



Department initiated Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L5976/1991/10
Licence Holder	Water Corporation
ABN	28 033 434 917
File Number	DWERVT16600
Premises	Carnavon Wastewater Treatment Plant Babbage Island Road MORGANTOWN WA 6701 Legal description - Lot 1321 on Plan 193061, Part of Lot 1205 on Plan 240108 and Part of Lot 1146 on Plan 210835 As defined in Schedule 1
Date of Report	29 October 2025
Decision	Revised licence granted

1. Decision summary

The delegated officer has determined to make amendments to licence L5976/1991/10. The amendments are administrative in nature therefore they do not alter the risk profile of the premises, providing that activities, emissions and receptors as stated in existing approvals remain unchanged.

This amendment report documents the amendments made pursuant to section 59 and 59(B) of the *Environmental Protection Act 1986* (EP Act).

The decision report for the existing licence will remain on the department's website for future reference and will act as a record of the department's decision making.

1.1 Regulatory framework

In amending the licence, the department has considered and given due regard to its regulatory framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

1.2 Amendment summary

Licence L5976/1991/10 is held by Water Corporation (licence holder) for the Carnavon Wastewater Treatment Plant (the premises), located at Lot 1321 on Plan 193061, Part of Lot 1205 on Plan 240108 and Part of Lot 1146 on Plan 210835 Babbage Island Road, MORGANTOWN WA 6701.

The premises relates to the category and the assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in existing Licence L5976/1991/10.

The department considers there to be insufficient time to complete a licence renewal prior to the current licence expiry. Therefore, the licence duration will be extended for a short period to ensure the current licence continues to remain in force until a full assessment is able to be completed.

On 31 July 2025, the department initiated an amendment to licence L5976/1991/10. The amendment is limited to extending the licence expiry date, consolidating amendment notices issued since 29 April 2016, renumbering of conditions, updating the annual and biennial reporting periods, correcting typographical errors, updating/deletions/inclusion of definitions, and updating premises maps.

In extending the licence duration, the revised licence has been granted in a new format.

2. Consultation

The licence holder was provided with the draft amendment report on 7 October 2025. Comments provided by the licence holder are outlined in Appendix 1.

3. Summary of amendments

Table 1 below provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the Revised licence as part of the amendment process.

Table 1: Summary of licence amendments

Condition no.	Proposed amendments
All	- Reference to 'licensee' replaced with 'licence holder'; - Reference to 'shall' replaced with 'must'; - Reference to 'Director' replaced with 'CEO'; - Condition numbering updated to reflect new template; and - Minor wording changes to update conditions into current licensing format with no changes to requirements or intentions of conditions.
Cover page: Revised to current licensing format	Category description and assessed design capacity moved to cover page.
Duration	Extended to 31/10/2026
	Definitions removed: 'Director', 'licensee'
	Definitions added: 'ACN', 'annual audit compliance report', 'annual period', 'biennially', 'books', 'CEO', 'department', 'DWER', 'discharge', 'emission', 'EP Act', 'EP Regulations', 'licence', 'licence holder', 'prescribed premises', 'waste'.
Licence History	Added to licence
Interpretation	Added to licence
Table 2	Waste type column table updated. The licence holder is allowed to accept tankered waste which was not specified in table 2.
Table 3	Table 3 amended by the inclusion of additional process treatment conditions in accordance with Amendment Notice 1.
Table 4	Table 4 updated in accordance with amendment notice 1 and to accurately represent the infrastructure as detailed in figure 1 and figure 2.
Table 7	Table 7 updated in accordance with amendment notice 1.
Table 9 , Table 10 & Table 11	N1 form is now considered redundant. Other forms are no longer the required format, updated to 'none specified'.
Attachment 1 - Premises map	- Updated to Schedule 1, Figure 1; - Inclusion of map of infrastructure added as Figure 2; and - Inclusion of process schematic added as Figure 3.
Schedule 2 Reporting & Notifications (N1 form)	N1 form is now considered redundant. Other forms are no longer the required format, updated to 'none specified' Addition of the text : AACR form is available from www.dwer.wa.gov.au
Attachment 2 - AACR form	Deleted. AACR form is available from www.dwer.wa.gov.au

Table 2: Consolidation of licence conditions in this amendment

Existing condition	Condition summary	Revised licence condition	Conversion notes
N/A	Expiry Date: 31 October 2019	Expiry Date: 31 October 2025	In accordance with the Notice of Amendment of Licence Expiry Dates (29/04/2016)
N/A	Contents and preamble	N/A	Redundant text. Revised to current licensing format.
1.1.1 1.1.2	Interpretation and definitions	N/A Interpretation section, Definitions and Table 6	Redundant condition. Revised to current licensing format.
1.1.3	Australian or other standard	N/A Interpretation section, Definitions and Table 6	Redundant condition. Revised to current licensing format.
1.1.4	Reference to code of practice	N/A Interpretation section, Definitions and Table 6	Redundant condition. Revised to current licensing format.
1.1.5	Emissions	N/A	Redundant condition. Revised to current licensing format.
1.2.1	Pollution control and monitoring equipment	N/A	Redundant condition. Adequately covered by alternative existing conditions. Deleted from licence.
1.2.2	Recovery and removal of spills	N/A	Redundant condition. Adequately covered by EP (Unauthorised Discharges) Regulations 2004. Deleted from licence.
1.2.3	Prevention of contamination and containment of contaminated stormwater	N/A	Redundant condition. Adequately covered by alternative existing conditions and proposed new conditions. Deleted from licence.
1.3.1	Record and investigate exceedances of limits or targets	N/A	Redundant condition. Deleted from licence.
1.3.2 Table 1.3.1	Waste acceptance	Condition 1 Table 2	Revised to current licensing format. New numbering.
1.3.3 Table 1.3.2	Waste processing	Condition 2 Table 3	New numbering.
1.3.4	Management of containment infrastructure	Condition 3	New numbering.
1.3.5	Management of wastewater treatment,	Condition 4	New numbering.

Existing condition	Condition summary	Revised licence condition	Conversion notes
	evaporation and infiltration ponds		
1.3.6	Infiltration of treated wastewater	Condition 5	New numbering.
1.3.7	Security measures	Condition 6	New numbering.
1.3.8	Managing sludge drying bed	Condition 7	New numbering.
1.3.9	Emergency discharge	Condition 8	New numbering.
2.1.1	Investigation of exceedances	NA	Redundant condition. Deleted from licence.
2.2.1 Table 2.2.1	Emissions to land	Condition 9 Table 5	New numbering.
3.1.1	Collection and Preservation of water samples	Condition 10	New numbering.
3.1.2	Monitoring requirement	Condition 11	New numbering.
3.1.3	Calibration of monitoring equipment	Condition 12	New numbering.
3.1.4	Calibration not practically met	Condition 13	New numbering.
3.2.1 Table 3.2.1	Monitoring of emissions to land	Condition 14 Table 6	New numbering
3.3.1 Table 3.3.1	Monitoring of inputs and outputs	Condition 25 Table 7	New numbering
3.4.1 Table 3.4.1	Monitoring of ambient groundwater quality	Condition 16 Table 8	New numbering
4.1.1	Records	Conditions 17 and 18	New numbering. Condition wording revised to current standard condition wording.
5.1.2	Person in charge of premises	N/A	Redundant condition. Deleted from licence.
5.1.3	AACR	Condition 19	New numbering. Condition wording revised to current standard condition wording.
5.1.4	Complaints	Condition 20	New numbering. Condition wording revised to current standard condition wording.

