GOVERNMENT OF WESTERN AUSTRALIA

Environmental Protection Authority

Environmental Protection Act 1986

Section 45C

NOTICE OF DECISION TO CONSENT TO AMEND AN APPROVED PROPOSAL WITHOUT INQUIRY

PERSON TO WHOM THIS NOTICE IS GIVEN

Chevron Australia Pty Ltd (CAPL)

PROPOSAL TO WHICH THIS NOTICE RELATES

Gorgon Gas Development Revised and Expanded Proposal: Barrow Island Nature Reserve

MINISTERIAL STATEMENT and ANY APPROVED CHANGES

MS 800 issued 10 August 2009, with approved:
s46 changes resulting in MS 865 issued 8 June 2011; and MS 1198 issued 19 October 2022, s46C changes on 31 May 2011; and 25 June 2013,
s45C changes on 23 February 2010; 26 February 2010; 23 March 2010; 29 April 2011; 2 June 2011; 26 June 2013; 3 April 2020; and 24 October 2022.

DECISION

Pursuant to s. 45C (1) (a) of the *Environmental Protection Act 1986* (EP Act), the A/Chair acting as delegate for the Minister for Environment gives approval to the following amendments of the approved proposal:

- The construction and implementation of additional pressure management infrastructure including: an additional pressure management drill centre on existing cleared land and additional wells for pressure management, water injection, anode and reservoir surveillance at existing drill centres.

The amended proposal content document is attached.

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SUMMARY OF REASONS

- The existing CO_2 injection system forms part of the proposal for the Gorgon Gas Development assessed under Part IV of the *Environmental Protection Act 1986* (WA) (EP Act) in 2005 and approved via Ministerial Statement (MS) 800 in 2009 (Approved Proposal).

- Conditions 5, 26 and 27 of MS 800 were updated by MS 1198 in 2022 following an inquiry under section 46 of the EP Act into the implementation conditions relating to the emission of greenhouse gases. Consistent with the revised condition 26, 100% of reservoir CO_2 emissions should be injected underground using the existing CO_2 injection system where practicable, the proponent must also implement all measures necessary to achieve injection of 80% reservoir CO_2 emissions, and any remaining volume of reservoir CO_2 that is not injected underground is offset using authorised offsets.

- Long term CO_2 injection rates on Barrow Island are currently limited by the capacity of the associated pressure management system, therefore an amendment to the approved proposal has been sought under section 45C of the EP Act to enable works to optimise the existing CO_2 injection system.

- During the construction phase, there will be an increase in GHG emissions (approximately 500,000 tonnes CO_2-e/year). This temporary increase is due to the safety requirements to shut down the existing CO_2 injection wells during drilling of the additional wells. Once operational, the average annual emission from the additional wells is expected to be less than 100,000 tonnes CO_2-e/year. However, the proponent is not seeking to amend any GHG emission limits for the proposal, and the requirement to ensure net GHG emissions meet those limits set out in condition 27(a) of MS 1198 (i.e. net GHG emissions for the proposal do not exceed 5,220,000 tonnes CO_2-e/year for the period until 30 June 2030) are still required to be met by the proponent.

- In applying the mitigation hierarchy, the proponent has committed to minimisation of GHG emissions through, no routine flaring or venting of hydrocarbon gas and maintaining all vehicles and equipment to minimise fuel use and emissions. Furthermore, the implementation of the proposed amendment will result in net emission reduction through a substantial, and sustainable increase in CO_2 injection rates achieving a reduction in overall GHG emissions from the Gorgon Gas Development.

- The proponent has been requested by DWER to update its GHG environmental management plans to reflect the proposed amendments construction and operations related GHG emissions consistent with conditions 26 and 27 MS 1198. Of note is that the proposed amendments do not alter any of the net GHG emission limits set out in condition 27(a) of MS 1198 which the proponent is required to ensure are not exceeded.

- The proposed amendment will result in the clearing of up to 2.5 ha of native vegetation. The proposed disturbance footprint is wholly within the previously assessed and approved proposal area and will not result in an exceedance of the 332 ha of 'uncleared land' limit imposed under the *Barrow Island Act 2003*.

