



## Application for Licence Amendment

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

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<b>Licence Number</b>	L7738/2000/9
<b>Licence Holder</b>	Water Corporation
<b>ACN</b>	634 169 841
<b>File Number</b>	DEC1113/1~3
<b>Premises</b>	Margaret River Wastewater Treatment Plant Corner Long and Tare Roads BRAMLEY WA 6285  Legal description – Being Forest Lease 2112/97 and Part of State Forest No. 56 As defined by the Premises map in Schedule 1 of the Revised Licence
<b>Date of Report</b>	16 March 2026
<b>Decision</b>	Revised licence granted

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## 1. Decision summary

Licence L7738/2000/9 is held by the Water Corporation (Licence Holder) for the Margaret River Water Resource Recovery Facility (the Premises), located at the corner of Long and Tare Roads, Bramley WA 6285.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, Revised Licence L7738/2000/9 has been granted.

The Revised Licence issued as a result of this amendment supersedes the existing licence previously granted in relation to the Premises.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, 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>.

### 2.2 Background summary

Water Corporation was issued a Works Approval W5073/2011/1 for the Margaret River Water Resource Recovery Facility (Margaret River WRRF) on 3 February 2012 with an assessed design capacity of 3,000 m<sup>3</sup>. Compliance with W5073/2011/1 was confirmed by the Department on 5 November 2019.

On 24 October 2014 Licence L7738/2000/9 was issued with an initial assessed design capacity of 1,500 m<sup>3</sup> per day. On 2 October 2020 an amendment to the licence was granted for an interim increase in wastewater acceptance to 1,800 m<sup>3</sup> per day prior to a detailed application for licence review to increase to 3,000 m<sup>3</sup> per day.

### 2.3 Application summary

On 9 May 2025, the Licence Holder submitted an application to the department to amend Licence L7738/2000/9 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

The following amendments are being sought to increase assessed design capacity to 3,000 m<sup>3</sup> per day, update site surface water and ground water monitoring locations, and the addition of soil monitoring.

This amendment is limited only to changes to Category 54 activities from the existing licence. No changes to the aspects of the existing licence relating to Category 61 have been requested by the licence holder.

Table 1 below outlines the proposed changes to the existing licence.

**Table 1: Proposed design capacity changes**

Category	Current design capacity	Proposed design capacity	Description of proposed amendment
54: Sewerage facility	1,800 m <sup>3</sup> per day	3,000 m <sup>3</sup> per day	The Licence Holder has upgraded the existing wastewater treatment plant (WWTP) at the Premises, which has a design capacity of 3,000 m <sup>3</sup> per day

61: Liquid waste facility	1,000 tonnes per annual period	No change	N/A
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**Nutrient Irrigation Management Plan (NIMP)**

GHD (2025) prepared a NIMP for the Margaret River WRRF in accordance with Water Quality Protection Note 33. The plan outlines the operational controls for managing Treated Wastewater (TWW) irrigation at inflows of up to 3,000 m<sup>3</sup> per day and assesses the woodlot’s capacity to receive additional nutrient and hydraulic loading

Detailed nutrient fate and transport modelling considered irrigation area, inflow forecasts, vegetation characteristics, climate conditions, and soil properties. The modelling confirmed that the existing irrigation regime can accommodate the proposed inflow without causing surface runoff or significant nutrient export to groundwater. Nitrogen and phosphorus concentrations in potential leachate were found to remain below background groundwater quality and well within environmental guidelines and the proposed increase in design capacity also remains compliant with the existing licence limits of 90 kg/ha/yr nitrogen and 15 kg/ha/yr phosphorus.

A Conceptual Site Model (CSM), included in the NIMP, was developed to validate the modelling and review the adequacy of current monitoring coverage. The CSM identified the need for additional monitoring locations to address potential source–pathway–receptor linkages and ensure effective risk management under the proposed irrigation regime.

The applicant proposes to update the surface water monitoring program to include all five drainage lines across the northern (SW2, SW11, SW12) and southern (SW9, SW10) woodlots, as well as upstream and downstream locations on the Margaret River and Bramley Brook. The groundwater monitoring program will also be revised to include up-gradient, storage dam, and boundary locations to better assess groundwater quality.

In addition, a new soil monitoring program will be implemented to track changes in soil quality and nutrient levels across all soil types within the irrigation area.

**Technical Advice**

The departments contaminated sites technical experts advised that elevated nutrients and coliforms have been detected in nearby sensitive receptors including the Bramley Brook and Margaret River. On the 8 September the department requested further information from the applicant requiring the surface water and groundwater monitoring program to be updated to demonstrate that the irrigation scheme is not contributing to contaminant loads in the Bramley Brook and Margaret River. As a result, the applicant agreed to:

- add *Escherichia coli (E. coli)* to the groundwater monitoring program at a quarterly frequency
- add annual testing Aluminum, Arsenic, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Nickel, Potassium and Zinc to the final effluent, surface water and groundwater monitoring program at an annual frequency.