Existing condition	Condition summary	Revised licence condition	Conversion notes
4.2.1 Table 4.2.1	Biennial reporting requirements	Condition 21 Table 9	New numbering. Condition wording revised to current standard condition wording.
4.2.2	Reporting information	Condition 22	New numbering. Condition wording revised to current standard condition wording. Licence holder is now required to submit environmental report biennially.
4.2.3 Table 4.2.2	Monitoring reports submitted by third parties	Condition 23	New numbering
4.3.1 Table 4.3.1	Notification requirements	Condition 24 Table 11	New numbering
Schedule 1: Maps	Premises map	Schedule 1: Maps	Updated premises plan as provided by licence holder includes details of labelled key infrastructure and location of all monitoring bores
Schedule 2 Reporting & notifications	Annual Audit Compliance Report	N/A	Redundant attachment. Deleted from Licence Forms accessed at www.dwer.wa.gov.au
1.3.6	Record and investigate exceedances of limits or targets	N/A	Redundant condition. Deleted from licence.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
Condition 1 - 5	Typographical changes requested. Request to remove Condition 2 because: The filtration and chlorination infrastructure has been installed to the required specification and there has been no departures from the specification in Table 1 so is no longer relevant.	Request adopted. The Delegated Officer has noted that the compliance report for the installation works was submitted to DWER on 13/09/2019 (A1720180) and therefore agrees that condition 1-5 can be removed from the licence. The licence has been updated to reflect the revised condition numbers.

Appendix 2: Amendment Notice 1

 Government of Western Australia Department of Environment Regulation		Amendment Notice 1
Licence Holder	Water Corporation	
ACN	28 003 434 917	
Licence Number	L5976/1991/10	
File Number	2010/003112	
Category	54 – Sewage Facility	
Premises	Carnarvon Wastewater Treatment Plant Babbage Island Road Morgantown WA 6701 Lot 1321 on Plan 193061, portion of Lot 1205 on Plan 240108 and portion of Lot 1146 on Plan 210835.	
Date of amendment	25/05/2017	
Amendment	The Chief Executive Officer (CEO) of the Department of Environment Regulation (DER) has amended the above Licence in accordance with section 59 of the <i>Environmental Protection Act 1986</i> 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	
Steve Checker		
MANAGER LICENSING (WASTE INDUSTRIES)		
<i>an officer delegated under section 20 of the Environmental Protection Act 1986 (WA)</i>		
Licence: L5976/1991/10 File No: 2010/003112 Template: 1.3		

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.

This notice is limited only to an amendment of the following:

1. Change to the prescribed premises boundary due to an increase in premises area including portions of Department of Lands land (Lot 1205 on Plan 240108) and Shire of Camarvon land (Lot 1146 on Plan 210835), and
2. To identify an upgrade of the reuse scheme infrastructure that is being handed over by the Shire of Camarvon to Water Corporation. The infrastructure and its operation will now become the responsibility, management and ownership of Water Corporation to ensure that treated wastewater discharged from the premises meets Department of Health infrastructure and discharge requirements.

No other changes to the aspects of the original licence have been requested by the Licence Holder.

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

- *Guidance Statement: Regulatory Principles* (July 2015)
- *Guidance Statement: Land Use Planning* (February 2017)
- *Guidance Statement: Decision Making* (February 2017)
- *Guidance Statement: Risk Assessment* (February 2017)

Amendment Description

Water Corporation initiated an application for an amendment to Licence L5976/1991/10 for the upgrade of the Shire Reuse Scheme infrastructure and a realignment of their prescribed premises boundary to incorporate additional lands under Department of Lands (Lot 1205 on Plan 240108) and Shire of Camarvon land (Lot 1146 on Plan 210835).

Water Corporation own and operate the Camarvon Wastewater Treatment Plant prescribed premises, Category 54 – Sewage facility as defined under Schedule 1 of the *Environmental Protection Regulations 1987*. The plant consists of three stabilisation ponds made up of a primary aeration pond and two maturation ponds. An onsite emergency infiltration basin also exists within the premises boundary along with a sludge drying bed area.

The inlet pipe at the premises is fitted with a grit and screening facility and the area is bunded and filters the waste stream prior to discharge into pond 1. A copper ioniser/doser has been in operation at the Premises since 2006, for use as an algicide and microbicide, as part of the wastewater treatment process.

The treated wastewater effluent is pumped into the Shire of Camarvon's reuse storage facility. Reuse accounts for 100% of the effluent discharged from the Water Corporation's facility. On-site infiltration is retained for emergency events and exceptional circumstances only.

Treated wastewater is discharged via the adjacent Shire of Camarvon reuse scheme to the Town Beach, Northwater Public Open Space, Brockman Park, Football Oval/Festival Grounds, Van Dongen Park and High School. This effluent reuse is managed under the Recycling Water Supply Agreement (RWSA) (signed 10/03/2011), which is managed by the Department of Health.

Water Corporation undertook an assessment of the Shire of Camarvon's infrastructure used for the filtration and chlorination of the wastewater from Water Corporations premises and

determined that it was in a state of "disrepair" and did "not meet Department of Health requirements under the Reuse Agreement". Water Corporation has therefore agreed to (in consultation and agreement with the Shire of Carnarvon) decommission the old infrastructure and rebuild them to Department of Health standards. Once completed, the new infrastructure and its operation will fall under the ownership and management of Water Corporation.

The proposed infrastructure details upgrade will include:

- Installation of a new pump station;
- New filtration system;
- New Chlorinator (gaseous); and
- New tanks – 2 x 400kL (over flow to sump).

The existing filtration and chlorination system at the Shire will be decommissioned on completion of the new works upgrade.

Clearing of the additional 0.72 hectares of land will be undertaken in accordance with Water Corporations' state-wide clearing permit CPS185/7. No variances with the clearing principles were determined through their assessment process.

The infrastructure will be located on a portion of Lot 1205 on Plan 240108 and a portion of Lot 1146 on Plan 210835 which is land owned by the Shire. The Shire has endorsed through council resolution (FC 17/1/17 / Ref. 5R0105), and signed a letter (4/4/2017) in agreement for Water Corporation to undertake the upgrade of the reuse scheme infrastructure which Water Corporation will then own, operate and maintain in order to supply treated wastewater to the Shire on Shire land (See Section Table 1 and Appendix 1).

