Government of Western Australia
Department of Water and Environmental Regulation

Amendment Report

Application for Licence Amendment

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

Licence Number	L8050/1991/4
Licence Holder	Water Corporation
ACN	28 033 434 917
File Number	2010/003526-1~6
Premises	Jurien Bay Wastewater Treatment Plant Victoria Location 11300 (Crown Reserve 40417) Airstrip Road JURIEN BAY WA 6516 Legal description – Lot 11300 on Deposited Plan 185509 As defined by the Premises map attached to the Revised Licence
Date of Report	22 August 2024
Decision	Revised licence granted

Grace Heydon

Digitally signed by Grace Heydon
Date: 2024.08.22 13:15:50 +08'00'

Grace Heydon
A/MANAGER WASTE INDUSTRIES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Table of Contents

1. Decision summary

Licence L8050/1991/4 is held by the Water Corporation (licence holder) for the Jurien Bay Wastewater Treatment Plant (the premises), located at Lot 11300 (Crown Reserve 40417) Airstrip Road, Jurien Bay.

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 L8050/1991/4 has been granted.

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 Application summary

On 30 January 2024, the licence holder applied to the department to amend Licence L8050/1991/4 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The requested amendments to the licence, and the Delegated Officers response to these requests are set out in

Table **1** below.

Table 1: L8050/1991/4 requested amendments to conditions.

Condition	Requested modification	Justification
1, Table 1: Waste Acceptance.	Request that the time period to receive D300 non-toxic salt waste at premises is removed from the condition, and the Category 61 waste (waste code D300) remains on the licence with a restriction only on the quantity to be accepted.	Licenced disposal of saline waste has occurred at the Jurien Bay Wastewater Treatment Plant (the site) periodically since April 2021. This saline waste is generated from desalination of groundwater for potable supply to the town of Jurien Bay. The need for saline RO wastewater at the premises is ongoing. A Jurien Bay Wastewater Treatment Plant– Review of Operational Data and Groundwater Assessment (Water Corporation, 2024), and Desktop and field assessment for subterranean fauna for the Borefield and Waste Water Treatment Plant upgrade – Jurien Bay, Western Australia. October 2023 (Invertebrate Solutions, 2023) were provided in support of application.

7.	Deletion of Condition 7 relating to premises security.	The security measures prescribed on Condition 7 on site are unrelated to an environmental outcome. Water Corporation is licenced to operate a WWTP and discharge treated wastewater to a prescribed quality standard to manage the risk to the environment and public health. The context of public health risk is in the context of the environmental quality (emissions), as opposed to the access (DWER 2015), which supported by the consideration that the condition is unrelated to the Object and Principles of the EP Act (Section s 4.). Water Corporation is responsible for the management and maintenance of its infrastructure and ensuring the processes are conducted appropriately. The requirement for security is covered under the Occupiers Liability Act 1985 (WA) and Security of Critical infrastructure Act 2022 (Cth) and is a duplicated required outside the regulatory span of control for the EP Act.
11, Table 5: Monitoring emissions to land.	Reference to emission point “M1” be corrected to “M2”.	The emission point referenced in Table 5 (M1) is incorrect. The flume monitoring outfall from secondary treatment ponds ‘2 and 2B’ prior to entering infiltration ponds should be labelled M2. Updated Schedule 1 map: Figure 3: Emission and monitoring points included at Appendix C of Attachment 3B.
12. Table 6: Monitoring of input and output.	Incorrect references to monitoring locations “M1” and “M2” to be corrected in tables and figures.	The monitoring locations referenced in Table 6 (M1 and M2) are incorrect. An updated Schedule 1 map: Figure 3: Emission and monitoring points is included at Appendix C of Attachment 3B.
13, Table 7: Groundwater monitoring well installation.	Deletion of Condition 13.	Condition 13, Table 7 is proposed to be deleted as the additional groundwater monitoring wells were installed on 28 October and 9 November 2023. A report (well construction report) including the requirements of Table 7 will be provided to comply with condition 13 and 14. Water Corporation request that the timeframe referred to in Table 7 be amended to “Complete”
14.	Deletion of Condition 13.	Condition 14 is proposed to be deleted as the well construction report as required by Condition 13, Table 7 will be submitted to the CEO on the 16 February 2024.
15, Table 8: Groundwater monitoring of ambient	Request well monitoring location column amended to incorporate list of specific monitoring bores.	New bores have been installed in accordance with Condition 13.