### 3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk assessments* (DWER 2020).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

#### 3.1 Source-pathways and receptors

##### 3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 2 below.

Table 22 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

**Table 2: Licence Holder controls**

Sources	Emission	Potential pathways	Proposed controls
Increase in wastewater discharge to storage dam and subsequent woodlot	Odour	Air / windborne pathway causing impacts to health and amenity	None proposed
	Discharge of treated wastewater	Localised contamination of soils causing infiltration into groundwater	Additional groundwater and surface water monitoring sites Addition of 5 yearly soil monitoring at 9 locations
	Spills/ unintended releases of untreated wastewater	Overland runoff, direct discharge and migration via soil to groundwater	Addition of <i>E. coli</i> parameter to groundwater monitoring Addition of annual metals monitoring in final effluent, surface water and groundwater monitoring program
Dam seepage	Discharge of treated wastewater	Localised contamination of soils causing infiltration into groundwater	

##### 3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 3 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)). Figure 1 shows the location of the Premises.

**Table 3: Sensitive human and environmental receptors and distance from prescribed activity**

<b>Human receptors</b>	<b>Distance from prescribed activity</b>
Residential Premises	200 m south of the premises
Margaret River airport	Adjacent east
<b>Environmental receptors</b>	<b>Distance from prescribed activity</b>
Margaret River surface water	50 m south of the premises boundary
Underlying groundwater	~4 mbgl on the premises
Bramely Brook creek	100 m west of the premises boundary
Keenan State Forest	Within premises boundary
Wooditjup National Park	Adjacent to south south-west boundary



**Figure 1: Distance to sensitive receptors**

## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

The Revised Licence L7738/2000/9 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

**Table 4: Risk assessment of potential emissions and discharges from the Premises during operation**

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder's controls				
<b>Operation</b>								
Increase in wastewater discharge to storage dam and subsequent woodlot	Odour	Air/windborne pathway causing impacts to health and amenity	Maragaret river airport (adjacent east) Residential Premises (200 m south)	Refer to Section 3.1	C = Minor L = Rare <b>Low Risk</b>	N/A	N/A	N/A
	Spills/unintended releases of untreated wastewater	Overland runoff, direct discharge and migration via soil to groundwater	Margaret River surface water (50 m south) Bramely Brook creek (100 m west) Underlying groundwater (~4 mbgl)	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	3 – 5, 7, 9 -13 and 16	N/A
	Discharge of treated wastewater	Localised contamination of soils causing infiltration into groundwater	Underlying groundwater (~4 mbgl)	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	3 – 5, 7, 9 -13 and 16	N/A

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

### 3.3 Detailed risk assessment of dam seepage

#### 3.3.1 Criteria assessment

The premises is located near the Bramley Brook creek and the Margaret River surface water system. Technical internal advice indicates elevated nutrient and coliform concentrations have been detected in nearby sensitive receptors, including Bramley Brook and the Margaret River. A potential source of these elevated contaminant levels is the treated wastewater storage dam, outlined in yellow in Figure 2. The storage dam is situated approximately 850 m east of Bramley Brook and 1.4 km north of the Margaret River.

Exceedances of relevant guideline assessment criteria in nearby surface waters and groundwater are of concern due to the recreational use of these water bodies and the potential for human exposure to contaminants.

Proposed groundwater, surface water, and soil monitoring locations are presented in Figure 2 below.