The Carnarvon WWTP and Shire storage ponds are less than 500 metres from residences in the nearby built-up area. Long term plans involve decommissioning the current plant and utilising a new site.

Map 1 below outlines the proposed changes to the prescribed premises boundary. The thick red line defines the new premises boundary with the yellow broken line defining the old section of the previous prescribed premises boundary that has been altered:



© Copyright 2019 Water Corporation
The Water Corporation has taken care in the preparation of this map but does not accept any responsibility for errors or omissions. The map is intended for general information only and should not be used for any other purpose. The Water Corporation is not responsible for any loss or damage arising from the use of this map. The Water Corporation is not responsible for any loss or damage arising from the use of this map. The Water Corporation is not responsible for any loss or damage arising from the use of this map.

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Map 2 below identifies the yellow hatched area to be cleared:



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Map 3 below identifies the location of the new infrastructure and operational assets to replace the old infrastructure used for the filtration and chlorination of wastewater from the Carnarvon Wastewater Treatment Plant:



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Other approvals

The Licence Holder has provided the following information relating to other approvals as outlined in Table 1.

Table 1: Relevant approvals

Legislation	Number	Approval
Local Planning approval – Shire of Carnarvon	N/A	Gazetted of the Water Services Act 2012 (as gazetted on 18 November 2013) states a 'Development Approval' is not required for the proposed works at the premises. Section 137 of the Water Services Act 2012, identifies that Water Corporation (in its capacity as service provider) is exempt from the requirement to obtain development approvals for Public Service Works.
Environmental Protection (Clearing of Native Vegetation) Regulations 2004	Native Vegetation Clearing permit CPS185/7	Water Corporation has determined that under their Statewide vegetation clearing permit they are not required to obtain any further clearing permits for the clearing of 0.72 hectares of land within their Lot 1321 on Plan T83061 boundary.
Land ownership and infrastructure management – Shire of Carnarvon (Shire)	N/A	Water Corporation submitted a letter co-signed by A/ Chief Executive Officer, Mark Decombe (Shire) and Manager Water Quality Branch, Rachael Miller (Water Corporation) confirming that Water Corporation will own, operate and maintain the filtration, disinfection and storage assets located on Lot 1321 (Shire land) (See Appendix 1).

Location, environmental siting and potential receptors

Table 2 below lists the relevant sensitive land uses in the vicinity of the prescribed premises which may be receptors relevant to the proposed amendment.

Table 2: Receptors and distance from prescribed premises

Residential and sensitive premises	Distance from Prescribed Premises
Residential area	~ 500 m south of the prescribed premises boundary

Table 3 below lists the relevant environmental receptors in the vicinity of the prescribed premises which may be receptors relevant to the proposed amendment.

Table 3: Environmental receptors and distance from prescribed premises

Environmental receptors	Distance from Prescribed Premises
Gascoyne River	Approximately 200 m north of the prescribed premises boundary

Table 4: Risk assessment for proposed amendments during construction

Source/Activities		Risk Event				Consequence rating	Likelihood rating	Risk	Reasoning
		Potential Emissions	Potential Receptors	Potential Pathway	Potential Adverse Impacts				
Category 54: Sewage Facility	Waste Water Treatment Facility	Odour associated with removal of effluent treatment infrastructure	Residential receptors (< 500 m south of the premises boundary)	Air	Health and Amenity impacts	Slight	Unlikely	Low	The new infrastructure will not disturb the current operational infrastructure which will only be removed once the new infrastructure is in place and ready for commissioning. The filtration and chlorination unit only receives treated wastewater from pond 3 (maturation) from the premises which has very low odour generation potential. The decommissioning of the old infrastructure is considered to have a low potential to generate odour. Based on the type of works being undertaken and the separation distance to sensitive receptors and extremely low volumes of potential waste that may discharge from pipework change over to the new infrastructure, the Delegated Officer considers that the consequence would be slight and the likelihood is unlikely. Therefore the potential risk of odour emissions is considered low.

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		Dust: associated with construction activities	Residential receptors (< 500 m south of the premises boundary)	Air	Health and amenity impacts	Sight	Possible	Low	The works that are to be undertaken are predominantly of an electrical and mechanical (infrastructure placement) nature. Leveling of ground works will result in the placement of soil for foundations however this is considered to be of low volumes and low ground disturbance. Based on the type of works being undertaken and the separation distance to sensitive receptors and extremely low volumes of potential earth works to be undertaken that may discharge dust, the Delegated Officer considers that the consequence would be slight and the likelihood is possible. Therefore the potential risk of emissions is considered low.
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Table 5: 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				
Category 54, Sewage Facility	Waste Water Treatment Facility	Odour associated with pipe backwash/ wasting operations and treatment	Residential receptors (< 500 m south of the premises boundary)	Air	Health and amenity impacts	Slight	Rare	Low	No discharge to land is proposed through the operation of the infrastructure under normal operations. Should an abnormal event occur to

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		process							infrastructure than the premises has been buried and will only allow for a limited flow through the system under low pressure reducing the potential for significant odour generation. In addition, waste water discharged through the pipeline is from the final treatment pond which generally has low odour generating potential. Based on the type of works being undertaken and the separation distance to sensitive receptors, the Delegated Officer considers that the consequence would be slight and the likelihood is rare. Therefore the potential risk of emissions is considered low.
		Emissions to land	Surface water with beneficial use (Geacoyne River system Approximately 200 m north of the premises boundary)	Seepage of leachate	Adverse impacts to the health and survival of aquatic flora and fauna dependent upon a healthy surface water system	N/A	N/A	N/A	The filtration and chlorination infrastructure proposed does not result in any emissions to land under normal operating processes. Emissions to land occur post filtration and chlorination as part of the standard operational process of the premises and are not applicable to this amendment process. However, the premises will include mitigation measures in the event of abnormal operations from the infrastructure with the

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									inclusion of earthen bunds to inhibit flow off the premises from associated infrastructure/ pipe works
Category 34 Sewage Facility	Waste Water Treatment Facility	Dust: associated with operational activities from the filtration and chlorination infrastructure	Residential receptors (< 500 m south of the premises boundary)	Air	Health and amenity impacts	N/A	N/A	N/A	No dust emissions are expected from the normal operation of the filtration and chlorination infrastructure.

Decision

Controls proposed by the Licence Holder for the construction of the works are conditioned on the licence to ensure that the upgrade of the filtration and chlorination system and change to premises boundary is done in accordance with the submitted details supplied by Water Corporation and in accordance with relevant Department of Health standards.

The front page of the Licence has been amended to update the premises boundary description to include the additional land being incorporated from Department of Lands and the Shire of Camarvon for the operation and management of the filtration and chlorination system.

The Delegated Officer considers this approach appropriate and consistent with the regulatory controls applied across the State in defining the location of prescribed premises, as regulated under DER guidance shown within Appendix 1, 2-5 of the Amendment Notice.

