



Application for Licence Amendment

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

| | |
|-----------------------|--|
| Licence Number | L9272/2020/1 |
| Licence Holder | Water Corporation |
| File Number | DER2020/000481 |
| Premises | Dardanup Wastewater Treatment Plant Banksia Road DARDANUP WA 6236 Legal description – Lot 20 on Deposited Plan 100642 Part of Lot 82 on Deposited Plan 403943 As defined by the Premises map and the coordinates in Schedule 2 of the Revised Licence |
| Date of Report | 23 April 2024 |
| Decision | Revised licence granted |

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A/MANAGER WASTE INDUSTRIES

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

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1. Decision summary

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during operation of the Premises. As a result of this assessment, Revised Licence L9272/2020/1 has been granted.

The Revised Licence issued as a result of this amendment consolidates and 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 Amendment summary

Licence L9272/2020/2 is held by the Water Corporation (Licence Holder) for the Dardanup Wastewater Treatment Plant (the Premises), located at Banksia Road, Dardanup. On 13 October 2023 the Licence Holder submitted an application to the department to amend Licence L9272/2020/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

The Licence Holder complied with the requirements of Improvement Condition IR1 to prepare and submit to the CEO, a report that includes:

- a decision on whether the storage pond will be repaired or decommissioned;
- specific actions to achieve the proposed decision; and
- a timeframe for the completion of the specific actions.

The Licence Holder conducted an investigation into the importance of the storage pond to satisfy the requirements of Improvement Condition IR1 and found the presence and operation of the storage pond made no difference to the operation of the WWTP system or the potential environmental impacts. Therefore the Licence Holder made the decision that the storage pond will be decommissioned, the scheduling of which will be made in line with other capital projects.

The existing licence was tailored to the prescribed activities as advised by the Licence Holder in 2020, whereby it was assumed treated wastewater was being disposed of to a channel for the purposes of irrigating the 22 ha tree lot. However, the investigations detailed in the report *Dardanup Wastewater Treatment Plant: Treated Wastewater Management Plan* (EEI 2023) to satisfy Improvement Condition IR2 of the existing licence, concluded that treated wastewater was actually disposed of into the channel for the purpose of infiltration.

As such, the report by EEI (2023) provided a description of the environmental siting for the infiltration area, as opposed to the irrigation area, required by Improvement Condition IR2.

In addition, the clarification that treated wastewater is disposed of by infiltration has prompted the Licence Holder to request that the licence be administratively updated to accurately represent the treated wastewater management activities occurring at the premises. It is noted that there is no actual alteration to the operations occurring at the premises. The proposed amendments include:

- Amendment to the wording of a number of conditions to accurately reflect the discharge of treated wastewater to an infiltration channel;

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- Amendment to the wording of a number of conditions and definitions to reflect the newly undertaken *Dardanup Wastewater Treatment Plant: Treated Wastewater Management Plan* (Environmental Engineers International, 2023);
- Removal of improvement condition 12 for IR1 and IR2, as these requirements have been satisfied.
- Removal of Biological Oxygen Demand (BOD) and total suspended solids from the parameters required to be regularly monitored in groundwater.
- Amendment to the environmental reporting requirements including:
 - (a) Removal of the need to provide copies of laboratory samples analysis reports for process monitoring and groundwater monitoring;
 - (b) Removal of loading limits from process monitoring and groundwater monitoring;
 - (c) to provide nutrient and contaminant loading monthly and annual average data in kg/day and kg/yr, not kg/ha/day and kg/ha/yr as currently shown on the licence; and
 - (d) removal of the need to include compliance documentation.

2.2.1 Hydrological Balance and Modelling Results

To ensure there was no ongoing risk of surface water runoff, EEI (2023) modelled the system for both the current operation using 2022 flow data and the assumed future capacity of 165 m³ per day. Due to uncertainties arising from the cross-sectional area of the infiltration channel, three different cross-sectional shape assumptions were used for the hydrodynamic model; elliptical, trapezoidal, and rectangular. The calculated worst-case scenario maximum volume of water that requires disposal by infiltration is 2,800 m³. In all three modelled channel shapes, the channel was able to contain and infiltrate treated wastewater for the full design capacity of 165 m³ year-round with no overflow predicted, even in winter. The average water level within the infiltration channel should be within the range of 0.32 – 0.59 m for the 2022 flow rates and 0.61 – 0.83 m for the expected future flowrate.

