

Jemena Gas Networks (NSW) Ltd

Operational Compliance Report

Western Sydney Green Hydrogen Hub

Project Application Number	SSD 10313
Reporting Period	03 November 2023 to 31 October 2024
Version Number	1
Date Prepared	31/10/2024
Name and Title of authorised reporting officer	Rahul Dorairaj - Environment Manager



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Operational Compliance Report - Western Sydney Green Hydrogen Hub

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Owning Functional Area

Business Function Owner:	Environment and Sustainability
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Acronyms

Acronym	Definition
AS/NZS	Australian Standard / New Zealand Standard
ACS	Asset Class Strategy
BOP	Balance of Plant
CEMP	Construction Environmental Management Plan
CLM	Community Liaison Manager
CSS	Construction Safety Study
DBYD	Dial Before You Dig
DPIE	Department of Planning, Industry and Environment
EGP	Eastern Gas Pipeline
EIS	Environmental Impact Statement
ESD	Emergency Shutdown
FHA	Final Hazard Analysis
FOMS	Field Operation and Maintenance Specification
FSS	Fire Safety Study
HAZID	Hazard Identification
HAZOP	Hazard and Operability Study
HSE	Health, Safety and Environment
HSMP	Health and Safety Management Plan
HV	High Voltage
JGN	Jemena Gas Networks (NSW) Ltd
LV	Low Voltage
NDT	Non Destructive Testing
NSW	New South Wales
OEMP	JGN NSW Distribution Network Operational Environmental Management Plan (OEMP)
OCR	Operational Compliance Report
PHA	Preliminary Hazard Analysis
PLC	Programmable Logic Controller
SAOP	Jemena Safety and Operating Plan
SCADA	Supervisory Control and Data Acquisition
SDS	Safety Data Sheet
SMS	Safety Management Study
SSD	State Significant Development
SWMS	Safe Work Method Statement(s)
TRS	Horsley Park Trunk Receiving Station
WSGHH	Western Sydney Green Hydrogen Hub (the Facility)

Executive Summary

Jemena Gas Networks (NSW) Limited (Jemena) is undertaking the Western Sydney Green Gas Project (WSGGP) (the Project), which involves trialling Power-to-Gas (P2G) technology by converting purchased green energy from the electricity mains network into hydrogen gas and injecting it into its secondary gas distribution network over a 5-year period. The Project would potentially facilitate ongoing development of commercially viable P2G systems in Jemena's NSW gas network.

The Project is located at the existing Jemena high pressure gas facility in Horsley Park (Horsley Park Facility), located in Western Sydney. The P2G facility will use renewable electricity to generate hydrogen, which can be injected into the natural gas network, used for mobility purposes through a compression and cylinder filling facility to supply to a third party or used to generate electricity back to the grid by means of a hydrogen-powered micro-turbine and fuel cell.

The Project is subject to an environmental assessment and approval process under the *Environmental Planning and Assessment Act 1979* (EP&A Act) and is classified as State Significant Development (SSD).

The delegate for the Minister for Planning and Public Spaces granted development consent on the 10 August 2020, requiring that the Project be carried out in general accordance with:

- Western Sydney Green Gas Project – Environmental Impact Statement (EIS), dated December 2019;
- Western Sydney Green Gas Project – Response to Submissions, dated May 2020;
- Additional information in a letter from Jemena dated 16 June 2020;
- Western Sydney Green Gas Project Instrument of Consent (Application no. SSD 10313), dated 10 August 2020;
- Western Sydney Green Gas Project - EIS modification (MOD 1) approval dated December 2021
- Western Sydney Green Gas Project - EIS modification (MOD 2) approval dated August 2022

Jemena has engaged their delivery partner Zinfra for commissioning, operation and ongoing maintenance of the Western Sydney Green Hydrogen Hub (Facility).

This Operational Compliance Report (OCR) has been developed to satisfy the conditions of Condition C5 of the SSD 10313 Development Consent. The requirements of Condition C5 are:

The Applicant must provide regular compliance reporting to the Department on the development in accordance with the relevant Compliance Reporting requirements (DPE May 2020), or its latest version.

There has been zero incidents, non-compliances and complaints received during this reporting period.

1. Introduction

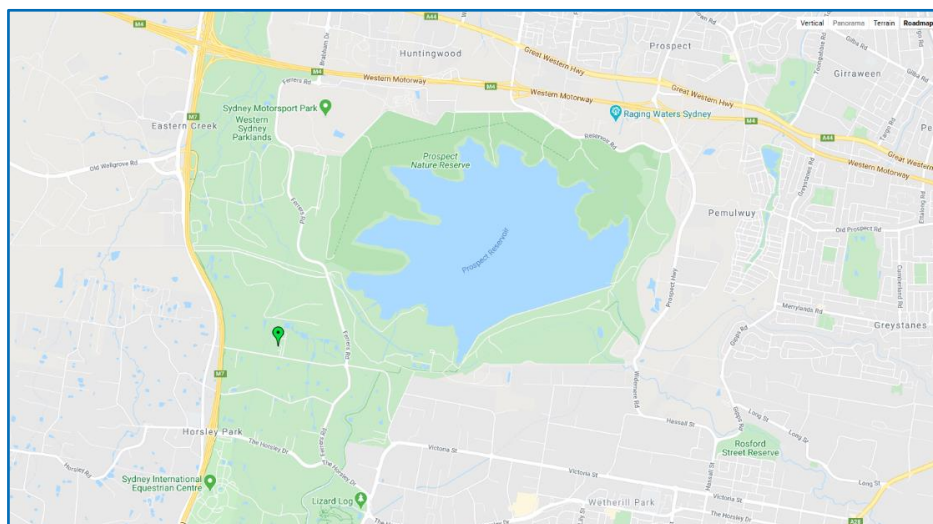
The Western Sydney Green Hydrogen Hub power to gas trial is one of the most comprehensive demonstration projects in Australia to date. It will produce 10.5 kg/h of green hydrogen from a 500 kW Polymer Electrolyte Membrane (PEM) electrolyser using renewable electricity supplied by wind and solar which is then stored in a 340 meter purpose built DN500 X52 carbon steel buffer storage pipeline (capacity to store approximately 4 MWh of energy). The hydrogen stored within the pipeline can then be utilised across multiple applications including:

- controlled direct injection into the existing natural gas distribution network at up to 2% by volume;
- utilisation by a fuel cell package and/or hydrogen microturbine to generate power for export to the grid;
- use in research and development opportunities including trialling compositions of natural gas and hydrogen blends; and
- refilling of transportable hydrogen cylinders for off-site use of green hydrogen for transport in fuel cell electric vehicles (FCEVs).

1.1 Location

The Horsley Park Facility is located at 194 – 202 Chandos Road, Horsley Park (Lot 1 DP 499001 and Lot 3 DP 1002746) in Western Sydney, NSW (refer to Figure 1–1).

Figure 1–1: Site Location



The general layout of the site is shown in Figure 1–2 below and the WSGG Facility layout presented in Figure 1–33 below.

Figure 1-2: General Layout of Development



Figure 1–3: WSGG Facility



1.2 Key Features

The WSGHH facility includes the following plant and infrastructure:

Table 1-1: Key Facility Features

Feature	Details
Electrolyser	<ul style="list-style-type: none"> Package – Three main packages consisting of electrolyser stack, power container and cooling unit Production – 10.5 kg/h of green hydrogen Standard Operation – 12 hours per day
Hydrogen buffer storage pipeline	<ul style="list-style-type: none"> Location – Buried below ground, with two risers located at the facility Length – ~340 m Material – X52 Carbon Steel Operating Pressure – 3,200 kPag Maximum Allowable Operating Pressure (MAOP) – 3,800 kPag Hydrogen Stored – ~100 kg Emergency Operation – Blowdown vent located on the southern riser
Site Control Hut	<ul style="list-style-type: none"> Purpose: <ul style="list-style-type: none"> Management of high voltage (HV), medium voltage (MV) and low voltage (LV) supply; Data and communication between packages and NSW Control Room; Remote operations and field desk Criticality – Provides power to the TRS facility through LV to TRS switchboard at the front of site.
Gas Control Panel	<ul style="list-style-type: none"> Two gas panels: <ul style="list-style-type: none"> one located within the main facility area. one located at the injection to the secondary main. Monitoring – Hydrogen monitoring in place

Hydrogen Microturbine	<ul style="list-style-type: none"> • Production – 65kWh • Operation – 7 am – 10 pm only • Supply – Natural gas until changeover to 100% hydrogen in CY2022
Fuel Cell	<ul style="list-style-type: none"> • Production – 30kWh • Operation – 7am - 10pm only • Supply - Hydrogen
Cylinder Filling Compressor	<ul style="list-style-type: none"> • Production – 7.1 kg/h • Standard Operation – 24hrs per day when in use periodically
Electrical	<ul style="list-style-type: none"> • HV Transformer – 2.5 mVA • HV Switchgear

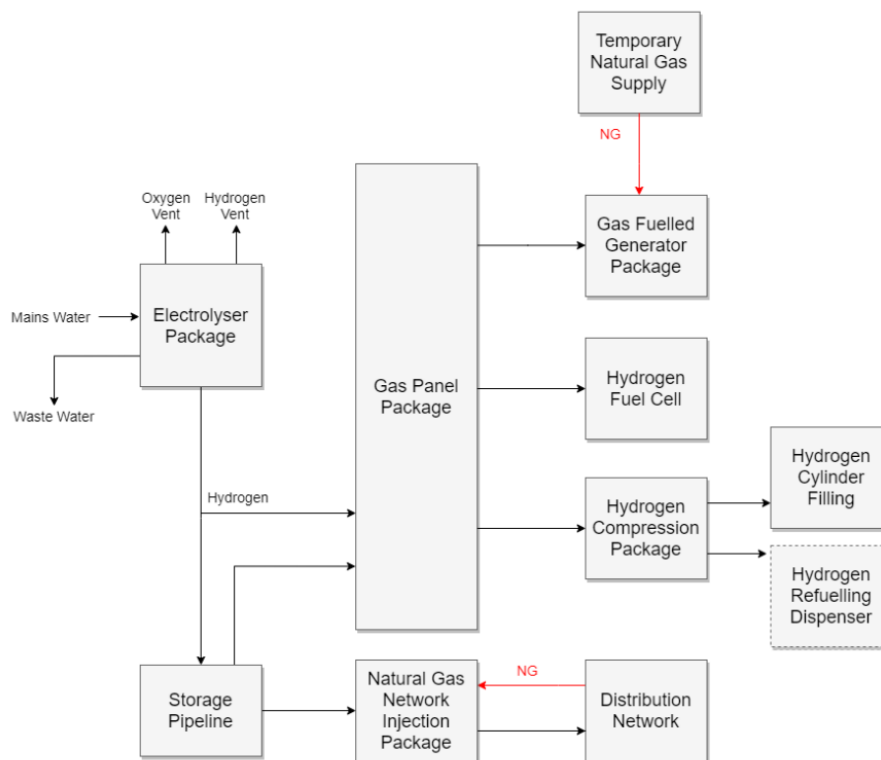
1.3 Facility Primary Function

The facility will perform the following key functions:

- convert mains water into hydrogen gas using grid (renewable) electricity through electrolysis;
- store hydrogen gas in a buried on-site carbon steel pipeline (this will be used for buffering the various produced hydrogen gas usage options);
- control and safely manage hydrogen gas pressures, temperatures and flow rates for injection into Jemena’s Secondary Mains gas pipeline and downstream medium and low pressure network; and
- provide a hydrogen microturbine generator to convert stored hydrogen into electrical energy for supply to the grid.
- provide a hydrogen fuel cell, to convert stored hydrogen into electrical energy for supply to the grid; and
- provide hydrogen compression and dispensing facilities to allow the filling of transportable hydrogen cylinders.

A general flow diagram of the facility operation is provided in **Figure 1–4** below.

Figure 1–4: Flow Diagram and General Facility



1.4 Operational Activities

The Western Sydney Green Hydrogen Hub is an unmanned facility, with the primary operation via local control systems monitored through telemetry linked to Jemena’s NSW Control Room (24x7 operation). The telemetry will provide data via Supervisory Control and Data Acquisition (SCADA), which in turn will alert the control room staff of the condition of the site prompting a response in line with the response sheet for the facility. The SCADA provides the functionality to override the local control systems.

In the event of equipment failure the system is designed to automatically isolate, and not impact upon the existing natural gas facilities.

The primary objective of the control system during operation will be to provide control over processing functions, protect plant, equipment and personnel, and enable simple and reliable plant shutdown, depressurisation, and isolation of equipment. The facility will be occasionally manned, with minimal operator involvement required, including for start-up, shutdown, and restart. The systems shall therefore monitor and control the facilities on a continuous basis under all operating and environmental conditions.

The facility will be provided with a local Programmable Logic Controller designed to control all major process functions, and a safety instrumented system (SIS) that will shut down (trip) a range of equipment and equipment packages, and close major isolation valves during emergency events or process trips. Hydrogen gas quality will be measured by a gas analyser, with data visible to the facility SCADA to enable plant adjustments to be made, if necessary.

1.5 Key Personnel

Details of the key Personnel who are responsible for environmental/ compliance management of the development are listed in Table 1-2 below.

Table 1-2 Key Personnel

Name	Role	Contact Details
Rahul Dorairaj	Environment Manager	Rahul.dorairaj@jemena.com.au

2. Previous Compliance Report Actions

There was no Independent audit required to be conducted during this reporting period. The next independent environment audit is scheduled to be carried out in 2025. There were no actions arising from the previous compliance report.

3. Compliance Status Summary

Appendix A contains the Compliance Table to Operational Conditions contained in the Project Conditions of Consent (Department of Planning and Environment).

The status of each compliance requirement for the project were assessed using the following descriptors in Table 3-1 below.

Table 3-1 Compliance status descriptors

Status	Description
Compliant	The proponent has collected sufficient verifiable evidence to demonstrate that all elements of the requirement have been complied with.
Non-compliant	The proponent has identified a non-compliance with one or more elements of the requirement.
Not triggered	A requirement has an activation or timing trigger that has not been met at the phase of the development when the compliance assessment is undertaken, therefore an assessment of compliance is not relevant.

3.1 Non compliances

There has been no non-compliances recorded or reported during this reporting period.

4. Incidents

There were zero incidents which occurred during the reporting period.

5. Complaints

There were zero complaints recorded during the reporting period.

6. Appendixes

Appendix A - Compliance Table

Condition of consent number	Compliance Requirement/ description	Development phase	Evidence and comments	Compliance status
A1	In addition to meeting the specific performance criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent, and if prevention is not reasonable or feasible, minimise any material harm to the environment that may result from the construction and operation of the development, and any decommissioning of the development and/or rehabilitation required under this consent.	At all times	Noted.	Compliant
A2	The Applicant must carry out the development: (a) generally in accordance with the EIS; and (b) in accordance with the conditions of this consent.	At all times	Noted. Jemena has updated the internal system (OMNIA) to set reminders to ensure compliance with all conditions of consent.	Compliant
A3	If there is any inconsistency between the above documents, the most recent document must prevail to the extent of the inconsistency. However, the conditions of this consent prevail to the extent of any inconsistency.	At all times	Noted	Compliant
A4	The Applicant must comply with any requirement/s of the Secretary arising from the Department's assessment of: (c) any strategies, plans or correspondence that are submitted in accordance with this consent; (d) any reports, reviews or audits commissioned by the Department regarding compliance with this consent; and (e) the implementation of any actions or measures contained in these documents.	At all times	Noted	Compliant
A5	A maximum of 87,600 kilograms of hydrogen gas may be produced at the site in any calendar year.	Operational phase	A maximum of 87,600 kilograms of hydrogen Gas has not been exceeded.	Compliant
A6	A maximum of 2% by volume of hydrogen gas may be injected into the Applicant's natural gas distribution network.	Operational phase	The volume of hydrogen has not exceeded 2% of the total gas injected into the network	Compliant
A7	On-site storage of full hydrogen cylinders, compressed natural gas vehicles when not in-use and high-pressure hydrogen storage facility are not permitted.	Operational phase	Noted	Not triggered
A8	The Applicant may carry out operations for 5 years from the date of commencement of operations.	Operational phase	Noted	Compliant
A9	The Applicant must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the Building Code of Australia.	At all times	Occupation certificate dated 8/09/2021 (certification number CC/0161822)	Compliant
A10	The Applicant must ensure that all demolition work on site is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version.	At all times	Noted	Not triggered
A11	The Applicant must: (a) rehabilitate the site progressively, as soon as reasonably practicable following disturbance; (b) minimise the disturbance area at any time; (c) employ interim rehabilitation strategies to minimise dust generation, soil erosion and weed incursion on parts of the site that cannot yet be permanently rehabilitated; and (d) within 18 months of the cessation of operations decommission and remove project infrastructure, unless the Secretary agrees otherwise.	At all times	Noted. DPE Planning Secretary has approved the Environmental Management Strategy (Revision 1, dated 12 November 2020) on 27/11/2020. Works are carried out as per the approved Environmental Management Strategy.	Compliant
A12	Unless the Applicant and the applicable authority agree otherwise, the Applicant must: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.	At all times	Noted	Not triggered
A13	The Applicant must ensure that all plant and equipment used on site, or in connection with the development, is: (a) maintained in a proper and efficient condition; and (b) operated in a proper and efficient manner.	At all times	Noted	Compliant