- The 2.5 ha increase in native vegetation clearing is not likely to have a significant impact on flora and vegetation. No Commonwealth or State-listed threatened or priority ecological communities were identified within the amended development envelope and no threatened flora or vegetation have been recorded for Barrow Island.

- The additional 2.5 ha of vegetation clearing is not likely to have a significant impact on terrestrial fauna. Direct impacts to fauna habitat may occur, however, impacted fauna habitats are well represented in the areas surrounding the development envelope and across Barrow Island.

- The impact to subterranean fauna is not likely to be significant given the confinement of drilling to existing areas, the small size of the increase in disturbance footprint and the management measures to mitigate impacts. The proponent has been requested to update relevant management plans (e.g. Short-range Endemics and Subterranean Fauna Monitoring Plan, and Terrestrial and Subterranean Environment Protection Plan) to capture the proposed amendment.

- Potential impacts to inland waters will continue to be mitigated by measures such as (but not limited to) using existing water supplies to avoid dewatering or groundwater abstraction; minimising extent and depth of excavation work as much as practicable for operational requirements; and designing and implementing the project to minimise changes to the hydrological regime and prevent groundwater contamination.

- The amendment is unlikely to result in significant impact to Aboriginal cultural heritage (ACH). Consistent with condition 31 of MS 800 the proponent will survey the proposed disturbance footprint for artefacts and sites of ACH prior to any construction works being undertaken. The survey results will inform any additional management requirements for the protection of ACH values in line with EPA objectives.

- There are no new environmental factors likely to be significantly affected as a result of the amendments.

- The amended proposal, if implemented, is unlikely to have a significant effect on the environment and is therefore not considered a significant amendment. In considering this, the effects of the amendment on its own, the effect of the amendment in the context of the existing approved proposal, cumulative and holistic impacts have been considered.

- The amended proposal will be substantially the same character as the existing referred proposal and there are no new environmental factors.

EFFECT OF THIS NOTICE:

1. The proposal as amended in accordance with this notice is taken to be able to be implemented under s. 45 of the EP Act.

RIGHTS OF APPEAL:

There are no rights of appeal under the EP Act in respect of this decision.

Darren Walsh
Delegate of the Environmental Protection Authority
A/CHAIR

28 September 2024

Attachment 1- Amended proposal content

Table 1: General proposal content description

Proposal title	Gorgon Gas Development Revised and Expanded Proposal: Barrow Island Nature Reserve
Proponent name	Chevron Australia Pty Ltd (ACN 086 197 757)
Short description	The construction of facilities for the development of the Greater Gorgon Gas Fields on the North-West Shelf, and the processing and export of the gas at a liquefied natural gas plant to be constructed on Barrow Island, as more generally described in the Draft Environmental Impact Statement / Environmental Review and Management Programme for the Proposed Gorgon Development, the Final Environmental Impact Statement/ Response to Submissions on the Environmental Review and Management Programme; as amended under Section 45C; and as expanded and revised in the Public Environmental Review for the Gorgon Gas Development Revised and Expanded Proposal and the Response to Submissions: Gorgon Gas Development Revised and Expanded Proposal, Public Environmental Review.

Table 2: Proposal content elements

Proposal Element	Location/Description	Extent, Capacity, Range	Proposed Amendment	Combined Extent, Capacity, Range
Physical Elements				
Gas Treatment Plant	Town Point, Barrow Island, Figure 2-1	Volume of earthworks 6 million m^3 (nominal)	No change	Volume of earthworks 6 million m^3 (nominal)
Feed Gas Pipeline Systems	Pipelines, electrical cables, hydraulic, and fibre-optic connections between the offshore fields and the Gas Treatment Plant on Barrow Island Figure 2-1	Length onshore (Barrow Island) approximately 14 km Construction easement (onshore) approximately 42 ha Terrestrial component of the shore crossing area of disturbance (HDD onshore construction area) up to 11ha at North White's Beach Length in State waters approximately 5.6 km (3 nautical miles)	No change	Length onshore (Barrow Island) approximately 14 km Construction easement (onshore) approximately 42 ha Terrestrial component of the shore crossing area of disturbance (HDD onshore construction area) up to 11ha at North White's Beach Length in State waters approximately 5.6 km (3 nautical miles)
Domestic Gas Pipeline	Figure 2-1	Route onshore (BWI) Within Gas Treatment Plant boundary Length offshore approximately 70 km Length onshore (mainland) 30 to 40 km Construction easement (mainland) 90 to 120 ha Shoreline crossing (mainland) Pilbara coast, west of Macey's Wreck.	No change	Route onshore (BWI) Within Gas Treatment Plant boundary Length offshore approximately 70 km Length onshore (mainland) 30 to 40 km Construction easement (mainland) 90 to 120 ha Shoreline crossing (mainland) Pilbara coast, west of Macey's Wreck.