The modelled results suggested that the infiltration channel was capable of holding the excess water from a 1 in 10-year storm event over 72 hours. This was modelled with both the 2022 ODSS data and the expected future capacity of 165 kL/day.

Soil capacity was calculated to determine if the water within the infiltration channel would lead to swelling or discharge into the perched aquifer. The analysis determined the soil was able to hold 97% of the wastewater infiltrated.

2.2.2 Nutrient Loading and Groundwater Analysis

The woodlot received a calculated total nitrogen loading of 34.8 kg/ha/year and total phosphorus loading of 12.9 kg/ha/year in 2022. In the future this could increase to 103.9 kg/ha/year and 26.0 kg/ha/year of total nitrogen and total phosphorus respectively if the licence limit capacity of 165 kL/day is reached.

Groundwater analysis of the premises from available monitoring bore data suggests the infiltration channel does not impact the downgradient groundwater quality. Nutrient concentrations were higher in the upgradient monitoring bores installed at the perched aquifer, suggesting the groundwater quality in the superficial regional aquifer is being impacted by off-site sources and improves with travel along the flow path due to natural attenuation, plant uptake and/or mixing processes.

Comparison of nutrient concentrations from the bores at different depths found that nutrient impacts in the groundwater did not extend deeper into the superficial regional aquifer.

2.2.3 Short – and Long – Term Environmental Implications

Given the groundwater nutrient analysis and hydrological modelling results, EEI (2023) concluded it is not expected that there is likely to be short- or long-term environmental implications from the current TWW disposal method. The analysis from the groundwater monitoring suggests the usage of the infiltration channel is unlikely to lead to changes in the background environmental setting.

The key conclusion of the EEI (2023) report is that modelling suggests there will be no significant changes to the long-term environmental setting of the premises. The report demonstrates that the current infiltration channel can manage the disposal hydraulic loading from the Dardanup WWTP.

The report recommended three additional activities to the current maintenance scheme:

1. Regular inspection of the condition of the infiltration channel, vegetation/reeds found to be growing in the channel must be physically removed;
2. The depth of the channel should be measured annually, with a minimum channel depth of 1.6 metres from the ground level to be maintained across the channel to ensure no overflow from the channel occurs; and
3. The channel embankment height should be kept at least 300 mm from the ground level to prevent surface run off entering the channel.

This amendment is limited only to accurately reflect the disposal of treated wastewater via infiltration and associated maintenance of the channel infrastructure. Table 1 below outlines the approved design capacity as approved under the Existing Licence. This capacity and the current treatment and disposal methods are not proposed to be altered.

Table 1: Approved design capacity

| Prescribed Premises category description (Schedule 1, <i>Environmental Protection Regulations 1987</i>) | Assessed design capacity |
|---|----------------------------|
| Category 54 sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters. | 165 m ³ per day |

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 2 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 |
|--|--------------------|-----------------------------------|---|
| Disposal of treated wastewater via infiltration | Treated wastewater | Infiltration through soil profile | <p>The soil capacity analysis determined the soil was able to hold 97% of the wastewater infiltrated.</p> <p>Groundwater analysis of monitoring bore data suggests the infiltration channel does not impact the downgradient groundwater quality.</p> <p>Comparison of nutrient concentrations from groundwater bores at different depths found that nutrient impacts did not extend deeper into the superficial regional aquifer.</p> <p>Groundwater will continue to be monitored on a quarterly basis.</p> |
| Overflow of treated wastewater from the irrigation channel | Treated wastewater | Overland flow | <p>Hydrological water balance modelling for current and projected flows of treated wastewater show the infiltration channel is able to contain the treated wastewater throughout the year with no overflow even in winter.</p> <p>Three maintenance controls are proposed to mitigate overland flow:</p> <ul style="list-style-type: none"> (a) Regular inspection of the infiltration channel with removal of emergent vegetation; (b) Channel depth to be measured annually and maintained at a depth of 1.6 m from surrounding ground level; and (c) Channel embankment height to be maintained at least 300 mm from surrounding ground level to prevent stormwater run off entering the channel. |

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 receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

Table 3: Sensitive human receptors and distance from prescribed activity

| Human receptors | Distance from prescribed activity |
|----------------------|---|
| Residential Premises | <ul style="list-style-type: none"> • 1.2 km south west of the premises boundary. • 1.3 km west of the premises boundary. • 1.3 km north west of the premises boundary. • 1.5 km north west of the premises boundary. • 1.8 km south west of the premises boundary. |

Table 4 below provides a summary of 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)).