B1	<p>Unless the Secretary agrees otherwise, the Applicant must prepare the following documents at least one month prior to commencing construction of the development to the satisfaction of the Secretary:</p> <p>(a) a Construction Safety Study that is consistent with the Department's Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety';</p> <p>(b) a Hazard and Operability Study, prepared by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Secretary, that is consistent with the Department's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines', and must be accompanied by a program for the implementation of all recommendations made in the report. The study must include a suitably designed firewall with Fire Resistance Level (FRL) of at least 240/240/240 to mitigate potential fire-related impacts from the high-pressure hydrogen storage facility. If the Applicant intends to defer the implementation of a recommendation, reasons must be documented;</p> <p>(c) a Final Hazard Analysis based on the final design of the development that is consistent with the Department's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'; and</p> <p>(d) a Fire Safety Study that is consistent with the Department's Hazardous Industry Planning Advisory Paper No. 2, 'Fire Safety Study Guidelines' and the New South Wales Government's 'Best Practice Guidelines for Contaminated Water Retention and Treatment Systems', and in consultation with FRNSW and RFS.</p> <p><i>Following the Secretary's approval, the Applicant must operate the development in accordance with the approved Construction Safety Study, Hazard and Operability Study, Final Hazard Analysis, and Fire Safety Study. Notes:</i></p> <ul style="list-style-type: none"> • Construction, other than preliminary works that are outside the scope of the hazard studies, must not commence until study recommendations have been considered and, where appropriate, acted upon. • For developments in which the construction period exceeds six months, the commissioning portion of the Construction Safety Study may be submitted two months prior to commencement of commissioning. 	Pre-construction	<p>DPE Planning Secretary has approved the Construction Safety Study (Revision 0, dated 8 October 2020)</p> <p>DPE Planning Secretary has approved the Hazard and Operability Study (Revision 1, dated 17 August 2020)</p> <p>DPE Planning Secretary approved the appointment of Francois Lambrechts to prepare the Hazard and Operability Study (14/09/2020)</p> <p>Western Sydney Green Gas Project (SSD-10313) Final Hazard Analysis approved by DPE 19/11/2020</p> <p>Western Sydney Green Gas Project (SSD-10313) Fire Safety Study approved by DPE 27/11/2020</p>	Compliant
B2	<p>Unless the Secretary agrees otherwise, the Applicant must prepare a revised Safety and Operating Plan (SAOP) at least one month prior to commencing construction of the development to the satisfaction of the Secretary – Authorising in relation to all the assets and equipment located within the development footprint, as shown in Appendix 2.</p>	Pre-construction	<p>Revised version requested by DPE for the Western Sydney Green Gas Project (SSD10313) Safety and Operating Plan approved by DPE Planning Secretary 11 November 2020</p>	Compliant
B3	<p>Unless the Secretary agrees otherwise, the Applicant must develop the following documents at least one month prior to commencement of commissioning of the development to the satisfaction of the Secretary:</p> <p>(a) a comprehensive Emergency Plan. The Applicant must keep two copies of the plan on-site in a prominent position adjacent to the site entry points at all times. The Emergency Plan must:</p> <ul style="list-style-type: none"> • be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning'; • identify the fire risks and controls of the development; • include procedures that would be implemented if there is a fire on-site or in the vicinity of the site; and • include an Evacuation Plan for flooding and bushfire events, in consultation with Council and the NSW SES; and <p>(b) a comprehensive Safety Management System, covering all on-site operations and associated transport activities involving hazardous materials. The Safety Management System must:</p> <ul style="list-style-type: none"> • consistent with the Department's Hazardous Industry Planning Advisory Paper No. 9, 'Safety Management'; and • identify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records must be kept on-site and must be available for inspection by Secretary upon request. <p><i>Following approval, the Applicant must implement the Emergency Plan and Safety Management System. Notes:</i></p> <ul style="list-style-type: none"> • The update of a relevant existing site document may satisfy the condition where all the relevant requirements are addressed in the updated document. 	Pre-commissioning	<p>Western Sydney Green Gas Project (SSD- 10313) - Emergency Plan approved on 03/05/2021 by DPE Planning Secretary (Revision 1, dated 28 March 2021).</p>	Compliant
B4	<p>The Applicant must prepare a Pre-startup Compliance Report for the development to the satisfaction of the Secretary. This report must be submitted to the Secretary for approval at least one month prior to carrying out any operations under this consent, and detail the development's compliance with the documents required under condition 1 of schedule 3 of this consent, including:</p> <p>(a) date of document preparation;</p> <p>(b) date that construction and commissioning commenced; and</p> <p>(c) actions proposed and/or taken in order to implement the recommendations made in the documents.</p>	Pre-operations	<p>Western Sydney Green Gas Project (SSD- 10313) Pre-start up Compliance Report (Jemena, Revision 0, 30 September 2021; Report) approved by DPE Planning Secretary 29/10/2021</p>	Compliant