concentrations	Request deletion of analytes (Aluminium, Arsenic, Cadmium, Chromium, Copper, Iron (total) Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Vanadium, Zinc, Radium-226 and Radium-228, Total Uranium and Thorium)	Inclusion of listed analytes required to facilitate assessment of groundwater quality impacts from plant operations.
Schedule 1, Figure 2 and Figure 3	Replacement of Figures 2: Site layout, and 3: Emission and monitoring points with revised figures provided by licence holder.	Figures 2 and 3 are inconsistent with regard to M1 and M2 labelling represented in Figure 3. Please replace with updated Schedule 1 map: Figure 3: Emission and monitoring points is included at Appendix C of Attachment 3B.

The addition of prescribed premises 61 and approval for the disposal of saline desalination wastewater to the three onsite infiltration ponds at an approved capacity of 150 m^3 per day for a period not exceeding 6 months, had previously been granted through a licence amendment issued on 26 March 2021. The saline desalination wastewater was expected to have a Total Dissolved Solids (TDS) concentration ranging between 6,000 mg/L to 8,200 mg/L Saline wastewater transported to the premises by controlled waste carriers is tracked under controlled waste category D300, *non-toxic salts.* Prior to this amendment, the premises treated wastewater to a secondary standard via a facultative pond network, with treated wastewater then disposed of via the on-site via the infiltration ponds.

Table 2 below outlines the proposed changes to the existing Licence.

Table 2: Proposed design capacity changes.

Category	Current design capacity	Proposed design capacity	Description of proposed amendment
54	300 cubic metres or more per day	300 cubic metres or more per day	No change proposed.
61	150 cubic metres per day	12, 500 tonnes per annum	6-month limitation of saline waste acceptance removed to permit ongoing discharge of desalination wastewater to infiltration basins. Consolidation of tankered controlled waste types (excluding sewage from the reticulated sewage network) into the approved design capacity for premises category 61.

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 3 below. Table 3 also details the proposed control measures the licence holder has proposed to assist in controlling these emissions, where necessary.

Table 3: Licence holder controls.

Emission	Sources	Potential pathways	Proposed controls
Dust	Vehicle movements (Continued tankering of RO brine wastewater for unloading to infiltration ponds).	Air/windborne pathway.	Physical separation from sensitive receptors. Existing hardstands areas and sealed access roads will reduce potential for dust emissions. Speed limits on site are to be adhered to on unsealed and sealed access roads/tracks.
Noise	Vehicle movements (Continued tankering of RO brine wastewater for unloading to infiltration ponds).	Air/windborne pathway.	Physical separation from sensitive receptors. All vehicles and equipment to be fitted with appropriate noise controls and routinely maintained. All plant and equipment will be regularly inspected and maintained.
Dissolved salts	Disposal of desalination wastewater to infiltration ponds.	Percolation of dissolved salts through the soil profile.	Dilution with low salinity treated effluent from treatment ponds.
Sodium pyrophosphate	Disposal of desalination wastewater to infiltration ponds. (SUEZ-Hypersperse MDC220 antiscalant dosed to Reverse Osmosis (RO) desalination plant located at the Jurien Bay borefield WTP)	Percolation of dissolved salts through the soil profile.	Dilution with treated effluent. Reliance on limestone formations to chemically adsorb dissolved phosphorus compounds.
Diluted desalination	Disposal of desalination wastewater to	Infiltration of comingled treated	Reliance on unconfined aquifer and high transmissivity of Tamal Limestone to

Emission	Sources	Potential pathways	Proposed controls
wastewater	treated sewage infiltration ponds.	wastewater and desalination wastewaters through soil profile.	mitigate potential mounding.

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 4 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)). The location of identified sensitive receptors relative to the premises boundary (depicted in green) are shown in Figure 1 below.