Table 4: Sensitive environmental receptors and distance from prescribed activity

| Environmental receptors | Distance from prescribed activity |
|--|---|
| DBCA managed lands | <ul style="list-style-type: none"> • Dardanup Conservation Park located 600 m south and 1.1 km east of the Premises. • Boyanup State Forest located approximately 1.3 km south and 1 km east of the Premises. |
| Groundwater sources | <ul style="list-style-type: none"> • Immediately adjacent to, and outside of, the Bunbury Groundwater Area. • It is understood that the regional superficial aquifer is present within the Yoganup geological formation between 20 m to 30 m below ground level. • Depth to groundwater measured in bores located on the premises is variable and has been measured at 8.5 m below ground level. It is also possible that these measurements represent perched aquifers that are known to occur in the regional area. Depth to the perched aquifer system has been observed as high as 0.72 m below ground level below the Premises. • Groundwater direction has been observed to flow north west in winter and moves to a north-north-west direction in summer . • The confined Leederville aquifer has been encountered at the site between 35 mbgl and 40 mbgl. Groundwater flows in a northwest direction. |
| Beneficial uses of groundwater | <ul style="list-style-type: none"> • The Priority 1 groundwater protection zone for the Dardanup Water Reserve is located 2.4 km north west, and the Priority 2 zone is located 2.2 km north west of the Premises boundary. • Approximately 41 bores are located within 3km of the Premises. Water abstracted from these bores are used for such purposes as: <ul style="list-style-type: none"> ○ Stock watering; ○ Dairy purposes; ○ Irrigation of pasture; and ○ Domestic use. |
| Surface water sources | <ul style="list-style-type: none"> • Crooked Brook, a minor, non perennial water course, is located 1.3 km south. • Preston River is located 2.5 km south west. |
| Threatened and Priority Ecological Communities | <ul style="list-style-type: none"> • The Priority 3 ecological community ‘Banksia Dominated Woodlands of the Swan Coastal Plain’ occurs adjacent to the south western corner of the Premises and also to the west of the Premises on the opposite side of Banksia Road. • The Priority 1 ecological community ‘Dardanup Jarrah and Mountain Marri woodland on laterite’ occurs within the Dardanup Conservation Park located 600 m south of the Premises. |
| Threatened and Priority Flora | <ul style="list-style-type: none"> • One critically endangered flora species, one vulnerable flora species, one priority 1 flora species, one priority 3 flora species and two priority 4 flora species have been located within 2 km of the Premises boundary. |
| Threatened and Priority Fauna | <ul style="list-style-type: none"> • One critically endangered species of mammal, two endangered species of bird, one vulnerable species of bird, one priority 4 mammal species and one specially protected mammal species have been located within 2 km of the Premises boundary. |