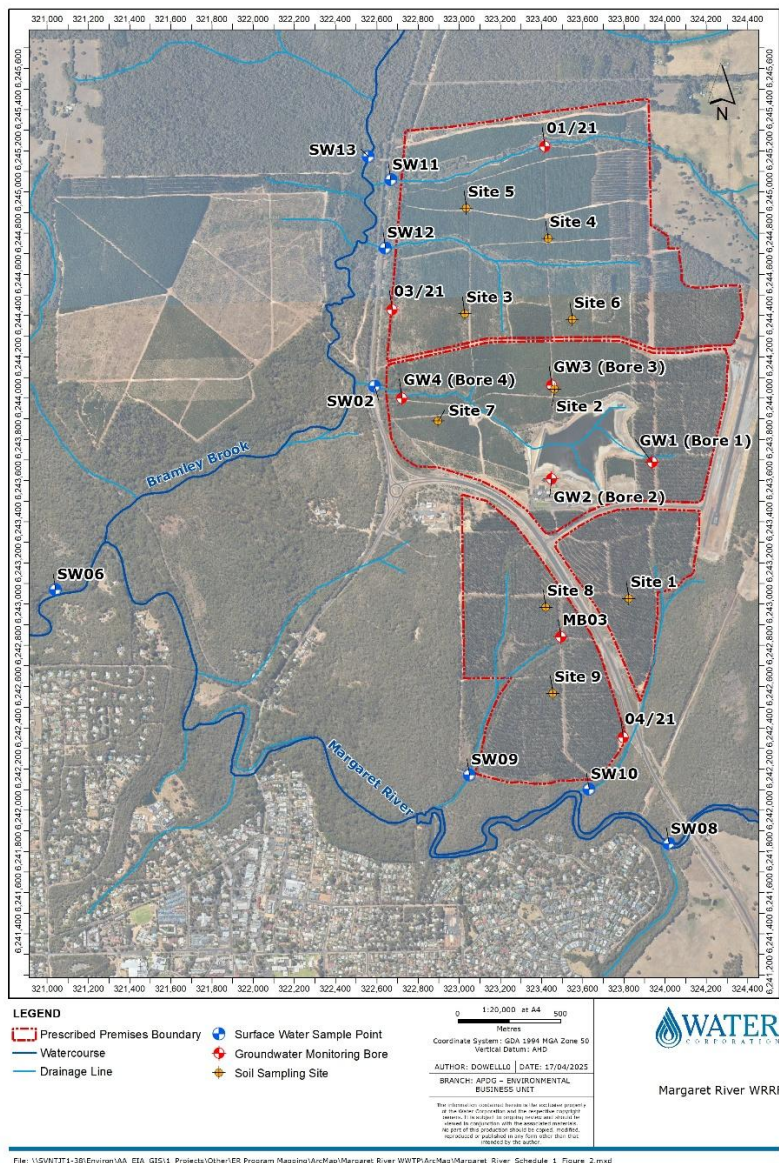


Figure 2: Monitoring network

### 3.3.2 Coliform sampling results

Escherichia coli (*E. coli*) concentrations in surface water monitoring sites from 2020 onwards range from <10 to 14,000 cfu/100mL across all monitoring sites. 10% to 53% of samples at all monitoring sites report exceedances of the Recreational Water Use and Livestock guidelines (both being 100 cfu/100 mL). The median does not exceed any guidelines except at SW05 site.

Water Quality Statistics	SW1A	SW1B	SW02	SW03	SW04	SW05	SW06	SW07	SW08	SW09	SW10
<i>E. coli</i> (cfu/100 mL) Water quality guideline values: 100 (non-potable / recreational); 100 (livestock)											
No. of samples	11	20	47	34	34	49	44	49	49	40	28
Minimum	10	10	<10	<10	<10	<10	<10	10	<10	<10	<10
Median	10	25.5	52	85	74.5	120	85	75	73	36	20
Maximum	580	6,500	4,100	4,600	1,900	9,200	1,200	14,000	1,500	1,300	460
Exceedances	27%	5%	36%	38%	47%	55%	45%	49%	41%	30%	14%

**Figure 3: *E. coli* surface water sample results**

As shown in Figure 4, *E. coli* concentrations in groundwater monitoring sites from 2020-2024 demonstrated zero exceedances of the Recreational Water Use and Livestock guidelines (both being 100 cfu/100 mL).

Water Quality Statistics	Bore 1/01	Bore 2/01	Bore 3/01	Bore 4/01	Bore 5/01
<i>E. coli</i> (cfu/100 mL) Water quality guideline values: 100 (recreational); 100 (livestock)					
No. of samples	17	17	15	17	17
Minimum	<10	<10	<10	<10	<10
Median	<10	<10	<10	<10	<10
Maximum	<10	10	75	10	<10
Exceedance	0%	0%	0%	0%	0%

**Figure 4: *E. coli* groundwater sample results**

### 3.3.3 Key findings

As part of the licence amendment application and subsequent request for further information, Water Corporation have proposed a detailed groundwater, surface water and soil monitoring program designed to demonstrate that operations at the WRRF are not contributing to elevated contaminant levels in nearby sensitive receptors, including Bramley Brook and the Margaret River.

Microbial indicators have been incorporated to verify that pathogen migration from the treated wastewater storage dam is not occurring. Coliforms, measured through the indicator species Escherichia coli (*E. coli*), will be monitored in surface water and final effluent as part of the amended licence conditions. Water Corporation has committed to including *E. coli* in the groundwater monitoring program at a quarterly frequency. This expansion in microbial monitoring provides a robust mechanism to detect any potential contamination pathways; however, current and historical monitoring results indicate minimal microbial impact attributable to the dam.

Additional monitoring for metals has also been proposed to confirm that the dam is not influencing groundwater or surface water chemistry. Metals will be included in final effluent, groundwater, and surface water sampling based on contaminants of potential concern.