Table 4: Sensitive human and environmental receptors and distance from prescribed activity

Receptor ID	Human receptors	Distance from prescribed activity
H1	Jurien Bay Aerodrome, Lot 500 Jurien Road, Jurien Bay	Approximately 850 m northwest of the premises boundary.
H2	Jurien Bay Country Golf Club, 3-7 Bashford Street, Jurien Bay	Approximately 1.0 km northwest if the premises boundary.
H3	Jurien Bay Industrial Area, Gypsum Street, Jurien Bay	Approximately 1.7 km north of premises boundary.
H4	Residential premises, Whitfield Road, Jurien Bay	Approximately 1.7 km northwest of premises boundary.
H5	Jurien Bay Health Centre, 23 Whitfield Way, Jurien Bay	Approximately 1.7 km northwest of premises boundary.
H6	Jurien Bay District Highschool, 19 Hamersly Street, Jurien Bay	Approximately 2.0 km Norwest of premises boundary.

H7 **E5** **H8** **H6**	**Groundwater users** Groundwater in the Jurien Bay area is used for irrigation, stock drinking water and domestic non-potable uses.	There are 6 registered bores within 500m of the premises boundary with the DWER's water register listing four water abstraction licences down hydraulic gradient of the premises: • Shire of Dandaragan GWL 154453: 155,000 kL pa from the superficial aquifer (about 300m west), • Ardross Estates GWL 159892: 20,000kL pa from the superficial aquifer (about 1.5 km southwest), • Jurien Bay Country Golf Club GWL 201896: 250,000kL pa from the superficial aquifer (about 1 km west), and • Department of Education GWL166428 (about 2 km west): 30,000 kL pa from the superficial aquifer.
H7	**Drinking water source areas** Jurien Water Reserve (Priority 1)	Approximately 2.9 km north of northern premises boundary.
Receptor ID	**Environmental receptors**	**Distance from prescribed activity**
E1	**Underlying groundwater** Superficial aquifer supporting Stygofauna communities	Approximately 3 m below natural ground level.
E2 **E3**	**Remnant native vegetation** • *Acacia lasiocarpa* and *Melaleuca acerosa* heath. • Swan Coastal Plain Banksia Woodlands - Shrublands; scrub-heath Dryandra-Calothamnus association with *Banksia prionotes* on limestone in the northern Swan Region *[*Carnaby's Black Cockatoo *(Zanda latirostris)* foraging habitat]	• Immediately adjacent to premises boundaries. • Approximately 350 m east of eastern premises boundary.
E4 **E5**	**Geomorphic Wetlands** • Sumpland (571) • Seasonal dampland	• Approximately 1.15 km northwest from premises boundary. • Approximately 1.6 km north of premises boundary.
E6	**Jurien Bay Marine Park (Indian Ocean)**	Approximately 2.6 km northwest of premises 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 considers 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 L8050/1991/4 that accompanies this Amendment Report authorises emissions associated with the operation of the premises i.e. sewage and liquid waste facility.

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								
Tankering of desalination wastewater to the premises	Dust	Air/windborne pathway causing impacts to health and amenity	Residential premises, Country club users, High school, Jurien Bay Aerodrome, Jurien Bay Industrial Area	Refer to Section 5.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 1	N/A

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**				
	Noise	Air/windborne pathway causing impacts to health and amenity	Residential premises, Golf club users, High school	Refer to Section 5.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 1	N/A
Ongoing discharge of desalination wastewater to the infiltration ponds	Saline treated wastewater (comingled brine waste and treated effluent)	Infiltration of comingled treated wastewater and desalination wastewaters through soil profile resulting in raised water table and impacts on groundwater dependent ecosystems	Jurien Bay Country Golf Club GWL 201896: 250,000kL pa from the superficial aquifer (about 1 km west) Department of Education GWL166428 (about 2 km west): 30,000 kL pa from the superficial aquifer. Local stygofauna	Refer to Section 5.1	C = Major L = Possible **High Risk**	N	Conditions 1 and 13 **Conditions 19 and 20**	Refer to section 3.3

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 for ongoing discharge of RO Brine

3.3.1 Stygofauna sampling

The ongoing discharge of saline wastewater (from groundwater desalination activities) at the premises is considered to have the potential to increase groundwater salinity and decrease depth to groundwater within the vicinity of the premises (groundwater mounding); both of which may have potential impacts on local stygofauna species. The potential for groundwater mounding is further discussed in section 3.3.2.