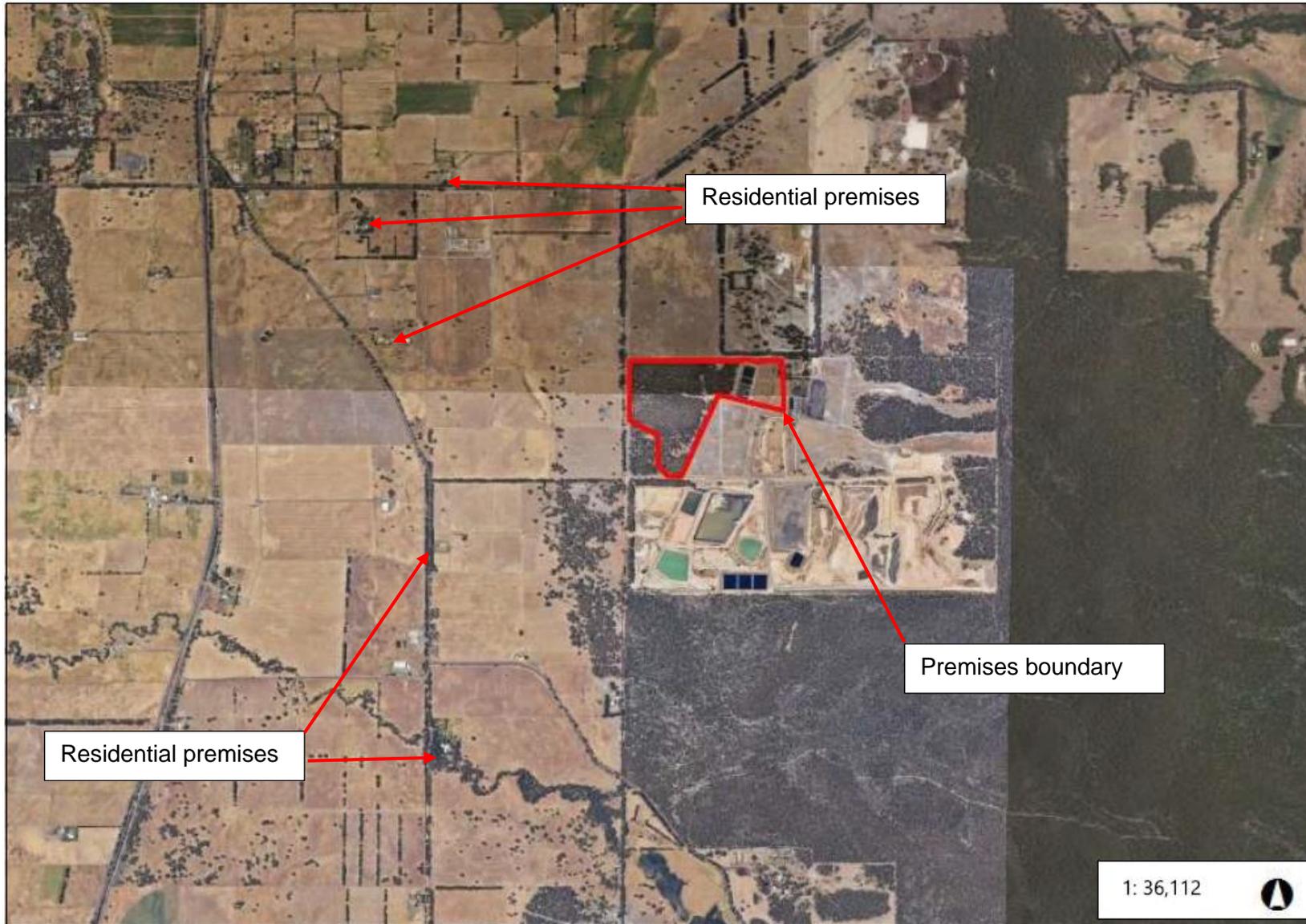


Figure 1: Distance to sensitive receptors

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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 in-complete 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 5.

The Revised Licence L9272/2020/2 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 5. Risk assessment of potential emissions and discharges from the Premises during operation

| Risk Event | | | | | Risk rating ¹ C = consequence L = likelihood | Licence Holder's controls sufficient? | Conditions ² of licence | Justification for additional regulatory controls |
|---|--------------------|--|--|---------------------------|---|---------------------------------------|--|---|
| Source / Activities | Potential emission | Potential pathways and impact | Receptors | Licence Holder's controls | | | | |
| Operation | | | | | | | | |
| Disposal of treated wastewater via infiltration | Treated wastewater | Infiltration through soil profile impacting soil health, vegetation health, degradation of groundwater quality | Beneficial uses of groundwater Threatened and Priority flora and ecological communities adjacent to and south of the premises | Refer to Section 3.1 | C = Slight L = Unlikely Low Risk | Yes | Conditions 4, 5, 9, 10 <u>Conditions 1, 16</u> | <p>The Delegated Officer notes infiltration is the accurate description of the disposal method for treated wastewater. While the actual method of discharge of treated wastewater has not been altered, the incorrect description of the disposal method of irrigation was previously risk assessed.</p> <p>The outcomes of the EEI (2023) report indicate that subsurface seepage of treated wastewater would result in minimal onsite impacts and minimal amenity impacts.</p> <p>The Delegated Officer has added new conditions and modified existing conditions for management of infiltration activities and infrastructure and deleted conditions relating to irrigation.</p> |

