



<b>Works Approval Holder</b>	Chevron Australia Pty Ltd
<b>ACN</b>	086 197 757
<b>Works Approval Number</b>	W5097/2011/1
<b>File Number</b>	2011/010776
<b>Premises</b>	Gorgon Gas Permanent Wastewater Treatment Plant Within coordinates: 339 251.03E 7 700 279.78N 339 272.89E 7 700 279.78N 339 272.89E 7 700 225.50N 339 251.03E 7 700 225.50N BARROW ISLAND WA 6712
<b>Date of amendment</b>	25 May 2017

## Amendment

The Chief Executive Officer (CEO) of the Department of Environment Regulation (DER) has amended the above works approval in accordance with section 59 of the *Environmental Protection Act 1986* as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act and follows.

Date signed: 25 May 2017

Jonathan Bailes  
ACTING SENIOR MANAGER – INDUSTRY REGULATION (PROCESS INDUSTRIES)  
LICENSING AND APPROVALS

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

## Amendment notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the works approval issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

The following DER Guidance Statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles* (July 2015)
- *Guidance Statement: Setting Conditions* (October 2015)
- *Guidance Statement: Decision Making* (November 2016)
- *Guidance Statement: Risk Assessment* (November 2016)

## Amendment description

Chevron Australia Pty Ltd (the Works Approval Holder) applied on 9 March 2017 for an amendment to Works Approval W5097/2011/1 issued by DER on 23 April 2012 approving construction and commissioning of a category 54 sewage facility; the Gorgon LNG Project Permanent Wastewater Treatment Plant (PWWTP) located on Barrow Island.

The amendment application requests:

- Extension of the expiry date of W5097/2011/1 for 12 months to 28 February 2019 to accommodate uncertainty on commissioning and licensing of the PWWTP;
- A change to the definition of 'commissioning period' such that the new definition allows for commissioning to occur once DER has been notified of the Works Approval Holder's intention to start commissioning the PWWTP (as opposed to once the construction compliance document has been submitted); and
- To allow the PWWTP to continue to be operated beyond the end of the three month defined commissioning period and prior to the issue of the licence for ongoing operation.

The Works Approval Holder has advised DER that there is some uncertainty associated with the timing for which licence applications will be submitted for the PWWTP combined with a number of other prescribed premises related to the Gorgon LNG Project. At this stage, the Works Approval Holder anticipates applications will be submitted in September 2017. To allow for some flexibility around the commissioning process, the Works Approval Holder has therefore requested an extension to the commissioning period for the PWWTP defined in the works approval.

## Background

The PWWTP will process and treat sewage waste generated by approximately 950 personnel (equivalent to 383m<sup>3</sup> per day (+ 15%)) during the construction and operational phases of the Gorgon LNG Project. Flow-equalised sanitary wastewater from facilities within the gas treatment plant, staff accommodation, material off-loading facility, permanent operations centre, quarantine approval premises, and LNG jetty control room will be directed to the PWWTP. The system will also provide emergency system shutdown buffering of sanitary wastewater.

The PWWTP is expected to be in operation for 50 years, during which operation will initially be in tandem with a Bridging Wastewater Plant (BWWTP) until the BWWTP is decommissioned.

The PWWTP uses a membrane bioreactor to treat wastewater. The system will comprise the following:

- equalisation tank;
- inlet screening;
- pre-anoxic tank (68,200L);
- aeration tank (120,000L);
- post-anoxic tank (51,900L); and
- MBR filtration and disinfection (chlorine contact tank (23,500L) and treated backwash tank (19,200L)).

Determination of Works Approval W5097/2011/1 included a risk assessment of the treated effluent emissions from the PWWTP, which will be predominantly discharged via deep disposal wells into the Flacourt geological formation located 1,000m below Barrow Island. Disposal to the wells will be via the Liquid Waste Facility (LWF), which is approved to operate under Licence L8894/2015/1. The LWF consists of two 1,300m<sup>3</sup> Disposal Water Tanks where various water streams will be combined prior to permanent disposal to deep injection wells.