Section 1.2 has been updated to include conditions relating to the proposed works upgrade.

Conditions 1.2.4-1.2.8 relate to the establishment of an upgraded filtration and chlorination system that will meet Department of Health requirements under this licence amendment application. A risk assessment for odour, dust and emissions to land is detailed in Table 4 above.

Condition 1.2.4 requires the proponent to ensure that construction meets or exceeds the standards defined within Table 1.2.1 of the Licence condition. These specifications are consistent with the application requirements submitted by the proponent for the construction of the works.

Condition 1.2.5 relates to potential deviations/ departures from the proposed upgrade construction requirements (as based upon any variations to the works specifications, Table 1.2.1), and how these should be addressed.

Condition 1.2.6 requires upgrades or minor departures from the defined construction requirements to be listed and submitted through to DER, and should be submitted within the construction compliance document, stated within condition 1.2.7. This ensures that departures from the approved works can be assessed and actioned as required.

Conditions 1.2.7 and 1.2.8 require the submission of a construction compliance document prior to operation of the premises upgrade and signed by an appropriate person. This will ensure that upgrades undertaken (installation of the irrigation area) are certified as having been constructed in accordance with the Licence requirements, and that the appropriate testing has been conducted by the proponent for inclusion within the compliance report document.

The Delegated Officer considers the treatment of wastewater from the plant, through the filtration and chlorination system, impacts upon the capability of the proponent to discharge waste from the premises boundary to an appropriate standard for reuse offsite. The inclusion of additional infrastructure within the premises boundary alters the activities and processes being undertaken or stated within the Licence. As such, conditions 1.2.4-1.2.8 have been included within the Licence to define these alterations in consideration of Section 53 of the EP Act.

Condition 1.3.3 and 1.3.4 have been updated to include the new premises process controls relating to filtration and chlorination of the treated wastewater which will become the responsibility of Water Corporation on the completion of the works upgrade.

The Delegated Officer considers these inclusions appropriate to better define the relevant process activities and infrastructure controls required as a result of the additional infrastructure now included within the prescribed premises boundary, under the management of Water Corporation.

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Condition 3.3.1 has been updated with the inclusion of monitoring of chlorine at the premises as a result of the process change as part of the works upgrade.

The Delegated Officer determined that the requirement to monitor for chlorine is appropriate and necessary to validate the risk determinations and regulatory controls for 'emissions to land' and 'monitoring'. The condition has been updated to specify what process changes and equipment (i.e. wastewater filtration and chlorination) is required to be maintained and operated at the premises through the monitoring of inputs/ outputs.

The Delegated Officer noted that DER has one record of an odour complaint (5/1/2016) from the facility within DER 'Incidents and Complaints Management System' (ICMS). The Delegated Officer considered that the general onsite housekeeping and distance to sensitive receptors is expected to mitigate any odour issues. As the risk from odour has been determined as 'Low', the Delegated Officer considers that impacts from odour emissions can be sufficiently regulated under section 49 of the *Environmental Protection Act 1986*.

The Delegated Officer has determined that risk of dust emissions is considered low due to the short term nature of the earth works required at the premises, and the relatively small volumes of soil disturbance required to level and prepare the site. Under normal operating processes, dust emissions are not expected to pose a potential environmental risk.

The premises is scheduled to be subject to a full risk-based review by DER in the near future.

Amendment History

Table 6 provides the amendment history for L5976/1991/10.

Table 6: Licence amendments

Instrument	Issued	Amendment
L5976/1991/10	25/05/2017	Amendment Notice 1 – Upgrade of filtration and chlorination system and change to premises boundary.

Licence Holder's Comments

The Licence Holder was provided with the draft Amendment Notice on 18 April 2017. Comments received from the Licence Holder have been considered by the Delegated Officer as shown in Appendix 2.

Amendment

1. Front Page of the Licence

Premises address is to be amended by the inclusion of the in red text shown in underline below:

"Being Lot 1321 on Plan 193061, ~~portion of Lot 1205 on Plan 240106 and~~ portion of Lot 1146 on Plan 210835 as depicted in schedule 1"

2. Section 1.2 of the Licence is amended with the insertion of the following conditions relevant to the installation of the new infrastructure at the premises:

- 1.2.4 The Licensee must ensure that the proposed Works specified in Column 1 of Table 1.2.1 are designed and constructed to meet or exceed the specifications in Column 2 of Table 1.2.1 for the infrastructure in each row of Table 1.2.1.
- 1.2.5 The Licensee must not depart from the specifications in Table 1.2.1 except:
- (a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
 - (b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment; and all other Conditions in this Licence are still satisfied.

Table 1.2.1:	Works specifications
Column 1	Column 2
Infrastructure	Specifications (design and construction)

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Table 1.2.1: Column 1 Infrastructure	Works specifications Column 2 Specifications (design and construction)
Filtration and Chlorination system (See Map 3)	The Licensee must ensure that the filtration and chlorination area: 1. is contained within the premises boundary; 2. is not accessible to the public (non-operational staff) at any time; 3. is earthen bunded to mitigate against accidental discharge from the infrastructure under abnormal operating conditions; 4. has signage placed around the boundary of the premises identifying chlorination treatment of wastewater within the premises boundary; 5. includes the installation of a filtration unit, chlorination unit, 2 x 400 kL storage tanks, low permeability (concrete) overflow/ backwash sump/s and transfer pumps; 6. is linked via a pipeline network from pond 3 only to receive wastewater for filtration and chlorination purposes prior to discharge to the Shire storage ponds, outside of the premises boundary; and 7. complies with Department of Health requirements.

1.2.6 If departures under Condition 1.2.5 apply, then the Licensee must provide the CEO with a list of departures which are certified as complying with Condition 1.2.5 at the same time as the certifications under Condition 1.2.7.

1.2.7 The Licensee must submit a construction compliance document to the CEO, within one month, following the construction of the Works and prior to operating the new works at the premises.

1.2.8 The Licensee must ensure the construction compliance document:

- (a) is certified by a suitably qualified professional engineer or builder that each item of infrastructure specified in Condition 1.2.3, Table 1.2.1 has been constructed in accordance with the Conditions of the Licence with no material defects; and
- (b) be signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company.

3. Condition 1.3.3, Table 1.3.2 of the licence is amended by the inclusion of additional process treatment requirements as shown in red underlined text below:

Table 1.3.2: Waste processing		
Waste type	Process	Process requirements
Sewage	Physical, biological and <u>chemical</u> treatment	• Treatment of sewage waste shall be at or below the treatment capacity of 1 800 m³/day; • <u>Treated wastewater shall be filtered and chlorinated prior to discharge beyond the premises boundary for reuse.</u>
Sewage sludge	Storage – sludge drying bed	• Returns sludge leachate to the start of the treatment process.