The premises is situated in a natural dune swale, approximately 2.6 kilometres from the coastline at an elevation at approximately 5 m Australian Height Datum (AHD). The surrounding landscape comprises remnant low, dense coastal heath vegetation, with the limestone of the Tamala Limestone formation occurring at shallow depths and overlain by fine to medium grained dune sand; the Safety Bay Sand. The surface of the limestone is locally hard “capstone” of low permeability.

Beneath the premises, the unconfined superficial aquifer (Superficial Swan) lies within the Safety Bay Sand or the Tamala Limestone at approximately 2 to 15 mbgl. The Tamala Limestone is karstic, and of high to very high permeability with significant cave structures found northeast of the Jurien Bay townsite (Drovers Cave National Park); some of which extend down to the water table. Solution channels in the limestone provide preferential pathways for groundwater flow. Groundwater in the limestone is recharged by the infiltration of rainfall and runoff. The depth to groundwater within the premises monitoring bore network varies between 2.5 to 4 mbgl, with a 3 mbgl average depth to groundwater recorded from bores within a 2 km radius of the premises. Groundwater flow at the premises is in a north-westerly direction, towards the town of Jurien Bay, under low hydraulic gradients, and discharging to the ocean along the coast.

The karstic Tamala limestone has previously been identified as potential habitat for subterranean stygofauna and/or troglofauna species. The high degrees of local endemism and potential absence of habitat connectivity make subterranean fauna susceptible to impacts from localised projects and impacts, with species’ extinction possible if they are not adequately considered during project planning phases.

The licence holder was previously required as a condition of the licence to:

> *“provide to the CEO by 18/9/2022, a subterranean fauna assessment, undertaken in accordance with EPA Technical Guidance Subterranean Fauna Survey for Environmental Impact Assessment (December 2021).”*

The licence holder engaged a consultant to undertake a combined desktop assessment for subterranean fauna (stygofauna and troglofauna) for both the Water Corporations Jurien Bay Borefield Project and the Jurien Bay Wastewater Treatment Plant due to their close geographical proximity. Consistent with the requested scope, the consultant undertook a single-phase field survey for stygofauna for the Borefield Project and provided a recommendation as to whether a field survey was required at the WWTP.

A total of 10 samples were obtained from bores intersecting both the Tamala Limestone (Superficial Aquifer) and the deeper Lesueur Sandstone Aquifer, using modified plankton nets in accordance with the *Environmental Protection Authority (EPA) Technical Guidance – Subterranean Fauna Surveys for Environmental Impact Assessment (EPA2021),* with two undescribed stygofauna (a *Cyclopoida copepod (Diacyclops sp.’Jurien’), and a Paramelitid amphipod (Paramelitidae? sp.’Jurien’*) retrieved from the superficial aquifer. The assessment identified a Low likelihood of troglofauna or stygofauna being present within the overlaying sandy alluvium and colluvium, but a high likelihood of stygofauna being present within the superficial aquifer present in the saturated Tamala Limestone that is directly connected to the overlaying sandy alluvium. As neither taxa is described, their distributions are unknown apart

from the records from this survey effort.

Due to the presence of these stygofaunal species, and their currently unknown distribution within the local Jurien Bay area, the licence holder's consultant has recommended that at least one phase of stygofauna sampling is undertaken within the WWTP brine disposal area and in the modelled saline plume area. This survey should also include immediate surrounding monitoring bores to determine if the undescribed stygofauna recorded two kilometres north are present in groundwater immediately surrounding the WWTP Project area. This sampling is required for the Project to adhere to (EPA 2021) subterranean fauna guidance.