B5	<p>The Applicant must ensure that all dangerous goods and hazardous materials storage and handling undertake on-site is in accordance with:</p> <p>(a) the requirements of all relevant Australian Standards; and</p> <p>(b) the NSW EPA's Storing and Handling of Liquids: Environmental Protection – Participants Handbook if the chemicals are liquids, or its latest version.</p> <p><i>In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement must prevail to the extent of the inconsistency.</i></p>	At all times	DPE Planning Secretary has approved the Environmental Management Strategy (Revision 1, dated 12 November 2020) on 27/11/2020. Works are carried out as per the approved Environmental Management Strategy.	Compliant
B6	<p>The Applicant must:</p> <p>(a) minimise the fire risks of the development, including managing vegetation fuel loads on-site;</p> <p>(b) ensure that the development complies with the relevant objectives in the RFS's Planning for Bushfire Protection 2019 (or latest version);</p> <p>(c) assist the RFS and emergency services as much as practicable if there is a fire in the vicinity of the site; and</p> <p>(d) notify the relevant local emergency management committee following construction of the development, and prior to commencing operations.</p>	At all times	Western Sydney Green Gas Project (SSD- 10313) Fire Safety Study approved by DPE 27/11/2020. Notified local emergency management committee about the operations of the facility on 21 April 2023.	Compliant
B7	<p>The Applicant must:</p> <p>(a) minimise the impacts of the site access upgrades for the development;</p> <p>(b) maintain all footpaths, roads and utility-related infrastructure on site in a safe and serviceable condition;</p> <p>(c) upgrade the access road and turning circle to an all-weather sealed surface;</p> <p>(d) provide sufficient parking on site for all vehicles and ensure vehicles associated with the development do not park on the public road network;</p> <p>(e) ensure the frequency of cylinder refilling vehicles entering and leaving the site does not exceed four trips per week, unless otherwise agreed by the Secretary subject to the Final Hazard Analysis required under Schedule 3 Condition B1; and</p> <p>(f) minimise the traffic noise impacts of the development.</p>	At all times	<p>Traffic Management Plan (Revision 3, dated 10 November 2020) for the Western Sydney Green Gas Project (SSD-10313) approved on 27/11/2020 by DPE Planning Secretary.</p> <p>DPE Planning Secretary has approved the Environmental Management Strategy (Revision 1, dated 12 November 2020) on 27/11/2020.</p>	Compliant
B8	<p>Prior to the commencement of construction, unless the Secretary agrees otherwise, the Applicant must prepare a Traffic Management Plan for the development to the satisfaction of the Secretary. This plan must:</p> <p>(a) be prepared in consultation with GSP, Council and TfNSW;</p> <p>(b) describe the measures that would be implemented to comply with the transport management requirements in condition B7 above;</p> <p>(c) include details of the transport route to be used for all construction and operational traffic;</p> <p>(d) include details of the measures that would be implemented to minimise traffic safety issues and disruption to local users of the transport route/s during construction and operations;</p> <p>(e) include a protocol for undertaking independent dilapidation surveys to assess the existing condition of Chandos Road, prior to and following construction or decommissioning activities;</p> <p>(f) include a swept path analysis of entry and exit to the site and identify a schedule for access upgrades (if required) to the satisfaction of Council and TfNSW; and</p> <p>(g) include a program to:</p> <ul style="list-style-type: none"> • record and track any light and heavy vehicle movements associated with the development; and • monitor the effectiveness of these measures. <p><i>The Applicant must implement the approved Traffic Management Plan for the development.</i></p>	Pre-construction	<p>Traffic Management Plan (Revision 3, dated 10 November 2020) for the Western Sydney Green Gas Project (SSD-10313) approved on 27/11/2020 by DPE Planning Secretary.</p> <p>Post works dilapidation survey was conducted and report developed on 10 July 2023.</p>	Compliant
B9	<p>The Applicant must comply with the operating hours set out in Table 1.</p> <p>The following activities may be undertaken outside of the hours identified in Table 1 without the approval of the Secretary:</p> <p>(a) the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons;</p> <p>(b) emergency work to avoid the loss of life, property and/or material harm to the environment;</p> <p>(c) construction works that cause LAeq (15 mins) noise levels that are:</p> <ul style="list-style-type: none"> • no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), or its latest version; and • no more than the noise management levels specified in Table 3 of the Interim Construction noise Guideline (DECC, 2009), or its latest version, at other sensitive land uses; and 	At all times	DPE Planning Secretary has approved the Compliant Environmental Management Strategy (Revision 1, dated 12 November 2020) on 27/11/2020	Compliant