Proposal Element	Location/Description	Extent, Capacity, Range	Proposed Amendment	Combined Extent, Capacity, Range
Associated Terrestrial Infrastructure	Figure 2-1	Terrestrial components of the upgrade of the existing WAPET Landing Construction Village approximately 2.6 km south of Gas Treatment Plant Operations workforce accommodation within an extension to the existing Chevron Camp Administration and Operations Complex near the Gas Treatment Plant outside the Plant boundary Permanent Utilities Area to be located within the Gas Treatment Plant Site Utilities corridors between the Utilities Area, Construction Village, and Gas Treatment Plant Road upgrades: WAPET Landing to Town Point. Town Point to the airport (via Construction Village). Feed Gas Pipeline System route Airport modifications: Extension of existing runway to the south, no realignment. Vegetation clearing within current airport perimeter Microwave communications tower and associated infrastructure Reverse Osmosis (RO) facilities for water supply	No change	Terrestrial components of the upgrade of the existing WAPET Landing Construction Village approximately 2.6 km south of Gas Treatment Plant Operations workforce accommodation within an extension to the existing Chevron Camp Administration and Operations Complex near the Gas Treatment Plant outside the Plant boundary Permanent Utilities Area to be located within the Gas Treatment Plant Site Utilities corridors between the Utilities Area, Construction Village, and Gas Treatment Plant Road upgrades: WAPET Landing to Town Point. Town Point to the airport (via Construction Village). Feed Gas Pipeline System route Airport modifications: Extension of existing runway to the south, no realignment. Vegetation clearing within current airport perimeter Microwave communications tower and associated infrastructure Reverse Osmosis (RO) facilities for water supply
Carbon Dioxide (CO_2) Injection System	Figure 2-3	CO_2 compression facilities located within Gas Treatment Plant boundary	No change	CO_2 compression facilities located within Gas Treatment Plant boundary
		CO_2 pipeline length approximately 10 km; Easement approximately 8 ha.	No change	CO_2 pipeline length approximately 10 km; Easement approximately 8 ha; Depth of pipeline trench not more than 9 m from ground surface.
		8-9 injection wells directionally drilled from 3-4 surface locations.	Up to three additional CO_2 injection wells to be established on existing DCs	Up to 12 CO_2 injection wells directionally drilled from 3 to 4 surface locations.
		Observation well or wells may be drilled from each cluster of injection wells	Observation well or wells may be drilled from each drill centre	Observation well or wells may be drilled from each drill centre
		Four pressure management water wells (water production wells)	Up to 7 pressure management water wells (or water production wells) will be required to manage pressure	Up to 11 pressure management water wells (or water production wells) will be required to manage pressure in the Dupuy Formation.