| Risk Event | | | | | Risk rating ¹ C = consequence L = likelihood | Licence Holder's controls sufficient? | Conditions ² of licence | Justification for additional regulatory controls |
|--|--------------------|--|---|---------------------------|---|---------------------------------------|------------------------------------|---|
| Source / Activities | Potential emission | Potential pathways and impact | Receptors | Licence Holder's controls | | | | |
| Overflow of treated wastewater from the irrigation channel | Treated wastewater | Overland flow causing localized flooding and impacting surface water quality | Surrounding land Surface water sources | Refer to Section 3.1 | C = Minor L = Rare Low Risk | Yes | <u>Condition 1</u> | The Delegated Officer notes the findings of the Treated Wastewater Management Plan (EEI 2023) and shall implement the requested maintenance controls as proposed to mitigate the risk of overland flow from the infiltration channel. Conversely, as irrigation is not applicable, the Delegated Officer has deleted operational and processing requirements relating to irrigation of the tree lot. |

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.

4. Assessment of Licence Holder's request to amend conditions

The licence requires ongoing monitoring of various parameters in groundwater from the bore network that surrounds the premises, to identify contamination of groundwater indicative of subsurface seepage from treatment ponds. The Licence Holder has requested the removal of total suspended solids and BOD as these parameters are not contaminants of concern in groundwater and don't pose a risk to down-hydraulic gradient receptors.

Given the treated wastewater filters through the soil medium before reaching groundwater, the Delegated Officer considers that any suspended solids would likely have filtered out beforehand. As this parameter does not provide relevant data for groundwater sampling, total suspended solids will be deleted from the licence condition.

The Delegated Officer considers BOD to be a key early indicator of organic related contamination in groundwater. As organic matter increases, more oxygen is required to be used to break it down. Changes in groundwater due to wastewater intrusion presents as changes in geochemical parameters (oxygen, pH, redox etc) earlier than contaminants of potential concern (nitrogen, phosphorus) as nutrients are consumed or bound up in the process. Therefore, the nutrient load in treated wastewater entering groundwater needs to reach a high load before it identifies in samples. Further, the premises is located in proximity to suitable laboratories to meet the required 48 hour holding time for BOD analysis. As this parameter provides relevant data for groundwater sampling, BOD will be retained in the licence condition.

The Delegated Officer requires the provision of copies of laboratory sample analysis reports to validate that the Licence Holder has correctly sampled, analysed and reported on process and groundwater monitoring. Given the risk of disposal of treated wastewater via infiltration poses a low risk of impacts occurring to soil health, vegetation health and degradation of groundwater quality, the Delegated Officer considers it satisfactory that the Licence Holder provides the laboratory reports if requested by DWER. Further, condition 13 requires the Licence Holder to maintain accurate and auditable books including, but not limited to, information, reports and data applicable to monitoring programmes undertaken in accordance with condition 9 for process monitoring and condition 10 for groundwater monitoring, ensuring the laboratory reports will be retained should DWER require them for validation purposes.

The licence requires reporting of loading limits for process monitoring and groundwater monitoring. The Licence Holder has requested loading limits be removed based on the recommendations of the management plan (EEI 2023). The Delegated Officer considers loading limits are not appropriate when monitoring ambient groundwater quality. The Delegated Officer notes the licence does not include conditioned limits, therefore the reporting of loading limits is not applicable. The reporting requirements for loading limits will be deleted.

The licence requires reporting of nutrient and contaminant loading rates on a kg/ha/day and a kg/ha/year basis. The Licence Holder has requested that the loading rates are modified to be kg/day and kg/year, based on the recommendations of the management plan (EEI 2023). The Delegated Officer agrees with the findings of the management plan, in that loading limits and loading rates on a kg/ha/day and a kg/ha/year basis are only applicable where treated wastewater is disposed of by irrigation, therefore these portions of the reporting condition will be deleted. Alternatively, the modified loading rates for kg/day and kg/year are more appropriate for discharge to an infiltration channel, therefore the requirement to calculate this data on a quarterly and annual basis will be added to the requirement to report against process monitoring, under condition 9.