It is also proposed to reuse wastewater produced from the PWWTP for dust suppression, compaction and vehicle washdown where practicable and demand dictates. The PWWTP has been designed to achieve a Medium Exposure Risk Level as per Department of Health (DoH) Guidelines for the *Non-potable Uses of Recycled Water in Western Australia* (August 2011).

Dewatered solid waste and screenings produced from the PWWTP will be transported off Barrow Island to the mainland to an authorised waste facility.

Following construction, the PWWTP will require commissioning to allow testing, calibration and inspection of all equipment. The establishment of microorganisms to enable the proposed effluent output quality is also to occur during commissioning.

## Part IV Environmental Protection Act 1986

The Gorgon LNG Project was assessed by the Environmental Protection Authority (EPA) and approved by the Western Australian Minister for the Environment (the Minister) on 6 September 2007 by Ministerial Statement No. 748. Since 2007, several changes to the project have been approved under section 45C of the EP Act (outlined in Schedule 1 of Statement No. 748). The changes to the project were approved by the Minister on 10 Aug 2009 in Ministerial Statement No. 800.

Relevant management plans and programs developed under the Ministerial Statements include:

- Solid and Liquid Waste Management Plan (SLWMP); and
- Long-term Marine Turtle Management Plan (for lighting).

The SLWMP outlines the management of solid and liquid waste during construction, commissioning and operation of the Gorgon Gas Development and Jansz Feed Gas Pipeline. This includes both offshore and onshore works, as well as the disposal of solid and liquid waste to the marine environment (including from the various wastewater treatment plants on BINR), subsurface formations (deep well injection), treatment by incineration or food waste dryers on Barrow Island, or mainland disposal and recycling.

## Decision

Having considered the application to amend Works Approval W5097/2011/1, the Delegated Officer has determined that the changes requested by the Works Approval Holder will not alter the risk profile of the premises. Emissions and discharges during and after the commissioning period can be adequately regulated under the existing treated effluent discharge limits, and monitoring and reporting requirements specified in the works approval. Disposal of wastewater

to land for dust suppression etc. is also required to meet the relevant DoH (2011) standards under approval from the DoH.

In addition, the disposal of wastewater will be in accordance with the SLWMP, which is required to be implemented under MS 800.

The Delegated Officer has therefore granted the amendment and extended the works approval expiry date by 12 months. The three-month restriction on the commissioning period has been removed from the works approval to allow the Works Approval Holder flexibility in completing the commissioning and commencing full operation whilst an application for a licence is made and assessed. The Works Approval Holder will be required to notify DER of the commencement and completion of commissioning.

The amendment also incorporates minor changes to the monitoring requirements during commissioning under the works approval, such that weekly monitoring of treated effluent will be required for the first three months of commissioning, followed by monthly monitoring for the subsequent period. The data gained through the ongoing monitoring will be used by DER to verify that the ongoing emissions and discharges meet the criteria specified in the works approval, and to assess the ongoing operation of the PWWTP as part of any licence application.

## Amendment history

Table 1 provides the amendment history for W5097/2011/1.

**Table 1: Works approval amendments**

Instrument	Issued	Amendment
W5097/2011/1	23 April 2012	Issued Works Approval
W5097/2011/1	3 April 2014	The Works Approval was amended to modify the coordinates of the Premises boundary due to an administrative error.
W5097/2011/1	16 April 2015	The Works Approval was amended to extend the expiry date from 22 April 2015 to 29 February 2016.
W5097/2011/1	5 November 2015	The Works Approval was amended to extend the expiry date from 29 February 2016 to 28 February 2018.
W5097/2011/1	25 May 2017	Amendment Notice 1 Extension to works approval duration and commissioning period.