Proposal Element	Location/Description	Extent, Capacity, Range	Proposed Amendment	Combined Extent, Capacity, Range
			in the Dupuy Formation.	
		Four pressure management wells for the re-injection of water produced from the Lower Dupuy formation by the pressure management wells.	Up to 7 pressure management water injection wells for the reinjection of water produced from the Dupuy formation by pressure management wells.	Up to 11 pressure management water injection wells for the reinjection of water produced from the Dupuy formation by pressure management wells.
		Four shallow drilled anode wells are required for each CO_2 drill centre for the purposes of cathodic protection. Total anode well count is up to 19.	Anode wells required for each CO_2 drill centre for the purposes of cathodic protection. Total anode well count is up to 19.	Anode wells required for each CO_2 drill centre for the purposes of cathodic protection. Total anode well count is up to 19.
		Monitoring activities including acquisition of seismic data.	No change	Monitoring activities including acquisition of seismic data.
Materials Offloading Facility (MOF)	Figure 2-1	Solid causeway and MOF design with offloading facilities including wharf, dock, mooring dolphins, ramp, and tug pens to support a range of vessel sizes and loads. Combined length from the nominated onshore set out point (E 340013.006 N 7700404.460 – approximately 250 m inland from Town Point) to the top of batter at interface with start of the LNG Jetty is approximately 2120 m (Note: For this component, 'approximately' means ± 5 %). Constructed channel approximately 750 m long × 165 m wide Channel dredged to approximately 6.5 m (relative to chart datum) Berthing Pocket dredged to approximately 8 m (relative to chart datum)	No change	Solid causeway and MOF design with offloading facilities including wharf, dock, mooring dolphins, ramp, and tug pens to support a range of vessel sizes and loads Combined length from the nominated onshore set out point (E 340013.006 N 7700404.460 – approximately 250 m inland from Town Point) to the top of batter at interface with start of the LNG Jetty is approximately 2120 m (Note: For this component, 'approximately' means ±5 %). Constructed channel approximately 750 m long × 165 m wide Channel dredged to approximately 6.5 m (relative to chart datum) Berthing Pocket dredged to approximately 8 m (relative to chart datum)
LNG Jetty	Figure 2-1	Open pile structure LNG Jetty length from the end of the MOF to the end of the LNG Jetty, midway between the two LNG berths, is approximately 2.1 km (Note: For this component, 'approximately' means ±5 %). Turning basin shape Dual Berth facility (designed to meet safety requirements) Turning Basin and Access Channel dredged to	No change	Open pile structure LNG Jetty length from the end of the MOF to the end of the LNG Jetty, midway between the two LNG berths, is approximately 2.1 km (Note: For this component, 'approximately' means ± 5 %). Turning basin shape Dual Berth facility (designed to meet safety requirements) Turning Basin and Access Channel dredged to

Proposal Element	Location/Description	Extent, Capacity, Range	Proposed Amendment	Combined Extent, Capacity, Range
		approximately 13.5 m (relative to chart datum) Berthing Pocket dredged to approximately 15 m (relative to chart datum)		approximately 13.5 m (relative to chart datum) Berthing Pocket dredged to approximately 15 m (relative to chart datum)
Barge Landing	WAPET Landing, east coast of Barrow Island. **Figure 2-1**	Marine components of the upgrade of the existing WAPET Landing	No change	Marine components of the upgrade of the existing WAPET Landing
Construction Elements				
Dredging	East coast of Barrow Island	MOF volume 1.1 million m^3 (nominal) LNG turning basin and shipping channel volume 6.5 million m^3 (nominal, dual berth)	No change	MOF volume 1.1 million m^3 (nominal) LNG turning basin and shipping channel volume 6.5 million m^3 (nominal, dual berth)
Dredge Spoil Disposal Ground	Closest point is approximately 10 km from the east coast of Barrow Island	Approximately 900 ha. Note: For this component, 'approximately' means ± 5 %.	No change	Approximately 900 ha. Note: For this component, 'approximately' means ± 5 %.
Drill and blast associated with the dredging component of the construction of the Causeway, MOF, and LNG Jetty (access channels and berthing pockets)	East coast of Barrow Island	50 000 m^3 (nominal)	No change	50 000 m^3 (nominal)
Construction water supply	Gas Treatment Plant	Use of treated greywater, produced freshwater, and sea water for construction earthworks on the LNG treatment plant site	No change	Use of treated greywater, produced freshwater, and sea water for construction earthworks on the LNG treatment plant site
Construction and Operations Elements				
Water supply (seawater intake for Reverse osmosis (RO))	East coast of Barrow Island Gas Treatment Plant	5150 m^3/day (nominal) raw water supply during normal operations, and up to 12 000 m^3/day (nominal) during the construction period	No change	5150 m^3/day (nominal) raw water supply during normal operations, and up to 12 000 m^3/day (nominal) during the construction period
RO brine disposal	Gas Treatment Plant	Deep well injection or ocean outfall (east coast Barrow Island)	No change	Deep well injection or ocean outfall (east coast Barrow Island)
Wastewater Treatment Plant (WWTP)	Gas Treatment Plant	Wastewater treatment plant installed during pre-construction (with sufficient capacity for construction workforce) will be modified as necessary to support operations workforce.	No change	Wastewater treatment plant installed during pre-construction (with sufficient capacity for construction workforce) will be modified as necessary to support operations workforce.
Treated effluent disposal	Gas Treatment Plant	Deep well injection of surplus treated effluent	No change	Deep well injection of surplus treated effluent
Contaminated wastewater disposal	Gas Treatment Plant	Deep well injection of contaminated wastewater streams when practicable	No change	Deep well injection of contaminated wastewater streams when practicable
Process water disposal	Gas Treatment Plant	Deep well injection of process water	No change	Deep well injection of process water

