timeframes, amount of raw material processed, and the amount of hydrogen produced;

(e) results of process wastewater monitoring required by condition 17, including a comparison against expected effluent quality,

(f) a review of the plant's performance against the design specifications;

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

(h) where the manufacturer's design specifications or 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; and

(i) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Records and reporting (general)

25. 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.

26. 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 3 and condition 14;

(c) units of electricity consumed by the project infrastructure as supplied by the energy provider;

(d) evidence of surrendered Large-scale Generation Certificates;

(e) monitoring programmes undertaken in accordance with conditions 16 and 18; and

(f) complaints received under condition 25.

27. The books specified under condition 26 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 7 have the meanings defined.

Table 7: Definitions

Term	Definition
AS/NZS5667.1	Refers to Australian standard - Guidance on the design of sampling programs, sampling techniques and the preservation and handling of samples, of the same code.
AS/NZS5667.10	Refers to Australian standard – Water quality – Sampling, of the same code.
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
condition	a condition to which this works approval is subject under section 62 of the EP Act.
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).
HVAC	Heating Ventilation and Cooling system.
KEH WWTP	The Kwinana Energy Hub Wastewater Treatment Plant operated under L5938/1967/12 or any subsequent licence amendment.
LGC	Large-scale Generation Certificate
magl	Meters above ground level

Term	Definition
m^3/hr	Cubic meters per hour
mg/L	Milligrams per litre
monthly period	means a one-month period commencing from the first day of the month until the last day of the month.
NATA	National Association of Testing Authorities
NTU	Nephelometric Turbidity unit
PDU	Process Drying Unit
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.
Process effluent	Wastewater generated by the operation of infrastructure identified by Table 1.
Process infrastructure	Infrastructure identified in Table 1.
SWIS	South West Interconnected System
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.
uS/cm	microsiemens per centimeter
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: Map of the boundary of the prescribed premesis depicting the envelope containing new infrastructure under W6931/2024/1

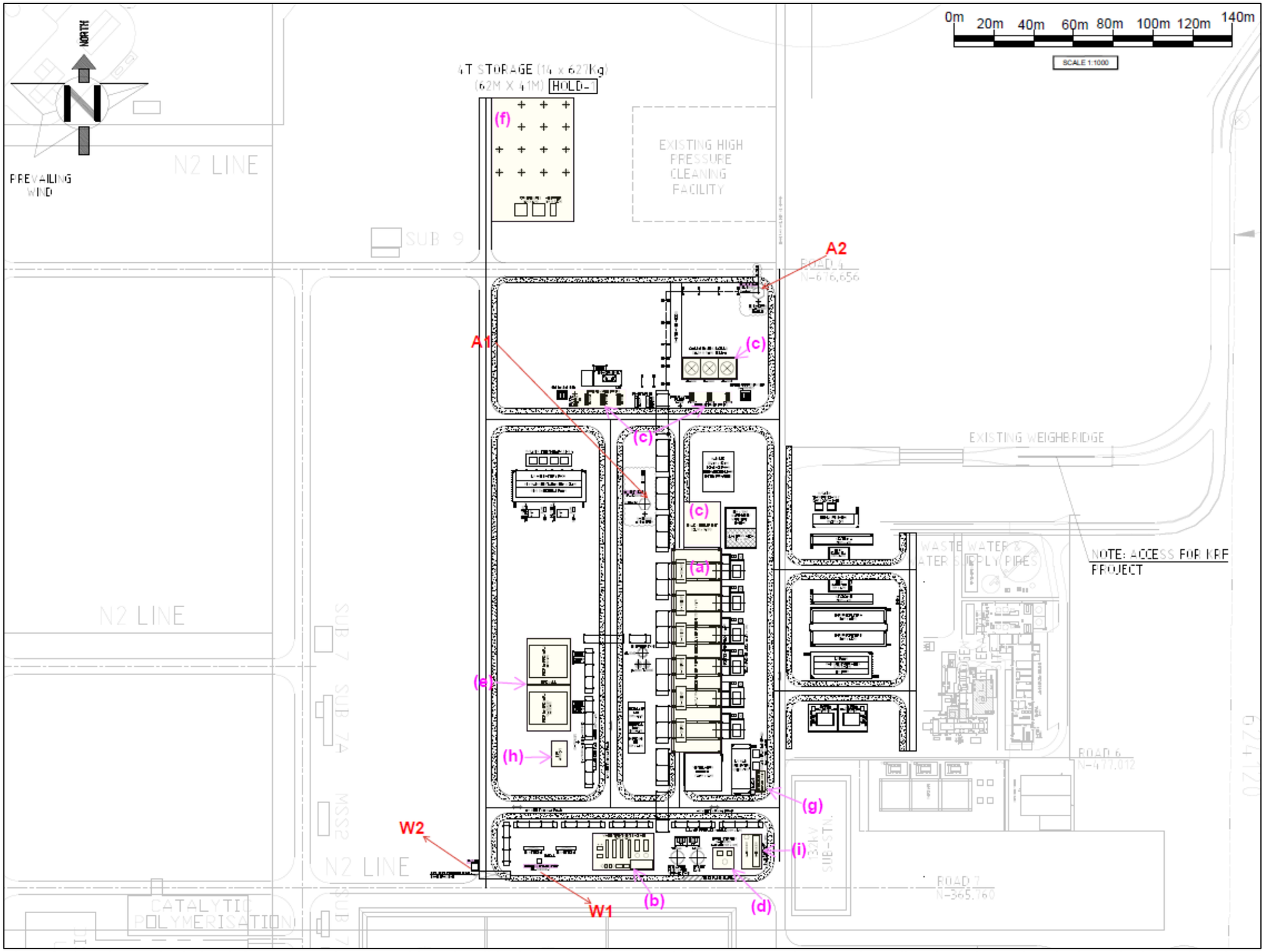

Figure 2: Plot plan of H2 Kwinana depicting infrastructure layout and location (black lines) relative to existing premises features (grey lines). Red notation depicts discharge locations. Pink notation depicts specific infrastructure conditioned by the works approval.