	<ul style="list-style-type: none"> • for continuous or impulsive vibration values, measured at the most affected residence, no more than those for human exposure to vibration, specified in Table 2.2 of Assessing vibration: a technical guideline (DEC, 2006), or its latest version; and • for intermittent vibration values measured at the most affected residence, no more than those for human exposure to vibration, specified in Table 2.4 of Assessing vibration: a technical guideline(DEC, 2006), or its latest version; <p>(d) where a negotiated agreement has been reached with affected receivers; or</p> <p>(e) works as approved through the out-of-hours work protocol outlined in the Environmental Management Strategy under Schedule 4 of this consent.</p> <p><i>Table 1: Operating Hours</i></p> <table border="1"> <thead> <tr> <th>Activity</th> <th>Operating Hours</th> </tr> </thead> <tbody> <tr> <td>Operations excluding microturbines, fuel cell and blowdowns</td> <td>24 hours a day 7 days a week</td> </tr> <tr> <td>Microturbines and fuel cell</td> <td>7 am to 10 pm 7 days a week</td> </tr> <tr> <td>Construction and decommissioning activities</td> <td>7 am to 6 pm Monday to Friday</td> </tr> <tr> <td>Blowdowns (excluding emergency work)</td> <td>8 am to 1 pm Saturday at no time on Sundays and NSW public holidays</td> </tr> </tbody> </table>	Activity	Operating Hours	Operations excluding microturbines, fuel cell and blowdowns	24 hours a day 7 days a week	Microturbines and fuel cell	7 am to 10 pm 7 days a week	Construction and decommissioning activities	7 am to 6 pm Monday to Friday	Blowdowns (excluding emergency work)	8 am to 1 pm Saturday at no time on Sundays and NSW public holidays			
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Blowdowns (excluding emergency work)	8 am to 1 pm Saturday at no time on Sundays and NSW public holidays													
B10	<p>The Applicant must:</p> <p>(a) minimise the noise generated by any construction or decommissioning activities on site in accordance with the best practice requirements outlined in the Interim Construction Noise Guideline (DECC, 2009), or its latest version;</p> <p>(b) implement all reasonable and feasible measures to minimise the operational noise of the development;</p> <p>(c) notify the occupants of residences within 200 metres of the site boundary and GSP 24 to 48 hours prior to undertaking blow downs (excluding emergency works); and</p> <p>(d) comply with the operational noise levels within the Noise Policy for Industry (NSW EPA, 2017), or its latest version.</p>	At all times	DPE Planning Secretary has approved the Environmental Management Strategy (Revision 1,dated 12 November 2020) on 27/11/2020. Works are carried out as per the approved Environmental Management Strategy.	Compliant										
B11	<p>The Applicant must minimise the:</p> <p>(a) dust emissions of the development, including wind-blown and traffic generated dust;</p> <p>(b) greenhouse gas emissions of the development;</p> <p>(c) surface disturbance of the development; and</p> <p>(d) other air emissions of the development.</p>	At all times	DPE Planning Secretary has approved the Environmental Management Strategy (Revision 1,dated 12 November 2020) on 27/11/2020. Works are carried out as per the approved Environmental Management Strategy.	Compliant										
B12	The Applicant must ensure that no offensive odours are emitted from the development, as defined under the POEO Act.	At all times	DPE Planning Secretary has approved the Environmental Management Strategy (Revision 1,dated 12 November 2020) on 27/11/2020. Works are carried out as per the approved Environmental Management Strategy.	Compliant										
B13	<p>The Applicant must:</p> <p>(a) minimise the off-site visual impacts of the development, including the potential for any glare or reflection;</p> <p>(b) ensure the visual appearance of infrastructure (including paint colours) blends in as far as possible with the surrounding landscape; and</p> <p>(c) not mount any commercial advertising signs or logos on site, except where this is required for identification or safety purposes.</p>	At all times	Occupation certificate dated 8/09/2021 (certification number CC/0161822) No objects that have glare or reflection No commercial advertising signs or logos on site	Compliant										
B14	<p>The Applicant must:</p> <p>(a) minimise the off-site lighting impacts of the development; and</p> <p>(b) ensure that any external lighting associated with the development:</p> <ul style="list-style-type: none"> • is installed as low intensity lighting (except where required for safety or emergency purposes); • does not shine above the horizontal; and • complies with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting, or its latest version. 	At all times	Occupation certificate dated 8/09/2021 (certification number CC/0161822) Consistent with Occupation certificate and Australian Standard AS4282 (INT) 1997	Not triggered										
B15	<p>The Applicant must:</p> <p>(a) ensure that the development does not cause any water pollution, as defined under section 120 of the POEO Act;</p> <p>(b) ensure that stormwater runoff from the development is managed using Waster Sensitive Urban Design (WSUD) techniques consistent with the Western Sydney Parklands Design Manual and considers the Fairfield City Council Stormwater Management Policy; and</p>	At all times	DPE Planning Secretary has approved the Environmental Management Strategy (Revision 1,dated 12 November 2020) on 27/11/2020	Compliant										