4. Condition 1.3.4, Table 1.3.3 of the licence is amended by the inclusion of the following containment infrastructure as shown in red underlined text below:

Table 1.3.3: Containment infrastructure		
Vessel or compound	Material	Requirements
Inlet works	Screening	Stored in a sealed bin which is surrounded by a bunded hardstand area which returns sludge leachate to the start of the treatment process.

Pond 1 (aeration)	Wastewater	Clay lined to achieve a permeability of less than 10^{-8} m/s or equivalent.
Pond 2 (facultative)	Wastewater	
Pond 3 (maturation)	Treated wastewater	
Infiltration area	Treated wastewater	Unlined, in-situ soils. Used in emergency events only.
<u>Filtration and chlorination system</u>	<u>Treated wastewater</u>	<u>Filtration and gaseous chlorination of treated wastewater prior to discharge to Shine of Camarvon storage ponds for reuse.</u>
<u>Storage tanks</u>	<u>Treated wastewater</u>	<u>Holding tanks for the containment of overflow to surge</u>
Sludge drying bed	Sewage sludge	Temporary or permanent infrastructure to consist of a bunded hardstand or lined area (lined to achieve a permeability of less than 10^{-8} m/s or equivalent), capable of preventing surface run-off of leachate and sludge and which includes a leachate collection system.

5. Condition 3.3.1, Table 3.3.1 of the licence is amended by the inclusion of the following input as shown in red underlined text below:

Table 3.3.1: Monitoring of inputs and outputs					
Input/ Output	Monitoring point reference	Parameter ^a	Units	Averaging period	Frequency
Wastewater Treatment Plant - Inlet Flow	Inflow meter (M1 – S2042103)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Treated wastewater discharged to Shine of Camarvon ponds	Outflow meter (M2 – S0037360)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Treated wastewater discharged to on-site infiltration ponds	Outflow meter or mass balance calculation (M3)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Emergency/ abnormal events only
<u>Treated wastewater discharged from pond 3 (post chlorination)</u>	<u>Final treated water discharge monitoring point</u>	<u>Chlorine</u>	<u>mg/L</u>	<u>Monthly</u>	<u>Continuous</u>

6. **Schedule 1: Maps – Premises map** of the Licence is to be updated and replaced with the following map to reflect the changes to premises boundary, as shown below:



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 File No: 2010003112
 Template: 1.3

Appendix 1: Key Documents

	Document Title	In text ref	Availability
1	Licence amendment application – PM-#16370598-v1-Camarvon WWTP - Re-Use Scheme Upgrade Approval Application - 2017	L5976/1991/10	DER records (A1377434)
2	Email: Camarvon reuse scheme - Letter to DER re Licence amendment from Craig Chaudhry, 30/03/2017.	Project No. CS03206 (dated 14/3/17)	DER records (A1406227) 'infrastructure ownership and management.'
3	Email: FW: CS03206 Camarvon Shire Reuse - Shire letter to support DER licence amendment from Craig Chaudhry, 3/4/2017.	Shire of Camarvon - Council Resolution (Ref. 5R0106)	DER records (A1407182)
4	DER, July 2015. Guidance Statement: Regulatory principles. Department of Environment Regulation, Perth.	DER 2015a	accessed at http://www.der.wa.gov.au
5	DER, October 2015. Guidance Statement: Setting conditions. Department of Environment Regulation, Perth.	DER 2015b	
6	DER, November 2016. Guidance Statement: Risk Assessments. Department of Environment Regulation, Perth.	DER 2016b	
7	DER, November 2016. Guidance Statement: Decision Making. Department of Environment Regulation, Perth.	DER 2016c	

Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Notice on 19 April 2017 for review and comment. One comment was submitted on the draft Amendment Notice within the 21 day comment period, which expired on 19 May 2017.

Comments received	DER consideration of risk
One comment received via email from Craig Chaudhry on 18/05/2017 requesting the removal of mention of the sprinkler system within 'Table 1.2.1 Works specifications'. This infrastructure will not be owned or managed by Water Corporation and will continue to be the responsibility of the Shire of Camarvon, as part of the reuse scheme infrastructure for application to the various areas within the Shire.	Removed from Table 1.2.1 within the Amendment Notice.

Appendix 3: Amendment Notice 2



Government of Western Australia
Department of Environment Regulation

Amendment Notice 2

Licence Holder	Water Corporation
ACN	28 003 434 917
Licence Number	L5976/1991/10
File Number	2010/003112
Category	54 – Sewage Facility
Premises	Carnarvon Wastewater Treatment Plant Babbage Island Road Morgantown WA 6701 Lot 1321 on Plan 193061, portion of Lot 1205 on Plan 240108 and portion of Lot 1146 on Plan 210835.
Date of amendment	22 December 2017

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 and follows.

Date signed: 22 December 2017

Steve Checker

MANAGER LICENSING (WASTE INDUSTRIES)

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

Licence: L5976/1991/10
File No: 2010/003112
Template: 1.3

1

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.

This notice is limited only to an amendment of the following:

1. Rectification of errors in the information submitted by Water Corporation for the upgrade of the reuse scheme infrastructure that is being handed over by the Shire of Carnarvon to Water Corporation. The infrastructure and its operation will now become the responsibility, management and ownership of Water Corporation to ensure that treated wastewater discharged from the premises meets Department of Health infrastructure and discharge requirements.

No other changes to the aspects of the original licence have been requested by the Licence Holder.

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

- *Guidance Statement: Regulatory Principles* (July 2015)
- *Guidance Statement: Land Use Planning* (February 2017)
- *Guidance Statement: Decision Making* (February 2017)
- *Guidance Statement: Risk Assessment* (February 2017)

Amendment Description

Water Corporation initiated an application for an amendment to Licence L5976/1991/10 to rectify errors in information submitted by Water Corporation through an earlier amendment notice. The amendment notice was in relation to the upgrade of the Shire Reuse Scheme infrastructure and a realignment of their prescribed premises boundary to incorporate additional lands under Department of Lands (Lot 1205 on Plan 240108) and Shire of Carnarvon land (Lot 1146 on Plan 210835).

Water Corporation considers the amendments administrative in nature. The detail of each proposed amendment and DWER response is included within Attachment 1 of the Amendment notice.

Background

Water Corporation own and operate the Carnarvon Wastewater Treatment Plant prescribed premises, Category 54 – Sewage facility as defined under Schedule 1 of the *Environmental Protection Regulations 1987*. The plant consists of three stabilisation ponds made up of a primary aeration pond and two maturation ponds. An onsite emergency infiltration basin also exists within the premises boundary along with a sludge drying bed area.

The inlet pipe at the premises is fitted with a screening facility and the area is bunded and filters the waste stream prior to discharge into pond 1. A copper ioniser/doser has been in operation at the Premises since 2006, for use as an algacide and microbicide, as part of the wastewater treatment process.