The requirement to provide compliance documentation with the environmental report will be deleted as the existing licence includes a standalone condition requiring submission of the Annual Audit Compliance Report.

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5. Consultation

Table 6 provides a summary of the consultation undertaken by the department.

Table 6: Consultation

| Consultation method | Comments received | Department response |
|---|--|---|
| Local Government Authority advised of proposal (20/12/2023) | <p>The Shire of Dardanup provided comments on 18/01/2024 advising they have no objection to the proposal subject to:</p> <ul style="list-style-type: none"> • Operation is to be in accordance with the relevant components of the <i>DWER Odour Emissions Guideline</i> (2019); and • Proposed infrastructure is to be installed and operated in accordance with the requirements of the Department of Water and Environmental Regulation (DWER) licence conditions (Licence No: L9272/2020/1). <p>Further information was provided:</p> <ul style="list-style-type: none"> • The land is reserved for 'Public Purposes – Public Utilities' under the Greater Bunbury Region Scheme; • The land does not have a Local Planning Scheme zone currently under Local Planning Scheme No.3; and • The land has been included in draft Local Planning Scheme No.9 as 'Special Control Area 6 (SCA6) - Wastewater treatment plant buffer area', the purpose of which is to identify buffer areas for infrastructure facilities and prevent land use conflict. | <p>There are no alterations to the operations occurring at the premises, therefore the risk profile for odour has not changed. Subsequently odour was not risk assessed as part of this amendment.</p> <p>This amendment application does not include the construction of new infrastructure at the premises.</p> |
| Direct interest stakeholders advised of proposal (23/01/2024) | None received | N/A |
| Licence Holder provided with draft amendment (08/03/2024) | The Licence Holder provided comments on 27 March 2024, which are summarised in Appendix 1. The Licence Holder was provided with alternative draft conditions on 17 April 2024 which were accepted that day, and on 22 April 2024 which were accepted that day. | See Appendix 1. |

6. 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.

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6.1 Summary of amendments

Table 7 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 7: Consolidation of licence conditions in this amendment

| Condition no. | Previous condition no. | Proposed amendments |
|-------------------------|-------------------------|--|
| Cover page | Cover page | Deletion of incorrect ACN. |
| Condition 1 Table 1 | Condition 1 Table 1 | Amendment of the name of the irrigation area to infiltration channel. Addition of operational requirements relating to the irrigation channel. Deletion of operational requirements relating to the irrigation area, as they are no longer applicable. Amendment of the name of the discharge pipe, in that it discharges to the infiltration channel. |
| Condition 4 Table 3 | Condition 4 Table 3 | Amendment of the process for treated wastewater to be disposal via infiltration, not irrigation. Addition of process requirements relating to the infiltration channel. Deletion of process requirements relating to the irrigation area, management in accordance with the NIMP, sampling, groundwater monitoring and soil sampling, as they are no longer applicable. |
| Condition 8 Table 4 | Condition 8 Table 4 | Incorporation of the requirements of Note 1 into the monitoring point reference of Table 4, and updated the monitoring point references to refer to Figure 4 for the schematic diagram. |
| Condition 9 Table 5 | Condition 9 Table 5 | Incorporation of the requirements of Note 1 into the monitoring point reference of Table 5, and updated the monitoring point references to refer to Figure 4 for the schematic diagram. |
| N/A | Condition 10 | Deletion of the condition as calculations for contaminant loading relate to disposal of TWW by irrigation. |
| Condition 10 Table 6 | Condition 11 Table 6 | Deletion of the requirement to monitor for total suspended solids in groundwater. Updated the monitoring point references to refer to Figure 3 for the locations of the groundwater monitoring bores. |
| N/A | Condition 12 Table 7 | Deletion of improvement conditions IR1 and IR2, as Licence Holder has satisfied these requirements. |
| Condition 13 | Condition 15 | Update to condition words to accurately reflect the new condition numbers. |

