



# Amendment Notice 2

**Licence Number** L8240/2008/2

**Licence Holder** Water Corporation

**File Number:** DEC7566

**Premises**  
Narembeen Wastewater Treatment Plant  
Lot 28597 on Plan 182591  
Crown Reserve 35856  
Soldiers Road  
NAREMBEEN WA 6302

**Date of Amendment** 4 July 2018

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence 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.

Date signed: 4 July 2018

**JARROD ABRAHAMS**  
**A/MANAGER LICENSING – WASTE INDUSTRIES**  
**REGULATORY SERVICES (ENVIRONMENT)**

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

# Definitions and interpretation

## Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the <i>Environmental Protection Act 1986</i> Locked Bag 33 Cloisters Square PERTH WA 6850 <a href="mailto:info@dwer.wa.gov.au">info@dwer.wa.gov.au</a>
Decision Report	refers to this document
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986</i> (WA)
EP Regulations	<i>Environmental Protection Regulations 1987</i> (WA)
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Water Corporation
m <sup>3</sup>	cubic metres
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997</i> (WA)
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.

Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>
UDR	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)</i>
WWTP	Wastewater Treatment Plant

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence 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 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 (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

## Amendment description

The Water Corporation has submitted a Licence amendment application to install and operate a new filtration and gas chlorination facility including a pump station and additional reuse pipework. The additional infrastructure will improve the quality of treated wastewater (TWW) used by the Shire of Narembeen to irrigated public open spaces within the town of Narembeen.

Raw sewage is accepted onto the Premises through sewage pipes into an Imhoff Tank where primary treatment takes place. Once there is enough liquid in the Imhoff tank the partially treated wastewater is directed into a clay lined pond for secondary treatment before leaving the Premises through an effluent pipeline to a storage dam owned by the Shire of Narembeen on the adjacent Lot. The Premises is licensed to accept 130m<sup>3</sup>/day of sewage per day. The Premises currently accepts around 85- 90m<sup>3</sup>/day.

Water Corporation propose to undertake the following works:

1. Replacing the existing chlorine disinfection unit with a transportable gaseous cylinder chlorination module consisting of duty/standby chlorinators. The unit is expected to treat up to 576 kL per day with a dose rate which will ensure compliance with Department of Health (DoH) compliance criteria.
2. Installing a self-cleaning mechanical filtration system (200 microns) for algal solids so that downstream disinfection can achieve DoH compliance criteria.
3. Installing a new pump station comprising of a sump, duty/stand-by self-priming pumps and pipework discharging into the Shire's storage dam. The pump station has been designed to achieve a maximum flowrate of 5.6L/s and will start/stop based on level sensors. .
4. Installing a new pump station comprising of a sump, duty/stand-by self-priming pumps and pipework discharging into the Shire's storage dam. The pump station is designed to achieve a maximum flowrate of 5.6L/s and will start/stop based on level sensors in the sump.
5. A magnetic flow meter will be installed to control the rate of chlorine dosing. This flowmeter also serves to measure the volume of treated irrigation water provided to the Shire.
6. Graded access track on Lot 303 to provide access to the reuse facility.
7. Lay a new buried effluent pipeline connecting to the existing Shire of Narembeen irrigation system to be 625m long of 250mm diameter.

## Amendment history

Table 2 provides the amendment history for L8240/2008/2.

**Table 2:** Licence amendments

Instrument	Issued	Amendment
L6796/1991/13	7 June 2012	Licence amendment to include Environmental Improvement Plan
L6796/1991/13	30 June 2016	Licence amendment to include new infrastructure constructed under Works Approval A5633/2014/1
L8240/2008/2	23 March 2017	Amendment to authorise in-field analysis of pH with a non-NATA accredited analysis
L8240/2008/2	4 July 2018	Amendment to install a new filtration and gas chlorination facility, pump station, and additional reuse pipework

## Location and receptors

Table 3 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 3: Receptors and their distances from activity boundary**

Residential and sensitive premises	Distance from Prescribed Premises
Local residence	800m southwest
Bulk handling facility	750m south