The treated wastewater effluent is pumped into the Shire of Carnarvon's reuse storage facility. Reuse accounts for 100% of the effluent discharged from the Water Corporation's facility. On-site infiltration is retained for emergency events and exceptional circumstances only.

Treated wastewater is discharged via the adjacent Shire of Carnarvon reuse scheme to the Town Beach, Northwater Public Open Space, Brockman Park, Football Oval/Festival

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2

Grounds, Van Dongen Park and High School. This effluent reuse is managed under the Recycling Water Supply Agreement (RWSA) (signed 10/03/2011), which is managed by the Department of Health.

Water Corporation undertook an assessment of the Shire of Carnarvon's infrastructure used for the filtration and chlorination of the wastewater from Water Corporations premises and determined that it was in a state of "disrepair" and did "not meet Department of Health requirements under the Reuse Agreement". Water Corporation has therefore agreed to (in consultation and agreement with the Shire of Carnarvon) decommission the old infrastructure and rebuild them to Department of Health standards. The new infrastructure and its operation will fall under the ownership and management of Water Corporation.

The infrastructure upgrade currently underway, as defined under amendment notice 1 (issued on 25 May 2017) will include:

- Installation of a new pump station (located outside of the premises boundary, owned and managed by the Shire of Carnarvon);
- New filtration system;
- New Chlorinator (gaseous); and
- New tanks – 2 x 400kL (to facilitate adequate chlorine holding time).

The existing filtration and chlorination system at the Shire will be decommissioned on completion of the new works upgrade.

Clearing of the additional 0.72 hectares of land was undertaken in accordance with Water Corporations' state-wide clearing permit CPS185/7. No variances with the clearing principles were determined through their assessment process.

The infrastructure will be located on a portion of Lot 1205 on Plan 240108 and a portion of Lot 1146 on Plan 210835 which is land owned by the Shire. The Shire has endorsed through council resolution (FC 17/1/17 / Ref. 5R0105), and signed a letter (4/4/2017) in agreement for Water Corporation to undertake the upgrade of the reuse scheme infrastructure which Water Corporation will then own, operate and maintain in order to supply treated wastewater to the Shire on Shire land (See attached Maps 1-3).

The Carnarvon WWTP and Shire storage ponds are less than 500 metres from residences in the nearby built-up area. Long term plans involve decommissioning the current plant and utilising a new site.

Map 1 below outlines the proposed changes to the prescribed premises boundary. The thick red line defines the new premises boundary with the yellow broken line defining the old section of the previous prescribed premises boundary that has been altered:



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Map 2 below identifies the yellow hatched area to be cleared:



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Map 3 below identifies the location of the new infrastructure and operational assets to replace the old infrastructure used for the filtration and chlorination of wastewater from the Carnarvon Wastewater Treatment Plant:



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 Template: 1.3

Attachment 1 identifies the proposed changes as submitted by Water Corporation

Comment no.	Section	Page	License /Amendment condition/wording	Proposed amendment action	Comment
1.	Amendment description	3	The proposed infrastructure details upgrade will include: - Installation of a new pump station'	Removal of wording	The pump station will be a Shire asset. The Water Corporation is constructing and gifting to the Shire.
2.	Table 5 — Risk assessments for proposed amendments during operation	11	'Emissions to land' reasoning column 'however the premises will include mitigation measures in the event of abnormal operations from the infrastructure with the inclusion of earthen bunds to inhibit flow off the premises from associated infrastructure/pipe works'	Alter condition — remove requirement for earthen bund. The system is set up that Shire storage dam	The current design is sufficient to manage the risk posed by potential emission to land. The system is set up that should there be any failure, pumping from the Shire storage dam ceases. Any water in the pipework or out of spec water in the tanks can then be diverted to the sump which gets pumped back to the WWTP.
3.	Decision	12	'Conditions 1.2.7 and 1.2.8...This will ensure that upgrades undertaken (installing of the irrigation area) are certified as having been constructed in accordance with the Licence requirements'	Removal of reference to 'installing irrigation area'.	Water Corporation is not making any changes to the irrigation area or the assets in the irrigation area as this is managed by the Shire. The Corporation is constructing a new pump station for the Shire so that it can match the demands of the new filtration and chlorination system.
4.	Table 1.2.1 Works Specifications	15	'3. is earthen bunded to mitigate against accidental discharge from the infrastructure under abnormal operating conditions.'	As above in comment 2.	As above in comment 2.
5.	Table 1.2.1 Works Specifications	15	'6. is linked via pipeline network from pond 3 only to receive wastewater for filtration and chlorination purposes prior to discharge to the Shire storage ponds.'	Altered specification — to reflect the actual process flow.	The correct process flow is: WWTP final effluent from pond 3 to Shire Storage Pond to Water Corporation Filtration, disinfection and storage tanks to Shire irrigation pump station to Shire managed irrigation areas
6.	Table 1.3.3 Containment infrastructure	16	'Filtration and chlorination system — treated wastewater — filtration and gaseous chlorination of treated wastewater prior to discharge to Shire of Camarvon storage ponds for reuse'	Altered specification — to reflect the actual process flow.	Wastewater from the Shire storage pond will be filtered and chlorinated and then pumped to the Water Corporations storage tanks prior to reuse. Chlorinated and filtered water is not pumped to the Shire storage pond.
7.	Table 1.3.3 Containment infrastructure	16	'Storage tanks — treated wastewater — holding tanks for containment of overflow to	Altered specification — to reflect the purpose of the storage tanks.	The storage tanks are to achieve chlorine contact time prior to irrigation.

			sump'		Should this water be out of spec it can be pumped back to the sump and then the wastewater treatment plant. This will occur in an abnormal event.
8.	Table 3.3.1 Monitoring of inputs and outputs	16	'treated wastewater discharge from pond 3 (post chlorination) — final water discharge monitoring point — chlorine — mg/L — monthly — continuous'	Removal of 'continuous' frequency	Treated wastewater from pond 3 is not chlorinated. As detailed in the schedule of the licence the premises process table shows that M3 (SP Camarvon WWTP Secondary Ponds Discharge) is the final treated water discharge monitoring point from pond 3. The systems (and all low risk wastewater reuse schemes) do not have continuous monitoring — this is not compatible with the water quality. Online continuous chlorine monitoring isn't required for health compliance, rather the system has an interlock to ensure that no water is delivered should chlorination fail as per the MOU between Water Corporation and Department of Health.