	(c) minimise any soil erosion associated with the construction of the development in accordance with the relevant requirements in the Managing Urban Stormwater: Soils and Construction (Landcom, 2004) manual, or its latest version.		No complaints and no non-conformances during the Operation Phase	
B16	The Applicant must: (a) minimise the waste generated by the development; (b) classify all waste generated on site in accordance with the EPA's Waste Classification Guidelines 2014 (or its latest version); (c) store and handle all waste on site in accordance with its classification; (d) not receive or dispose of any waste on site; and (e) remove all waste from the site as soon as practicable, and ensure it is sent to an appropriately licensed waste facility for disposal.	At all times	DPE Planning Secretary has approved the Environmental Management Strategy (Revision 1, dated 12 November 2020) on 27/11/2020. Works are carried out as per the approved Environmental Management Strategy.	Compliant
B17	The Applicant must ensure the development does not cause any direct or indirect impacts on heritage items located outside the approved development footprint.	At all times	All works are within the approved development footprint.	Compliant
B18	If historical and/or Aboriginal archaeological heritage items are unexpectedly discovered during construction of the development, all works must cease, and a suitably qualified and experienced archaeologist be brought in to assess the find. Depending on the nature of the discovery, additional assessment, recording and management measures may be required prior to the recommencement of works in the affected area. Heritage NSW and/or members of the relevant Local Aboriginal Land Council must be notified of this discovery in writing.	Construction phase	No historical and/or Aboriginal archaeological heritage items were unexpectedly discovered during construction of the development.	Compliant Not triggered
C1	Prior to commencing construction, the Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must: (a) prepared in consultation with the Council and GSP; (b) provide the strategic framework for environmental management of the development; (c) identify the statutory approvals that apply to the development; (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development; (e) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the development; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise; • respond to any non-compliance; and • respond to emergencies; and (f) include: • the following sub-plans: o noise; o air quality; o stormwater management including erosion and sediment controls during construction; and o heritage. • copies of any strategies, plans and programs approved under the conditions of this consent; and • a clear plan depicting monitoring to be carried out in relation to the development. <i>Following the Secretary's approval, the Applicant must implement the Environmental Management Strategy.</i> <i>Notes:</i> • <i>The update of a relevant existing site documents may satisfy the condition where all the relevant requirements are addressed in the updated document.</i>	Pre-construction	DPE Planning Secretary has approved the Environmental Management Strategy (Revision 1, dated 12 November 2020) on 27/11/2020	Compliant
C2	Within 3 months, unless otherwise agreed with the Secretary, of: (a) the submission of an incident report under condition C5 below; (b) the submission of an audit report under condition C9 below; and (c) the approval of any modification to the conditions of this consent; or (d) a direction of the Secretary under condition A4 of schedule 2; the Applicant must review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review the revised document must be submitted to the Secretary for approval, unless otherwise agreed with the Secretary.	Operations	No incidents has occurred within the facility during the reporting period. Audit report was submitted to DPE on 28 Feb 2023. The next audit is not due until 2025.	Compliant

	<i>Note: This is to ensure the strategies, plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.</i>			
C3	<p>The Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance. A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.</p> <p><i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i></p> <p>The Secretary must be notified in writing via the Major Projects website immediately after the Applicant becomes aware of an incident. The notification must identify the development (including the application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 3.</p>	At all times	There were zero non-compliance recorded during the reporting period.	Compliant
C4	<p>Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non-compliance. The notification must identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.</p> <p><i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i></p> <p>The Secretary must be notified in writing via the Major Projects website within seven days after the Applicant becomes aware of any non-compliance. A non-compliance notification must identify the development and the application number for it, set out the condition of consent that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. <i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.</i></p>	At all times	There were zero non-compliance recorded during the reporting period.	Compliant
C5	The Applicant must provide regular compliance reporting to the Department on the development in accordance with the relevant Compliance Reporting requirements (DPE May 2020), or its latest version.	At all times	This report is being developed in line with Compliance Reporting requirements (DPE May 2020) and will be submitted to the DPE before the due date.	Compliant
C6	<p>Prior to commencing the construction, operations or decommissioning of the development or the cessation of operations, the Applicant must notify the Department and Council in writing of the date of commencement, or cessation, of the relevant phase.</p> <p>If any of these phases of the development are to be staged, then the Applicant must notify the Department and Council in writing prior to commencing the relevant stage, and clearly identify the development that would be carried out during the relevant stage.</p>	At all times	<p>Western Sydney Green Gas (WSGG) Project – SSD 10313 Notice of Commencement of construction phase by WASCO Pty Ltd given on Wednesday 6 January 2021.</p> <p>Western Sydney Green Gas (WSGG) Project – SSD 10313 Notice of Commencement of Operation given on 1 November 2021.</p> <p>Functional Operations started on December 16 2021</p>	Compliant
C7	Prior to commencing construction, the Applicant must submit detailed plans of the final layout of the development to the Secretary.	Pre-construction	Civil layout Document reference P2G2099DWCV001	Compliant
C8	Prior to commencing operations, the Applicant must submit work as executed plans of the development to the Secretary.	Pre-operations	Civil layout Document reference P2G2099DWCV001 - Rev 1 As Built	Compliant
C9	<p>Unless the Secretary agrees otherwise, 12 months after the commencement of operations of the development and every three years thereafter, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:</p> <p>(a) be prepared in accordance with the relevant Independent Audit Post Approval requirements (DPE 2020);</p> <p>(b) be conducted by a suitably qualified lead auditor and suitably qualified, experienced and independent team of experts in any field specified by the Secretary, whose appointment has been endorsed by the Secretary;</p> <p>(c) include consultation with Council and relevant agencies;</p> <p>(d) include a comprehensive Hazard Audit of the development in accordance with the Department's publication Hazardous Industry Planning Advisory Paper No. 5, 'Hazard Audit Guidelines' and include a review of the site Safety Management System and a review of all entries made in the incident register since the previous audit;</p> <p>(e) review the adequacy of any strategies, plans or programs required under the abovementioned approvals;</p>	Operations	<p>Independent Environmental Audit was carried out in CY22 and the findings of this audit were detailed in the last year's (2023) Annual Compliance Report.</p> <p>The next Independent Environmental Audit is not due until CY25.</p>	Compliant