Key findings:
1. Two crustacean taxa were collected together, a Cyclopoida copepod (*Diacyclops sp. 'Jurien'*) and an amphipod (*Paramelitidae? sp. 'Jurien')*, from two bores (1/90 and 1/100) (Invertebrate Solutions, Figure 8). The desktop report does not provide any contextual information for these taxa but, because they are likely novel species, they are potentially significant (EPA 2016). However, the significance also depends on whether they are likely to have restricted distributions or not. **There is currently insufficient information to determine the significance of these taxa.**
2. The desktop report notes that the assessment only 'partially' meets EPA Guidance (2021), which recommends at least three phases of sampling when stygofauna species and suitable habitat are present (EPA 2021, Section 4.2). To overcome these limitations, it is recommended that a second survey phase is undertaken following EPA Guidance (2021) i.e. preferably sampling in a different season, and following significant rainfall in the catchment, because research has shown these factors may increase sampling success via collection of a more representative sample of the subterranean fauna community and higher numbers of specimens (WABSI, p.39). A third sampling phase may not be required, depending on the outcomes of a second sampling phase.
3. Testing of premises monitoring bores for stygofauna has not been undertaken. **A recommendation has been made by a subterranean fauna consultant that at least one phase of stygofauna sampling is undertaken within the WWTP brine disposal area and in the modelled saline plume area.** The survey should also include immediate surrounding monitoring bores in order to determine if the undescribed stygofauna recorded two kilometres north are present in groundwater immediately surrounding the WWTP Project area.
4. To better understand the available habitat and likely distributions of these taxa a second stygofauna sampling phase, preferably after rainfall, targeting additional Tamala Limestone bores outside the known and predicted impact area is recommended. Sampling more broadly may result in collection of specimens outside predicted impact areas and provide confidence that the taxa collected are not restricted to impact areas and therefore will not be subject to significant impacts from wastewater infiltration at the premises.

3.3.2 Groundwater modelling

Groundwater in the vicinity of the premises is considered naturally brackish, with Total Dissolved Solids (TDS) ranging between 1,300 mg/L and 3,000 mg/L, and is less saline towards the east (TDS <1,200 mg/L), and more saline towards the coast (up to 15,000 mg/L) where seawater incursion occurs. Calculated TDS concentrations during a groundwater investigation undertaken at the premises in 2019 ranged between 1,431 mg/L to 9,048mg/L with an average TDS of 4,135 mg/L. This indicates the groundwater beneath the site would be generally classified as brackish to saline. There are no notable Groundwater Dependent Ecosystems documented down – gradient (westward) of the WWTP, with coastal vegetation in the area considered to be more reliant upon soil pore moisture and diurnal dew generation. Background Total Nitrogen (TN) ranged between 0.5 to 1.5 mg/L at the site with higher concentration of up to 4.9 mg/L near the coast.

The likely impacts of increasing infiltration of treated wastewater at the premises to 1,000 m^3/day

was assessed by the licence holder, who considers that due to the high transmissivity of the Tamala Limestone there would be minimal mounding of groundwater beneath the site from the ongoing disposal of up to 150 m^3/day of saline waste.

Data from the existing monitoring bores within the Jurien Bay WWTP site have revealed a small groundwater mound centred on the WWTP approximately 20 cm in height. Mounding of groundwater levels appears localised to bores located immediately alongside the site infiltration ponds (0.34 m AHD), with a generally western groundwater flow direction in the shallow aquifer (decreasing from 0.26 m AHD in the east to 0.13 m AHD in the west).

In support of the amendment application, Water Corporation provided to the Department the document "*Jurien Bay Wastewater Treatment Plant – Review of Operational Data and Groundwater Assessment*" prepared by Aidan Moyse in February 2024. The review details analyses of waste infiltration and groundwater monitoring; including assessments of ion chemistry, heavy metals, and radionucleotides and asserts that:

> *"A comprehensive review of site operational data and groundwater monitoring data identified that neither groundwater levels nor groundwater quality have been influenced by saline waste disposal at the site to date and are unlikely to be influenced by future disposal".*

As part of the assessment process, the adopted methodology and findings offered by the Water Corporation were referred to internal hydrologists for technical advice on the reliability of findings in the provided report. A summary of this advice is set out below.

Key findings:
1. Revision of the aquifer transmissivity calculations is required, using: • appropriate methodology for unconfined aquifers, such as such as Neuman's method, Boulton's method (if any delay yield is suspected), Moench Method, or Jacob's Corrections for drawdowns in thin unconfined aquifers, and • a saturated thickness of ~15.5 m (not just 5 m as given and used in pump test analysis).
2. Officers agree that chloride mass balance will not be a suitable method to estimate recharge, as groundwater has been influenced by the injected saline wastewater.
3. Officers determined that total wastewater disposal is only around 10-15 % of the rainfall recharge, but, as there was no rainfall recharge occurring due to low rainfall (less then threshold value of 475 mm/year), recharge to the system is only from wastewater disposal in some low rainfall years such as 2023. Observed groundwater level trends are varied because infiltrated water volumes were insufficient in year 2021 and 2022 to cause measurable changes in annual groundwater level, however there are clear magnitude changes in 2023 resulting from the infiltrated water volume.
4. Reporting should incorporate the complete suite of monitoring results for each bore to accurately characterise groundwater quality and detect significant changes in groundwater quality.
5. It is recommended that the approval for disposal of brine waste at the premises is only approved for another two years; to provide time for the licence holder to address the review comments above.