Attachment 2 includes DWER response to proposed changes to Licence

Comment no.	Section	Proposed amendment action	DWER Response
1.	Amendment description	Removal of wording	Noted. Additional wording will be included to define this infrastructure as being the property and management of the Shire (pump located off the premises boundary).
2.	Table 5 — Risk assessments for proposed amendments during operation	Alter condition — remove requirement for earthen bund.	Additional justification was received from Water Corporation from Craig Chaudhry via email on 2/11/2017. The defined mitigation measure is will be incorporated within the amendment under Table 1.2.1 within the Licence to identify automatic pressure sensor shut down values within the system which will negate the need for bunding around the infrastructure
3.	Decision	Removal of reference to 'installing irrigation area'.	Paragraph within the 'Decision' section of the Amendment Notice has been amended.
4.	Table 1.2.1 Works Specifications	As above in comment 2.	Additional justification was received from Water Corporation from Craig Chaudhry via email on 2/11/2017. The defined mitigation measure will be incorporated within the amendment to identify automatic pressure sensor shut down values within the system which will negate the need for bunding around the infrastructure identified.
5.	Table 1.2.1 Works Specifications	Altered specification to reflect the actual process flow.	Changed to reflect actual process flow, as re-defined.
6.	Table 1.3.3 Containment infrastructure.	Altered specification — to reflect the actual process flow.	Changed to reflect actual process flow, as re-defined.

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7.	Table 1.3.3 Containment infrastructure	Altered specification — to reflect the purpose of the storage tanks.	Changed to reflect actual process flow, as re-defined.
8.	Table 3.3.1 Monitoring of inputs and outputs	Removal of 'continuous' frequency	Changed. Monitoring frequency changed to 'Spot sample'.

Other approvals

The Licence Holder has provided the following information relating to other approvals as outlined in Table 1.

Table 1: Relevant approvals

Legislation	Number	Approval
Local Planning approval – Shire of Carnarvon	N/A	Gazetial of the <i>Water Services Act 2012</i> (as gazetted on 18 November 2013) states a 'Development Approval' is not required for the proposed works at the premises. Section 137 of the <i>Water Services Act 2012</i> , identifies that Water Corporation (in its capacity as service provider) is exempt from the requirement to obtain development approvals for Public Service Works.
<i>Environmental Protection (Clearing of Native Vegetation) Regulations 2004</i>	Native Vegetation Clearing permit CPS185/7	Water Corporation has determined that under their Statewide vegetation clearing permit they are not required to obtain any further clearing permits for the clearing of 0.72 hectares of land within their Lot 1321 on Plan 193061 boundary.
Land ownership and infrastructure management - Shire of Carnarvon (Shire)	N/A	Water Corporation submitted a letter co-signed by A/ Chief Executive Officer, Mark Dacombe (Shire) and Manager Water Quality Branch, Rachael Miller (Water Corporation) confirming that Water Corporation will own, operate and maintain the filtration, disinfection and storage assets located on Lot 1321(Shire land) (See Appendix 1).

Location, environmental siting and potential receptors

Table 2 below lists the relevant sensitive land uses in the vicinity of the prescribed premises which may be receptors relevant to the proposed amendment.

Table 2: Receptors and distance from prescribed premises

Residential and sensitive premises	Distance from Prescribed Premises
Residential area	< 500 m south of the prescribed premises boundary

Table 3 below lists the relevant environmental receptors in the vicinity of the prescribed premises which may be receptors relevant to the proposed amendment.

Table 3: Environmental receptors and distance from prescribed premises

Environmental receptors	Distance from Prescribed Premises
Gascoyne River	Approximately 200 m north of the prescribed premises boundary

Risk assessment

The proposed changes are considered administrative and do not change the risk profile or rating of the premises, and do not pose any additional risk to the environment or human health.

The Delegated Officer has determined that no additional risk assessment is required as part of this amendment process.

Decision

The Delegated Officer has determined that the rectification of errors in the information submitted by Water Corporation for the upgrade of the reuse scheme infrastructure is administrative in nature.

The changes to the Licence do not pose any additional risk to the environment or to human health. The relevant changes that have been determined as appropriate by the Delegated Officer and have been defined within Attachment 2.

The proposed changes to the specific sections/ conditions within the Licence have been defined within the 'Amendment' section below, which includes:

- 1) One change within the 'amendment' in relation to point 1 of the requested amendments by Water Corporation. summary section

A change to the location of the new pump station was identified through the amendment process and has been updated to reflect it being outside of the premises boundary, and owned and managed by the Shire of Carnarvon.

The Delegated Officer considers this an administrative change to the Licence and is in accordance with DWER regulatory guidance.

- 2) One change within the 'Decision' summary in relation to point 3 of the requested amendments by Water Corporation. of the amendment

As a result of the change to point 1 above, the Decision summary has also undergone an administrative change to remove wording that is now incorrect in the location of the new pump station infrastructure.

- 3) Two changes within Table 1.2.1 in relation to points 2, 4 and 5 of the requested amendments by Water Corporation. The changes are as a result of an altered specification (process flow) and inclusion of pressure sensor monitoring system.

The Delegated Officer initially considered the construction of the earthen bunds as an appropriate mitigation measure proposed by Water Corporation in the event of an abnormal operation causing discharge from the premises as a result of pipework rupture/ failure. The earthen bunds were considered within the original amendment (Amendment Notice 1) as part of the risk assessment in relation to impacts to land, groundwater and surface water.

However, Water Corporation have since identified that the system incorporates pressure sensors which identify an increase or decrease in the infrastructure operation which triggers an alert sent to the operator to attend the site to undertake further investigations. The Delegated Officer considers this approach to be appropriate and adequate for the same purposes as intended through the use of earthen bunds. As a result the earthen bund mitigation measure within Table 1.2.1 has been replaced by the use of in-line pressure sensors.

- 4) Two changes within Table 1.3.3 in relation to point 6 and 7 of the requested amendments by Water Corporation. This is as a result of an altered specification (process flow).

The filtration and chlorination system and storage tank details have been updated due to error in details originally given. The change is considered administrative in nature and ensures that the Licence accurately reflects the activities being undertaken at the premises. The process had not been correctly defined previously.

- 5) One change within Table 3.3.1 in relation to point 8 of the requested amendments by Water Corporation. This is as a result of an altered monitoring frequency due to process design.

The monitoring frequency has been changed from continuous to spot sample. The

Amendment History

Table 6 provides the amendment history for L5976/1991/10.

Table 6: Licence amendments

Instrument	Issued	Amendment
L5976/1991/10	25/05/2017	Amendment Notice 1 – Upgrade of filtration and chlorination system and change to premises boundary.
L5976/1991/10	22/12/2017	Amendment Notice 2 – Amendment to undertake administrative changes to information errors submitted by Water Corporation.

Licence Holder's Comments

The Licence Holder was provided with the draft Amendment Notice on 14 November 2017. Comments were received from the Licence Holder, via email on 1 December 2017, and have been considered by the Delegated Officer as shown in Appendix 2.

Amendment

1. The 'Amendment' description section has been amended as shown in the red, italics text below:

The proposed infrastructure details upgrade will include:

- *Installation of a new pump station (located outside of the premises boundary, owned and managed by the Shire of Carnarvon);*
- *New filtration system;*
- *New Chlorinator (gaseous); and*
- *New tanks – 2 x 400kL (over flow to sump).*

2. The 'Decision' section paragraph has been amended as shown in the red, italics strike through text below:

Conditions 1.2.7 and 1.2.8 require the submission of a construction compliance document prior to operation of the premises upgrade and signed by an appropriate person. This will ensure that upgrades undertaken (~~installation of the irrigation area~~) are certified as having been constructed in accordance with the Licence requirements, and that the appropriate testing has been conducted by the proponent for inclusion within the compliance report document.