	(f) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under the abovementioned approvals; and (g) be conducted and reported to the satisfaction of the Secretary. <i>Note: A reference to Independent Audit Post Approval Requirements (2020) in this development consent also includes future amendments to this document.</i>			
C10	Within 12 weeks of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report and a timetable for the implementation of these recommendations as required. The Applicant must implement these recommendations, to the satisfaction of the Secretary.	Operations	There was no audit requirement within this reporting period.	Compliant
C10A	The Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified in the <i>Independent Audit Post Approval Requirements (2020)</i> , upon giving at least 4 weeks' notice (or timing) to the Applicant of the date upon which the audit must be commenced.	Operations	Noted	Not triggered
C10B	In accordance with the specific requirements in the <i>Independent Audit Post Approval Requirements (2020)</i> (or as amended from time to time), the Applicant must: (a) review and respond to each Independent Audit Report prepared under condition C9 of this consent, or condition C10A where notice is given by the Secretary; (b) submit the response to the Secretary; and make each Independent Audit Report, and response to it, publicly available within 60 days of submission to the Secretary, unless otherwise agreed by the Secretary.	Operations	Independent Environmental Audit was carried out in CY22 and the report along with findings, proposed corrective actions with due dates were submitted to DPE on 28 Feb 2023. The Independent Audit Report, and response to it are published in our external Jemena website - Western Sydney Hydrogen Hub Jemena	Compliant
C10C	Independent Audit Reports and the Applicant's response to audit findings must be submitted to the Secretary within 2 months of undertaking the independent audit site inspection, as outlined in the <i>Independent Audit Post Approvals Requirements (2020)</i> (or as amended from time to time) unless otherwise agreed by the Secretary	Operations	Independent Audit report along with the proposed corrective actions for the audit findings were submitted on 28 Feb 2023. The next audit is not due until 2025.	Compliant
C10D	Notwithstanding the requirements of the <i>Independent Audit Post Approvals Requirements (2020)</i> , the Secretary may approve a request for ongoing independent operational audits to be ceased, where it has been demonstrated to the Secretary's satisfaction that independent operational audits have demonstrated operational compliance.	Operations	Noted	Not triggered
C11	Unless the Secretary agrees otherwise, from the commencement of development under this consent, the Applicant must: (a) make the following information publicly available on its website as relevant to the stage of the development: • the EIS; • the final general arrangement plans for the development; • current statutory approvals for the development; • approved strategies, plans or programs required under the conditions of this consent; • the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged; • how complaints about the development can be made; • a complaints register; • compliance reports; • any independent environmental audit, and the Applicant's response to the recommendations in any audit; and • any other matter required by the Secretary; and (b) keep this information up to date.	At all times	All the project relevant approval documents including the compliance reports, audit reports and how the complaints can be made are published in our external Jemena website - Western Sydney Hydrogen Hub Jemena	Compliant
C12	To ensure the studies, strategies and plans for the development are updated on a regular basis and incorporate any required measures to improve the environmental performance of the development, the Applicant may submit revised studies, strategies or plans required for the development under the conditions of consent at any time. With the agreement of the Secretary, the Applicant may also submit any study, strategy or plan required under the conditions of this consent on a staged basis.	At all times	Noted	Not Triggered
C13	The Secretary may approve a revised strategy or plan required under the conditions of consent, or the stage submission of these documents, at any time. With the approval of the Secretary, the Applicant may prepare the revised or staged strategy or plan without undertaking consultation with all parties nominated under the applicable condition in this consent	At all times	Noted	Not Triggered

Appendix B - Compliance Report Declaration Form


Compliance Report Declaration Form	
Project name	Western Sydney Green Hydrogen Hub
Project Application Number	SSD 10313
Description of Project	Trialling Power-to-Gas (P2G) technology by converting purchased green energy from the electricity mains network into hydrogen gas and injecting it into its secondary gas distribution network over a 5-year period.
Project Address	202-214 Chandos Road, Horsley Park (Lot 1, DP 499001)
Proponent	Jemena Gas Networks (NSW) Limited (Jemena)
Title of Compliance Report	Operations Compliance Report
Date	30/10/2024

I declare that I have reviewed relevant evidence and prepared the contents of the attached Compliance Report and to the best of my knowledge:

- The Compliance Report has been prepared in accordance with all relevant conditions of consent.
- The Compliance Report has been prepared in accordance with the Compliance Reporting Post Approval Requirements.
- The findings of the Compliance Report are reported truthfully, accurately and completely.
- Due diligence and professional judgement have been exercised in preparing the Compliance Report.
- The Compliance Report is an accurate summary of the compliance status of the development.

Notes:

- Under section 10.6 of the Environmental Planning and Assessment Act 1979 a person must not include false or misleading information (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.
- The Crimes Act 1900 contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years' imprisonment or 200 penalty units, or both).

Name of authorised reporting officer	Rahul Dorairaj
Title	Environment Manager
Signature	
Qualification	Master of Environmental Management
Company	Jemena Gas Networks (NSW) Limited
Company Address	Level 16, 567 Collins Street MELBOURNE VIC 3000