Final effluent and surface water samples will be analysed for total metals, while groundwater samples will be analysed for dissolved (filtered) metals. Given the consistently low and stable

metals concentrations previously recorded across all media, annual monitoring is deemed sufficient to assess the potential risk.

The treated wastewater storage dam was constructed with an in-situ compacted clay liner, which provides a low-permeability barrier designed to minimise seepage. Long-term groundwater level monitoring from bores surrounding the dam demonstrates that groundwater contours and levels have remained stable since 2008. This stability indicates that the dam is not exerting hydraulic influence or causing mounding that would be expected if significant seepage were occurring. Similarly, groundwater contaminant concentrations measured in surrounding bores do not exhibit patterns or elevated levels that would indicate influence from the dam.

Finally, treated wastewater stored in the dam consistently meets the effluent quality limits specified under condition 2 of the existing licence.

### 3.3.4 Risk rating for dam seepage

Given the low nutrient content of the effluent, combined with the clay-lined construction of the dam, stable groundwater trends, distance from receptors and updated monitoring (Section 2.3), any potential dam seepage is not expected to negatively impact groundwater quality or contribute to nutrient enrichment in nearby waterways.

The CEO considers dam seepage could cause medium level offsite impacts at a local scale resulting in a **Moderate** consequence rating.

Considering factors such as the operator's controls and proximity to the Bramely Brook creek and Maragaret River surface water, the likelihood of a contamination event has been determined as **Unlikely** – i.e. the risk event could occur at some time in the future.

According to the risk rating matrix in the Guideline: Risk Assessments (DWER, 2020a), this corresponds to a **Medium** risk rating.

## 4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

**Table 5: Consultation**

Consultation method	Comments received	Department response
Local Government Authority advised of proposal 1 July 2025	The Shire of Augusta Margaret River did not respond for comment	N/A
Department of Health (DoH) advised of proposal 1 July 2025	DoH replied on 23 July 2025 stating no objection to the licence amendment	N/A
Department of Biodiversity, Conservation and Attractions (DBCA) advised of proposal 1 July 2025	DBCA replied on 23 July 2025 advising that: <ul style="list-style-type: none"> <li>The WRRF site is currently under CALM Act lease (2112/97) but will be excised from State forest and vested with Water Corporation, cancelling the lease</li> <li>Irrigation zones near creek-line vegetation must</li> </ul>	The department notes the DBCA comments and this information is provided to the applicant in this decision report. It is the applicant's responsibility to obtain relevant approvals under other legislation.

	<p>maintain buffers to avoid impact</p> <ul style="list-style-type: none"> <li>• Fire management accessways within and around woodlots are to be maintained by Water Corporation</li> <li>• Ground disturbance works require approval via DBCA's Disturbance Approval System (DAS) portal</li> </ul>	
Licence Holder was provided with draft amendment on 23 January 2026	Refer to Appendix 1	Refer to Appendix 1

## 5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

## 5.1 Summary of amendments

Table 6 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

**Table 6: Summary of licence amendments**

Condition no.	Proposed amendments
Cover page and 1	Increase design capacity from 1,800 to 3,000 m <sup>3</sup> per day
2, Table 2	Addition of WRRF as a re-use area for irrigation Updated wording of "Mechanical dewatering (belt press) of sludge" to Mechanical dewatering of sludge"
3	Addition of WRRF as a re-use area for irrigation
6	Updated wording of "licensed landfill facility" to "licensed facility"
9	Updated designated monitoring bores
12	Updated monitoring sites and frequency including addition of annual metals parameters monitoring for final effluent and groundwater bores
	Addition of Ammonium-Nitrogen and Nitrate + Nitrite-Nitrogen to surface water sites parameters
	Addition of <i>Escherichia coli</i> parameter to quarterly groundwater monitoring bores
	Addition of 5-yearly soil sampling monitoring
13	Updated designated monitoring bores
19	Updated monitoring reporting requirements for the environmental report
N/A	Updated Figure 2 - Map of groundwater, surface water and soil sampling site monitoring locations

## 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
Front Page	Date of issue in current licence states 24/10/2014. Date of issue in draft licence states 01/11/2013. Please change to correct date	Issue date on the existing licence is incorrect. Issue date of 01/11/2013 provided on the draft licence is correct. No change made.
2, Table 2	Remove belt press since it is no longer part of the process	Noted and updated
2, Table 2 and 3	Re-use water is also used for irrigation at the garden area at the WRRF. Update	Noted and updated
6	Change wording of "licensed landfill facility" to "licensed facility". Other disposal opportunities may arise in future (waste to energy for example)	Noted and updated
12, Table 3, Note 1	Soil sampling is measured in mg/kg. Add soil sampling to the exceptions	Noted and updated
19, Table 4	Amend bores to reflect proposed new program.	Noted and updated
Figure 2	Update Figure 2 with new Figure provided	Updated