| Condition no. | Previous condition no. | Proposed amendments |
|-------------------------|-------------------------|--|
| Condition 14 | Condition 16 | Update to condition words to accurately reflect the new condition number. |
| Condition 15 Table 7 | Condition 17 Table 8 | Update to condition words to accurately reflect the new table number. |
| Condition 16 Table 8 | Condition 18 Table 9 | <p>Update to condition words to accurately reflect the new table number.</p> <p>Update to condition numbers listed in Table 8 to accurately reflect the new condition numbers being referred to.</p> <p>Deletion from the reporting requirements for condition 9, to remove the requirement to determine loading limits, which is not applicable for disposal of treated wastewater by infiltration, and the requirement to provide laboratory sample analysis reports.</p> <p>Addition to the reporting requirements for condition 9, to include quarterly and annual average data in kg/day and kg/year for each contaminant (excluding pH and <i>E. coli</i>) in treated wastewater discharged to the infiltration channel.</p> <p>Deletion of the requirement to report on condition 10, as this condition has been deleted from the licence.</p> <p>Deletion from the reporting requirements for condition 10 (previously condition 11), to remove the requirement to determine loading limits, which is not applicable for monitoring of groundwater quality, and the requirement to provide laboratory sample analysis reports.</p> <p>Deletion of the requirement to report on condition 14, as compliance is adequately managed via condition 12.</p> |
| Definitions Table 9 | Definitions Table 10 | <p>Deletion of Annual Audit Compliance Report, Dardanup Wastewater Treatment Plant Nutrient and Irrigation Management Plan 2012.</p> <p>Addition of monthly period.</p> |
| Schedule 1 Figure 2 | N/A | Addition of Figure 2 depicting the location of the irrigation channel. |
| Schedule 1 Figure 3 | Schedule 1 Figure 2 | Update to Figure 3 to accurately reflect the new figure sequence. |
| Schedule 2 Table 10 | Schedule 2 Table 11 | Update to condition words to accurately reflect the new table number. |
| Schedule 3 | Schedule 3 | Update of the schematic map to accurately reflect operations at the premises with the removal of the storage |

| Condition no. | Previous condition no. | Proposed amendments |
|---------------|------------------------|--|
| Figure 4 | Figure 4 | pond. Update to Figure 4 to accurately reflect the new figure sequence. |

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.
4. Environmental Engineers International 2023, *Dardanup Wastewater Treatment Plant: Treated Wastewater Management Plan*, 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 Table 1 | <p>Deletion of the requirement to maintain the depth, width and length dimensions of the infiltration channel.</p> <p>Replace with infiltration channel must be maintained to optimise infiltration performance.</p> | <p>The dimensions of the infiltration channels were obtained from the EEI report lodged in support of the application. Given the Licence Holder has requested to alter their disposal method from storage with staged infiltration, to direct infiltration, it is crucial to the operation of the plant that the infiltration channels are capable of disposing of all the treated wastewater potentially produced.</p> <p>Furthermore, overflows from the irrigation channel are to be mitigated. Section 6 of the EEI report presents hydraulic modelling to determine if the infiltration channels contain sufficient volume to accept the full design capacity of the plant (+ rainfall - evaporation) year-round without overflow events. Although the shape of the infiltration channels is unknown (ellipse, trapezoid, rectangle), the dimensions of the channels were measured and included in these calculations. It was determined that the channels could adequately accept the worst-case scenario maximum volume of 2,800 m³ for infiltration, without overflows.</p> <p>While the Delegated Officer does not expect the applicant to maintain the exact shape of the infiltration channels, there is the expectation that the integrity of the channel is maintained to ensure the channel volume continues to be adequate for disposal of the full design capacity of the plant.</p> <p>The condition has been amended to remove the minimum length, width and depths of the northern and southern arms of the infiltration channel, and replace it with being capable of containing 2,800 m³ of treated wastewater.</p> <p>For consistency, section 2.2.1 of the Amendment Report has been amended to specify this decision.</p> |