Table 4 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 4: Environmental receptors and distance from activity boundary**

Environmental receptors	Distance from Prescribed Premises
Walker Lake	2km southwest
Groundwater	4-6 metres below ground level (mbgl)

## Risk assessment

Tables 5 and 6 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

**Table 5: Risk assessment for proposed amendments during construction**

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 54 Sewage Facility	Construction of infrastructure	<b>Dust:</b> From vehicle movements and construction activities	Local residence 800m from the premises	Air/wind dispersion	Health and amenity impacts	Slight	Possible	Low
		<b>Noise:</b> From construction machinery			Amenity impacts			

**Table 6: Risk assessment for proposed amendments during operation**

Source/Activities		Risk Event				Consequence rating	Likelihood rating	Risk	Reasoning
		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 54 Sewage Facility	The operation of the new chlorinator and associated infrastructure	<b>Odour:</b> From the storage of treated wastewater and chlorine	Local residence 800m from the facility	Air/wind dispersion	Amenity impacts	Minor	Rare	Low	The Delegated Officer considers the risk profile of odour emissions is not altered by the proposed changes to infrastructure and therefore the risk rating of Low remains.
		<b>Treated sewage:</b> Failure of any containment infrastructure	Groundwater	Seepage	Impacts to groundwater quality	Minor	Unlikely	Medium	The Delegated Officer considers the risk profile of potential groundwater contamination is not altered by the proposed changes to infrastructure and therefore the risk rating of Medium remains. The site is not located within an environmentally sensitive area and is not within a drinking water supply area.
		<b>Gaseous chlorine:</b> From any spills or leaks	Local residence 800m from the facility	Air/wind dispersion - inhalation	Health impacts	Minor	Rare	Low	The storage of chlorine was not previously assessed. The Delegated Officer considers the risk to be low due to the containment infrastructure and management measures implemented at the premises.
			Groundwater	Seepage	Impacts to groundwater quality	Minor	Rare	Low	The storage of chlorine was not previously assessed. The Delegated Officer considers the risk to be Low, based on the containment infrastructure controls proposed by Water Corporation to store chlorine and the gaseous nature of the chlorine. It is unlikely that a pathway to groundwater would occur. The site is not located within an environmentally sensitive area and is not within a drinking water supply area.

## Decision

The Delegated Officer has determined that the risk profile of emissions is not altered by the proposed construction and operation of the new infrastructure. Therefore, the licence will be amended to authorise the construction and operation of the infrastructure, and no additional control measures are required.

## Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 31 May 2018. Comments received from the Licence Holder have been considered by the Delegated Officer as shown in Appendix 2.

## Amendment

1. Definitions of the Licence is amended by the insertion of the red text shown in underline below:

“Works” refers to the Works described in Table 4.1.1 at the locations shown in Schedule 1 of this Licence to be carried out subject to the Conditions.

2. The Licence is amended by the insertion of the following Conditions 4.1.1 to 4.1.4 and Table 4.1.1:

### **4. Works**

#### **4.1 Authorised works**

4.1.1 *The Licence Holder must install and undertake the Works for the infrastructure and equipment:*

- (a) *specified in Column 1;*
- (b) *to the requirements specified in Column 2; and*
- (c) *at the location specified in Column 3*

*of Table 4.1.1 below.*

4.1.2 *The Licence Holder must not depart from the requirements specified in Column 2 of Table 4.1.1 except:*

- (a) *where such departure does not increase risks to public health, public amenity or the environment; and*
- (b) *all other Conditions in this Licence are still satisfied.*

4.1.3 *Subject to Condition 4.1.1, within 30 days of the completion of the Works specified in Column 1 of Table 4.1.1, the Licence Holder must provide to the CEO a report with photographs confirming each item of infrastructure or component of infrastructure specified in Column 1 of Table 4.1.1 below has been constructed with no material defects and to the requirements specified in Column 2.*