3.4 Proposed amendments

On the basis of the detailed risk assessment for the ongoing discharge of RO brine as detailed in Section 3.3 above, a new licence condition is proposed as part of the amendment requiring the licence holder to prepare and submit an updated monitoring data review (2015 – 2024) detailing the impacts of wastewater infiltration at the premises.

Based on the recommendations provided to the licence holder by their subterranean fauna consultant, the Department has inserted a new condition requiring the undertaking of an additional stygofauna survey within the monitoring network to determine the presence of undescribed stygofauna in the groundwater immediately surrounding the premises.

The Delegated Officer has considered the Licence Holder's other proposed amendments and has reached the outcomes detailed in Table 6 below.

Table 6: Delegated Officer determination on proposed amendments

Condition	Requested modification	Delegated Officer response
1, Table 1: Waste Acceptance.	Request that the time period to receive D300 nontoxic salt waste at premises is removed from the condition, and the Category 61 waste (waste code D300) remains on the licence with a restriction only on the quantity to be accepted.	Approval for the disposal of brine waste at the premises for an additional two years has been granted based on advice provided from Groundwater Science Central. This advice recommended the limitation of brine waste disposal for two years to provide sufficient time for the licence holder to commission and submit an updated monitoring data review. This review, in conjunction with the findings of the stygofauna survey, will better facilitate the risk assessment of the environmental impacts of ongoing brine disposal at the premises.
7.	Deletion of Condition 7 relating to premises security.	Request refused. Requirement for fencing has been included on the licence as a control to reduce the likelihood of unauthorised waste acceptance at the premises. The recent deletion of this requirement from another Water Corporation licence was done in error, and action has been undertaken to reinstate this condition on the same basis.
11, Table 5: Monitoring emissions to land.	Reference to emission point "M1" be corrected to "M2".	Noted, condition to be amended to reflect correct naming.
12. Table 6: Monitoring of input and output.	Incorrect references to monitoring locations "M1" and "M2" to be corrected in tables and figures.	Noted, maps to be replaced with figure which correctly reflects emission and monitoring point naming.
13, Table 7: Groundwater monitoring well installation.	Deletion of Condition 13.	Technical advice prepared by the Water Corporation in relation to the establishment of an additional 7 shallow and two deep monitoring bores west of the premises was submitted on 14 March 2024. The report and activities detailed therein were assessed, and deemed to satisfy former conditions 13 and 14. These conditions will therefore be removed from the amended licence.
14.	Deletion of Condition 13.	

15, Table 8: Groundwater monitoring of ambient concentrations	Request well monitoring location column amended to incorporate list of specific monitoring bores.	Noted, table revised accordingly.
	Request deletion of analytes (Aluminium, Arsenic, Cadmium, Chromium, Copper, Iron (total) Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Vanadium, Zinc, Radium-226 and Radium-228, Total Uranium and Thorium)	Request refused. Refer to section 3.3. Ongoing monitoring of analytes required to support preparation of report required under condition 21 of revised licence.
Schedule 1, Figure 2 and Figure 3	Replacement of Figures 2: Site layout, and 3: Emission and monitoring points with revised figures provided by licence holder.	Noted, erroneous figure to be replaced with figure which correctly reflects mission and monitoring points naming.

4. Consultation

Table 7 provides a summary of the consultation undertaken by the department.

Table 7: Consultation

Consultation method	Comments received	Department response
Licence holder was provided with draft amendment on 30 April 2024	Licence holder submitted comments on 24 May 2024. Refer to Appendix 1.	Refer to Appendix 1.
	Licence holder submitted further comments on 1 July 2024 following additional discussions with the Delegated Officer. Refer to Appendix 1.	Refer to Appendix 1.
The licence holder was provided further opportunity to provide comment on proposed changes on 2 July 2024	Licence holder submitted additional comment on 25July 2024. 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 8 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 8: Summary of licence amendments