| Condition | Summary of Licence Holder's comment | Department's response |
|-------------------------|---|--|
| Condition 9 Table 5 | Reference to table note for pH is incorrect. | Reference corrected. |
| Condition 10 Table 6 | Deletion of the parameter total suspended solids from groundwater monitoring as it is not a suitable analyte for groundwater assessments. | Total suspended solids was proposed for deletion in the draft licence package. This parameter will remain deleted. |
| Condition 16 Table 8 | <p>The Licence Holder understands the need to be able to validate the data presented in Environmental Reports to laboratory reports, however given their internal risk rating procedure lists Dardanup WRRF as a low risk premises, we would prefer the provision of laboratory reports is on an as-needs basis when DWER considers the environmental report requires validating.</p> <p>The Licence Holder receives all laboratory reports in hard copy, therefore they are not easily accessible for inclusion with the computer generated environmental report. These laboratory reports are retained, so are available should they be required.</p> | <p>As discussed in section 4 of the Amendment Report, the Delegated Officer requires the provision of copies of laboratory sample analysis reports to validate that the Licence Holder has correctly sampled, analysed and reported on process and groundwater monitoring.</p> <p>Given the risk of disposal of treated wastewater via infiltration poses a low risk of impacts occurring to soil health, vegetation health and degradation of groundwater quality, the Delegated Officer considers it satisfactory that the Licence Holder retains the laboratory reports as required by condition 13 and provides them if requested by DWER.</p> <p>Condition 16, Table 8 has been amended. Section 6.1, Table 7 of the Amendment Report has been amended to formally record this change.</p> <p>For consistency, section 4 of the Amendment Report has been amended to include this discussion.</p> |
| Schedule 1 | Figure numbers are incorrect, plus cross-referencing within conditions. | Figure numbers and cross-referencing corrected. |

Appendix 2: Application validation summary

| SECTION 1: APPLICATION SUMMARY | | | | |
|---|---|---|--------------|--------------------------|
| Application type | | | | |
| Amendment to licence | <input checked="" type="checkbox"/> | Current licence number: | L9272/2020/1 | |
| | | Relevant works approval number: | N/A | <input type="checkbox"/> |
| Date application received | 13 October 2023 | | | |
| Applicant and Premises details | | | | |
| Applicant name/s (full legal name/s) | Water Corporation | | | |
| Premises name | Dardanup Wastewater Treatment Plant | | | |
| Premises location | Lot 20 of D100642 Part of lot 82 on DP403943 Banksia Road, Dardanup | | | |
| Local Government Authority | Shire of Dardanup | | | |
| Application documents | | | | |
| HPCM file reference number: | DER2020/000481 | | | |
| Key application documents (additional to application form): | Attachment 1- EEI 2023 – Dardanup TWW Management Plan Attachment 2 – WC.Dardanup-WWTP technical Advice Attachment 3- Dardanup WWTP- Supporting information. Cover letter | | | |
| Scope of application/assessment | | | | |
| Summary of proposed activities or changes to existing operations. | <p>The Water Corporation decided to decommission the storage pond in WWTP system. This decommissioning activity has met Improvement Requirement 1 (IR1) of Condition 12.</p> <p>Also, the Department received the treated wastewater management plan, fulfilling the Improvement Requirements (IR2) of condition 12 on April 14, 2023.</p> <p>This licence amendment application was submitted to update all licence conditions to reflect the current operation activities within the premises and remove improvement requirements of condition 12 from the current licence.</p> | | | |
| Category number/s (activities that cause the premises to become prescribed premises) | | | | |
| Table 1: Prescribed premises categories | | | | |
| Prescribed premises category and description | Assessed production or design capacity | Proposed changes to the production or design capacity (amendments only) | | |
| Category 54 Sewage facility: premises – (a) on which sewage is treated (excluding septic tanks); or (b) from which treated sewage is discharged onto land or into waters. | 165 m ³ per day | No change to the assessed design capacity | | |

| Legislative context and other approvals | | |
|--|---|---|
| Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Does the applicant hold any existing Part IV Ministerial Statements relevant to the application? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Has the proposal been referred and/or assessed under the EPBC Act? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Has the applicant demonstrated occupancy (proof of occupier status)? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Has the applicant obtained all relevant planning approvals? | Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> | |
| Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal? | Yes <input type="checkbox"/> No <input type="checkbox"/> | |
| Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Is the Premises situated in a Public Drinking Water Source Area (PDWSA)? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i>) | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Is the Premises within an Environmental Protection Policy (EPP) Area? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Is the Premises subject to any EPP requirements? | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | |
| Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ? | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | Classification: possibly contaminated – investigation required (PC–IR) Date of classification: May 28, 2014 12:00 AM |