3. The Table 1.2.1 has been amended as shown in the red, italics and strike through text below:

Table 1.2.1:	Works specifications
Column 1	Column 2
Infrastructure	Specifications (design and construction)
Filtration and Chlorination system (See Map 3)	The Licensee must ensure that the filtration and chlorination area: 1. is contained within the premises boundary; 2. is not accessible to the public (non-operational staff) at any time; 3. is earthen bunded to mitigate against accidental discharge from the infrastructure under abnormal operating conditions incorporates pressure sensors on the inlet and outlet of the re-use infrastructure to indicate failures in the scheme infrastructure. The sensors must be connected to a remote communications alert system to notify the operator to attend to the site to address any fault; 4. has signage placed around the boundary of the premises identifying chlorination treatment of wastewater within the premises boundary; 5. includes the installation of a filtration unit, chlorination unit, 2 x 400 kL storage tanks, low permeability (concrete) overflow/ backwash sump/s and transfer pumps; 6. is linked via a pipeline network from WWTP final effluent pond 3 to Shire Storage Pond to Water Corporation Filtration, disinfection and storage tanks to Shire irrigation pump station to Shire managed irrigation areas from pond 3 only to receive wastewater for filtration and chlorination purposes prior to discharge to the Shire storage ponds, outside of the premises boundary; and 7. complies with Department of Health requirements.

4. Table 1.3.3 has been amended as shown in the red, italics and strike through text below:

Table 1.3.3: Containment infrastructure		
Vessel or compound	Material	Requirements
Inlet works	Screening	Stored in a sealed bin which is surrounded by a bunded hardstand area which returns sludge leachate to the start of the treatment process.
Pond 1 (aeration)	Wastewater	Clay lined to achieve a permeability of less than 10 ⁻⁹ m/s or equivalent.
Pond 2 (facultative maturation)	Wastewater	
Pond 3 (maturation)	Treated wastewater	
Infiltration area	Treated wastewater	Unlined, in-situ soils. Used in emergency events only.
Filtration and chlorination system	Treated wastewater	Filtration and gaseous chlorination of treated wastewater prior to discharge to Shire of Camarvon storage ponds for reuse. Wastewater from the Shire storage pond will be filtered and chlorinated and then pumped to the Water Corporations storage tanks prior to reuse off site.
Storage tanks	Treated wastewater	Holding tanks for the containment of overflow to sump. To achieve required chlorine contact time prior to irrigation off site.

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Sludge drying bed	Sewage sludge	Temporary or permanent infrastructure to consist of a bunded hardstand or lined area (lined to achieve a permeability of less than 10^{-9} m/s or equivalent), capable of preventing surface run-off of leachate and sludge and which includes a leachate collection system.
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5. Table 3.3.1 has been amended as shown by the red, italics and strike through text below:

Table 3.3.1: Monitoring of inputs and outputs					
Input/ Output	Monitoring point reference	Parameter ¹	Units	Averaging period	Frequency
Wastewater Treatment Plant - Inlet Flow	Inflow meter (M1 – S2042103)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Treated wastewater discharged to Shire of Carnarvon ponds	Outflow meter (M2 - S0037360)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Continuous
Treated wastewater discharged to on-site infiltration ponds	Outflow meter or mass balance calculation (M3)	Volumetric flow rate (cumulative)	m ³ /day	Monthly	Emergency/ abnormal events only
Treated wastewater discharged from pond 3 (post chlorination)	Final treated water discharge monitoring point	Chlorine	mg/L	Monthly	Continuous Spot sample

Appendix 1: Key Documents

	Document Title	In text ref	Availability
1	Licence amendment application – Carnarvon Wastewater Treatment Plant, received 8 September 2017.	L5976/1991/10 CEO2580/2017/1	DWER records (A1520880/ A1530232)
2	Licence amendment application – PM-#16370598-v1-Carnarvon WWTP - Re-Use Scheme Upgrade Approval Application - 2017	L5976/1991/10	DWER records (A1377434)
3	Email: Carnarvon reuse scheme - Letter to DWER re Licence amendment from Craig Chaudhry, 30/03/2017.	Project No. CS03208 (dated 14/3/17)	DWER records (A1406227) 'Infrastructure ownership and management.'
4	Email: FW: CS03208 Carnarvon Shire Reuse - Shire letter to support DWER licence amendment from Craig Chaudhry, 3/4/2017.	Shire of Carnarvon - Council Resolution (Ref. 5R0105)	DWER records (A1407182)
5	Email: Justification for the removal of earthen bunds, received from Craig Chaudhry, 2/11/2017.	-	DWER records (A1554361)
6	DWER, July 2015. <i>Guidance Statement: Regulatory principles.</i> Department of Environment Regulation, Perth.	DER 2015a	accessed at http://www.der.wa.gov.au
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 on draft

Comments received	Issue	DWER consideration of risk
Back Ground Section and Amendment Notice 1 Page 2	Incorrect information: The inlet pipe at the premises is fitted with a grit and screening facility and area is bunded. Note: There is no grit removal in the system	Amended/ Updated. The information has been updated to reflect the current operation of the facility. Reference to 'grit' has been removed from page 2 of the Amendment Notice.
Page 15, 4 Table 1.3.3 and Pages 15 and 16, 4 Table 1.3.4	Incorrect information: There are varying references to Pond 2 (facultative & maturation pond). There are two maturation ponds following the aeration pond. In the Amendment description section, the reference should be to two maturation ponds	Partial amendment. The information has been updated to reflect the current wording used for the operation of the facility, under this amendment submission. Reference to 'facultative' has been removed from page 15, Table 1.3.3 of the Amendment Notice and replaced with maturation. The current active Licence does not include a Table 1.3.4 or within page 16 of the proposed Amendment Notice, therefore no additional change is proposed.
There are many pages in the document where the reference to the Department is written as DER	Administrative change: The reference to the Department should be DWER	No change. The documents referred to under DER were published under Department of Environment Regulation.
Table 1.2.1	Works specification: Wording in Table 1.2.1 works specification 3 is too prescriptive and does not allow for modification during the construction process. The following wording is requested "remote monitoring and communications to ensure shutdown in event of failure."	The wording included within the proposed amendment was discussed and confirmed with the applicant to determine the current correct process operation. Should any change to the current operation occur in the future then the applicant has the ability to apply for an amendment (as per DWER procedures), and with consideration of s53 of the <i>Environmental Protection Act 1986</i> . The Delegated Officer has determined that the wording proposed is therefore accurate and reflects the current operation of the premises. No change to the wording is proposed.