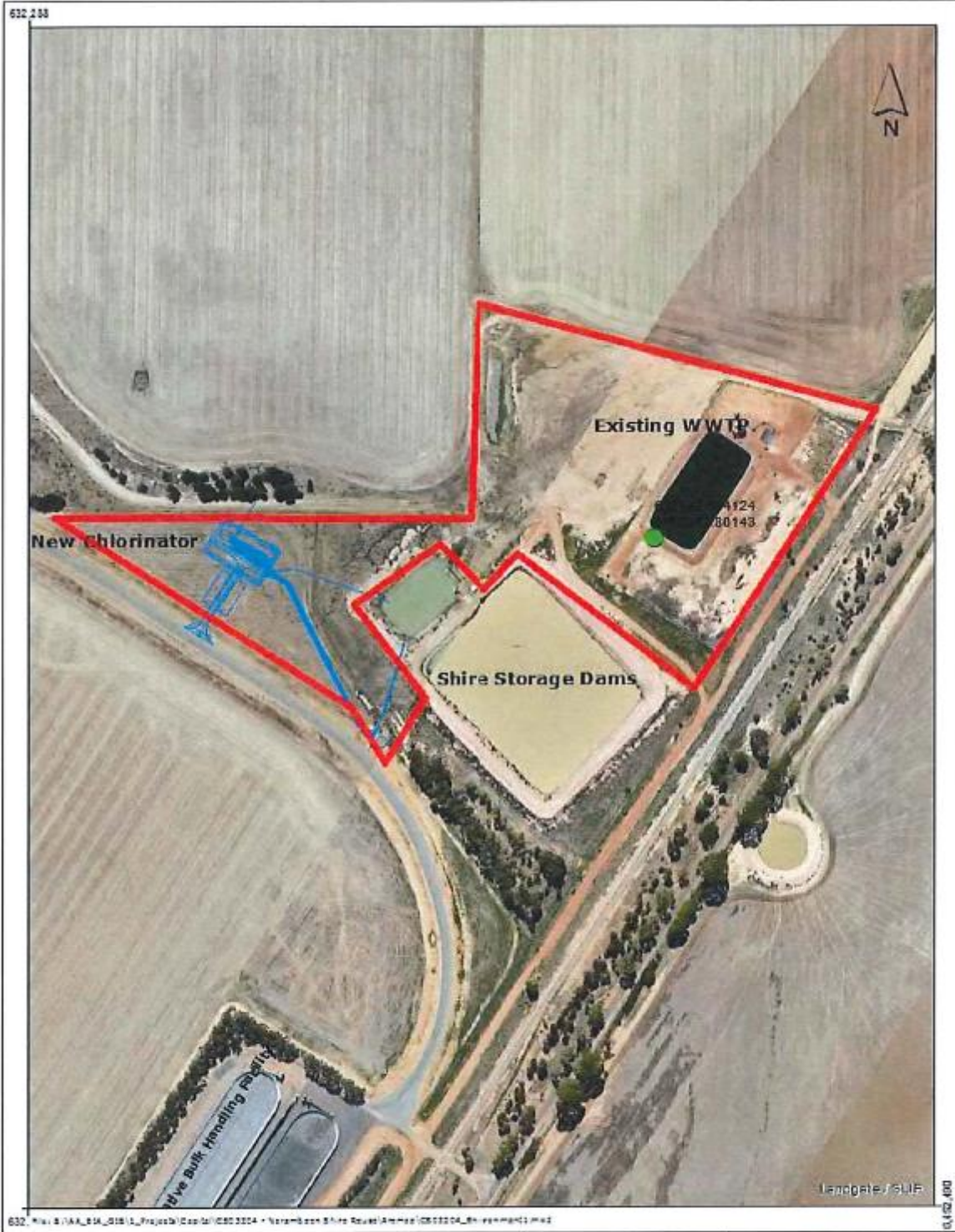
4.1.4 *Where a departure from the requirements specified in Column 2 of Table 4.1.1 occurs and is of a type allowed by Condition 4.1.2, the Licence Holder must provide to the CEO a description of, and explanation for, the departure along with the certification required by Condition 4.1.3.*