Condition no.	Proposed amendments
L8050/1991/4	Amendment date inserted on cover page.
	Licence history updated.
	In-text references to condition, tables and figures inserted throughout.
1, Table 1	Waste acceptance table amended to reflect operation of the premises as a combined category 54 and 61 facilities.
	Acceptance specification for non toxic salts to permit acceptance of tankered RO brine through to April 2026.
2, Table 2	Waste types and process(es) updated to reflect changes to Table 1.
	Reference to sewage sludge removed as this relates to sludge derived from onsite desludging activities, which is detailed in Table 3, condition 6, and Table 10.
Condition 13 and Table 7	Deleted.
Condition 14	Deleted.
Condition 19	New condition requiring commissioning and submission of a subterranean fauna assessment of the premises groundwater monitoring bore network inserted
Condition 20	New condition requiring commissioning and submission of an updated monitoring data review (2015 – 2026) detailing the impacts of wastewater infiltration at the premises.
Figure 3	Revised figure to replace previous inserted.
Figure 4	New figure depicting expanded bore network inserted.

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 Protection Authority (EPA) 2018, Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual, Environmental Protection Authority, Perth, WA.*
5. *EPA (2021). Technical guidance subterranean fauna survey for environmental impact assessment. Environmental Protection Authority, Perth. 38 pp.*
6. *Invertebrate Solutions (2023). Desktop and field assessment for subterranean fauna for the Borefield and Waste Water Treatment Plant upgrade – Jurien Bay, Western Australia. Unpublished report to Water Corporation, October 2023. Report Number 2022ISJ1502_F02_20231010 Prepared for: Water Corporation.*
7. *Snooks & Co 2002, Style Manual for Authors, 6th Edn, John Wiley & Sons Australia Ltd, Brisbane.*

Appendix 1: Summary of licence holder's comments on risk assessment and draft conditions

Condition	Summary of licence holder's comment	Department's response
Comment provided 30 April 2024		
Preamble		
Premises Details	Existing Text: *Jurien Wastewater Treatment Plant* Requested amendment: *Jurien Bay Wastewater Treatment Plant* Justification: Incorrect premises name.	Premises name changed. Name was carried over from previous instrument.
Front page	Existing Text: *Assessed design capacity: Category 61: Liquid waste facility - 12,500 tonnes per annum.* Requested Amendment: *150 cubic metres per day or 32,100 tonnes per annum.* Justification: Licence amendment request was to remove time limited operations, volume was to remain the same. Refer to section 2 of the decision report. 32,100 tonnes per annum has been calculated from 150 kL/d x 214 days a year (March to September).	Category 61 throughput amended to 32,700 tonnes incorporate the nominated annual throughputs for all waste types accepted under Category 61. This will be: • 32,100 tonnes for non-toxic salts; • 500 tonnes for sewage / septage wastes; and • 100 tonnes for grease trap wastes. The approved premises capacity for Category 61 premises is given as an annual throughput.
Page 2	Existing Text: *Licence amendment granted with extended brine acceptance, correction of waste acceptance tables and monitoring details, and insertion of new premises maps.* Requested Amendment: Licence amendment granted with extended brine Non-toxic salt (D300) acceptance,	Wording amended to: *"Licence amendment granted to extend approval period for the disposal of saline reverse osmosis wastewater from the Jurien Bay Water Treatment Plant, as well as the correction of waste acceptance tables and monitoring details, and insertion of new premises maps"*

Condition	Summary of licence holder's comment	Department's response
	correction of waste acceptance tables and monitoring details, and insertion of new premises maps. Justification: Incorrect terminology.	
Waste Acceptance		
Condition 1 Table 1	Existing Text: *Acceptance specification:* *Accepted through sewer inflow(s)* Requested Amendment: Accepted through sewer inflow(s) and via tankers only. Justification: Tankered waste acceptance removed from table, not requested. Reinstate specification from current licence. Tanker receival has been a previously assessed and approved discharge and emission point.	Table 1 Amended to include "or controlled waste tankers".
Condition 1 Table 1	Existing Text: *Category 61 (K210) Septage waste and (K110) Waste from grease traps* *Rate at which waste is received*. 500 tonnes per annum Requested Amendment: *Category 61, K210 waste to be included under 300 m^3/d rate.* *Category 61, K110 waste received to be amended to <100 tonnes per annum.* Justification: Adjustment to waste acceptance not requested. Reinstate specification from current licence for K210 waste to be included as ensures WWTP treatment capacity is met and able to evaluated.	Category 61 waste throughputs recorded and reported as an annual rather than daily throughput. Amended K110 to be included 100 tonnes per annum. "Waste code" changed to "Controlled Waste Code" to emphasise that codes only apply to tankered wastes.
Condition 1 Table 1	Existing Text: Category 61 (D300) Non-toxic salts.	Category 61 waste throughputs recorded and reported as an annual rather than daily throughput. "Rate at which waste is accepted" changed to "Quantity