Proposal Element	Location/Description	Extent, Capacity, Range	Proposed Amendment	Combined Extent, Capacity, Range
Clearing	All elements of the proposal	Clearing of native vegetation for the purpose of implementing the Proposal	No change	Clearing of native vegetation for the purpose of implementing the Proposal.
Discharge of waste from vessels	State waters	Discharge of waste from marine vessels in accordance with MARPOL 73/78	No change	Discharge of waste from marine vessels in accordance with MARPOL 73/78
Operations Elements				
Liquefied Natural Gas (LNG) trains	Gas Treatment Plant	3 × 5 MTPA nominal	No change	3 × 5 MTPA nominal
LNG tanks	Gas Treatment Plant	2 × 180 000 m^3 (nominal)	No change	2 × 180 000 m^3 (nominal)
Gas processing drivers	Gas Treatment Plant	6 × 80 MW (nominal) gas turbines fitted with dry low NO_x (DLN) burners	No change	6 × 80 MW (nominal) gas turbines fitted with dry low NO_x (DLN) burners
Power generation	Gas Treatment Plant	5 × 116 MW (nominal) conventional gas turbines fitted with DLN burners	No change	5 × 116 MW (nominal) conventional gas turbines fitted with DLN burners
Flare design	Gas Treatment Plant	Ground flare for main plant flare. Boil-off Gas (BOG) flares (two separate enclosed ground flares, one duty burner and one spare burner) in proximity to the LNG storage and loading area.	No change	Ground flare for main plant flare. Boil-off Gas (BOG) flares (two separate enclosed ground flares, one duty burner and one spare burner) in proximity to the LNG storage and loading area.
Domestic gas production rate	Gas Treatment Plant	300 TJ/day	No change	300 TJ/day
Condensate production rate	Gas Treatment Plant	3600 m^3/day (nominal) hydrocarbon condensate	No change	3600 m^3/day (nominal) hydrocarbon condensate
Condensate tanks	Gas Treatment Plant	4 × 35 000 m^3 (nominal)	No change	4 × 35 000 m^3 (nominal)
LNG and Condensate load-out	East coast of Barrow Island	Via dedicated lines installed to the LNG Berth (eastern end of LNG Jetty)	No change	Via dedicated lines installed to the LNG Berth (eastern end of LNG Jetty)
CO_2 Injection System Monitoring	**Figure 2-1**	CO_2 monitoring activities, including the acquisition of seismic data, will be undertaken as part of ongoing reservoir performance management.	No change	CO_2 monitoring activities, including the acquisition of seismic data, will be undertaken as part of ongoing reservoir performance management.
Greenhouse Gas Emissions				
Operations Elements				
Scope 1	Approximately 211 Mt CO_2-e (life of proposal emissions)		No change	Approximately 211 Mt CO_2-e (life of proposal emissions)
Scope 2	n/a		No change	n/a
Scope 3 (transport and third-party end use of products)	Approximately 49.8 Mtpa CO_2-e		No change	Approximately 49.8 Mtpa CO_2-e
Rehabilitation				
• Rehabilitation will be undertaken in accordance with a Post-Construction Rehabilitation Plan required by Condition 32 of MS 800.				
Commissioning				
• Commissioning of the infrastructure will be undertaken subject to the operational limits / requirements above				

Proposal Element	Location/Description	Extent, Capacity, Range	Proposed Amendment	Combined Extent, Capacity, Range
Decommissioning				
• Decommissioning works to be undertaken in accordance with the Decommissioning and Closure Plan required by Condition 34 of MS 800.				
Other elements which affect extent of effects on the environment				
Proposal time	Maximum project life	Max project tenure life until 2069	No change	Max project tenure life until 2069