## Works Approval Holder's comments

The Works Approval Holder was provided with the draft Amendment Notice on 10 May 2017. Comments received from the Works Approval Holder have been considered by the Delegated Officer as shown in Appendix 2.

## Amendment

1. The expiry date of the works approval has been extended from 28 February 2018 to 28 February 2019.
2. The definitions of the works approval are amended by the deletion of the text shown in strikethrough below:

~~“commissioning period” means a period not to exceed three months and is to start from the submission of the compliance document required in condition 2 of this works approval for the commissioning of the Gorgon Gas Development Permanent Wastewater Treatment Plant;~~

3. The works approval is amended by the deletion of the following Condition 3:

3      ~~The works approval holder shall undertake commissioning of the Gorgon Gas Development Permanent Wastewater Treatment Plant for up to three months.~~

4. Condition 4 of the works approval is amended by the insertion of the red text shown in underline below:

4      The works approval holder shall notify the CEO in writing one week prior to the commencement of the commissioning of the Gorgon Gas Development Permanent Wastewater Treatment Plant and one week after the completion of the commissioning.

5. Condition 6 of the works approval is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

6      The works approval holder shall ensure that during the first 12 weeks of commissioning period ~~required by condition 3~~, the treated effluent discharged:

- (a) ~~above ground, in accordance with Condition 5(a), is analysed to determine the concentration of all parameters listed in Column A of Table 1, on a weekly basis; and/or~~
- (b) ~~into the deep wells, in accordance with Condition 5(b), is analysed to determine the concentration of all parameters listed in Column A of Table 2, on a weekly basis.~~

and thereafter the treated effluent discharged:

- (a) above ground, in accordance with Condition 5(a), is analysed to determine the concentration of all parameters listed in Column A of Table 1, on a monthly basis; and/or
- (b) into the deep wells, in accordance with Condition 5(b), is analysed to determine the concentration of all parameters listed in Column A of Table 2, on a monthly basis.

## Appendix 1: Key Documents

	Document Title	In text ref	Availability
1	Works Approval W5097/2011/1	W5097/2011/1	<a href="http://www.der.wa.gov.au">http://www.der.wa.gov.au</a>
2	Chevron Australia Pty Ltd, 8 March 2017. Application to amend Works Approval W5097/2011/1	Chevron 2017	DER records (A1390316)
3	Ministerial Statement 748	MS 748	<a href="http://www.epa.wa.gov.au/">http://www.epa.wa.gov.au/</a>
4	Ministerial Statement 800	MS 800	
5	Department of Health (DoH), August 2011. Guidelines for the <i>Non-potable Uses of Recycled Water in Western Australia</i>	DoH (2011)	<a href="http://ww2.health.wa.gov.au/Articles/N_R/Recycled-water-publications">http://ww2.health.wa.gov.au/Articles/N_R/Recycled-water-publications</a>
6	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	DER 2015a	<a href="http://www.der.wa.gov.au">http://www.der.wa.gov.au</a>
7	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	DER 2015b	
8	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	DER 2016b	
9	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	DER 2016c	

## Appendix 2: Summary of Licence Holder comments

The Works Approval Holder was provided with the draft Amendment Notice on 10 May 2017 for review and comment. The Works Approval Holder responded on 18 May 2017. The following comments were received on the draft Amendment Notice.

Comments received	DER consideration of risk
<p>The Works Approval Holder requested the addition of the following wording to Condition 4 of the Works Approval:</p> <p><i>The works approval holder will continue to run the Wastewater Treatment Plant until the 3 Train licence is granted.</i></p>	<p>The Delegated Officer has not amended the condition as the additional wording is considered explanatory text.</p> <p>The Delegated Officer notes that the Works Approval Holder will continue to operate the WWTP post commissioning until an application for a licence is assessed and granted. Section 56(2) of the EP Act applies to emissions that are caused as a result of anything done in accordance with a works approval, while that works approval is in force.</p>