**Table 4.1.1: Infrastructure and equipment requirements table**

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>
<b>Infrastructure/ Equipment</b>	<b>Requirements (design and construction)</b>	<b>Site plan reference</b>
<i>Replacement Chlorine Disinfection Unit</i>	<ul style="list-style-type: none"> <li>• <i>Transportable module with a design capacity of 576 kL/day</i></li> </ul>	<i>Chlorination Building</i>
<i>Mechanical Filtration</i>	<ul style="list-style-type: none"> <li>• <i>Self-cleaning system</i></li> </ul>	<i>Chlorination Building</i>
<i>Pump Station</i>	<ul style="list-style-type: none"> <li>• <i>Designed to achieve a maximum flow rate of 5.6 litres per second</i></li> </ul>	<i>Chlorination Building</i>
<i>Electrical Components/ Instrumentation</i>	<ul style="list-style-type: none"> <li>• <i>As necessary for operation of the above items of infrastructure</i></li> </ul>	N/A
<i>New Effluent Pipeline</i>	<ul style="list-style-type: none"> <li>• <i>Buried underground to connect to the existing Shire of Narembeen irrigation system</i></li> </ul>	N/A

3. The Licence is amended by the insertion of the following Map in Schedule 1:



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- Legend**
- Discharge Point
  - Premise Boundary



Scale: 1:10000  
 0 20 40 60  
 Metres

Coordinate System: GDA 1994 MGA Zone 80  
 Vertical Datum: AGD

AUTHOR: PHOENIX DATE: 19/06/2018  
 DRAWN: DDA

The information contained herein is subject to the terms and conditions of the contract under which it was prepared and is not to be used for any other purpose without the prior written consent of the author.

**CS03204 Narambeen Shire Reuse**

## Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L8240/2008/2 – Narembeen Wastewater Treatment Plant	L8240/2008/2	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
2	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	DER 2015a	accessed at <a href="http://www.dwer.wa.gov.au">www.dwer.wa.gov.au</a>
3	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	DER 2015b	
4	DER, February 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	DER 2017a	
5	DER, February 2017. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	DER 2017b	

## Appendix 2: Summary of Licence Holder comments

Section/Condition	Summary of Licence Holder comment	DWER response
Amendment description	There is no outlet weir between the Imhoff Tank and the clay lined pond.	Noted and wording amended to remove reference to an outlet weir.
	Minor change to description of chlorination module infrastructure.	Proposed change accepted.
	Given that the dose rate is dependent on water quality and scheme operations which change throughout the year, replace the mg/L chlorine dose rate with the wording that the disinfection unit will provide a dose rate that will ensure compliance with Dept of Health compliance criteria.	Proposed change accepted.
	Minor change to wording of expected flow rate.	Proposed change accepted.
	Minor change to description of pumping station infrastructure.	Proposed change accepted.
“Works” definition	Correction of typographical error.	Proposed change accepted.
Table 4.1.1: Infrastructure and equipment requirements table	Change to infrastructure requirement wording for the Replacement Chlorine Disinfection Unit as follows: <ul style="list-style-type: none"> <li>Remove the mg/L dose rate, consistent with the change to the amendment description.</li> <li>Remove requirement for infrastructure to be able to hold a 30 day chlorine supply.</li> </ul>	Proposed change accepted.
	Change to infrastructure wording for the Mechanical Filtration System to remove requirement that the system is able to achieve disinfection of 200microns, as this is a filter.	Proposed change accepted.
	Change to infrastructure requirement wording for the Pump Station to clarify that 5.6 litres per second is the maximum flow rate.	Proposed change accepted.
	Change to infrastructure requirement wording for the New Effluent Pipeline to remove the length and width requirements.	Proposed change accepted.
Premises map	Updated premises map provided – relocation of discharge point.	Proposed change accepted.

Section/Condition	Summary of Licence Holder comment	DWER response
Table 7: Risk assessment for proposed amendments during operation	The risk of chlorine seepage to groundwater should be amended to low (with a likelihood of “Rare”) as gaseous chlorine is to be used. If leaked, it will evaporate and form gas.	Proposed change accepted. The reasoning has been updated regarding the gaseous nature of the chlorine resulting in a minimal likelihood of a pathway to groundwater.