Condition	Summary of licence holder's comment	Department's response
	Rate at which waste is received. 12,000 tonnes per annum Acceptance specification: Accepted via tankers only between 18/03/2022 and 01/05/2026. Limited to desalination wastewater from the Jurien Bay Water Treatment Plant only Requested Amendment: Rate at which waste is received. 150 cubic metres per day or 32,100 tonnes per annum. Scenario 1: Acceptance specification: Accepted via tankers only between 18/03/2022 and 31/12/2026. Limited to desalination wastewater from the Jurien Bay Water Treatment Plant only. Scenario 2: Acceptance specification: Accepted via tankers only between 18/03/2022 and 01/05/2029. Limited to desalination wastewater from the Jurien Bay Water Treatment Plant only. Justification: Licence amendment request was to remove time limited operations, volume was to remain the same. Refer to section 2 of the decision report. 32,100 tonnes per annum has been calculated from 150 kL/d x 214 days a year (March to September). NOTE: Scenario 1: Acceptance specification: If DWER agree with the rationalisation of reporting dates to allow compliance with Condition 20 for the provision of groundwater monitoring report incorporating two years of data analysis, the "waste specification" column in Table 1 will need to be amended to reflect the adjusted waste acceptance timeframe. This will allow Water Corporation to submit a further licence amendment to continue to accept D300 non-toxic salts and DWER an appropriate assessment timeframe whilst an active approval remains in place. Scenario 2: Acceptance specification: If DWER agree with the rationalisation of reporting dates and provision of groundwater monitoring report to allow five years of data analysis, the "waste specification" column in Table 1 will need to be amended to reflect the	Limit" for clarity and in accordance with other approvals. Limit of 150 cubic metres per day inserted as an acceptance specification. Permitted acceptance period for desalination wastewater from the Jurien Bay Water Treatment Plant (non-toxic salts) extended though to 31/12/2026. This will permit adequate time to ensure that: • The subterranean fauna assessment report required under condition 19 of the Licence is completed and submitted to DWER for review; and • The updated monitoring data review detailing impacts of wastewater infiltration between 2015-2026 required under condition 20 of the Licence is completed and submitted to DWER for review. The findings of the subterranean fauna assessment report will be used to determine the presence of sensitive receptors within groundwater underlying and down hydraulic gradient of the premises, i.e. sensitive stygofauna communities. Findings from the updated monitoring data review will be used to verify potential impacts of wastewater infiltration to groundwater at the premises. The outcomes of subterranean fauna assessment report will be critical in determining the degree of regulatory control that will need to be in place post 2026 should the acceptance of non-toxic salts to the premises continue in relation to groundwater monitoring, so long as original data surrounding the impacts of wastewater infiltration have been validated.

Condition	Summary of licence holder's comment	Department's response
	adjusted waste acceptance timeframe.	
Waste Processing		
Condition 2 Table 2	Existing Text: *Table 2: Waste processing* *Process limits and/or specifications* *Saline waste acceptance must be maintained at or below 150 m^3/day.* Requested Amendment: Non-toxic salts acceptance must be maintained at or below 32,100 tonnes per annum. Justification: Update volume to align with Table 1.	Noted. Process limit and/or specification amended to "Limited to a maximum volume of 150 cubic metres per day"
Infrastructure and Equipment		
Condition 3 Table 3	Existing Text: Site infrastructure and equipment Infiltration pond 1, 2 and 3 Operational requirement Wastewater, Saline waste Requested Amendment: Operational requirement Wastewater, ~~Saline waste~~ non-toxic salts Justification: Consistent wording throughout the licence.	Noted. References changed to "desalination wastewater" in accordance with Table 1 Acceptance Specification.
Emissions and Discharges		
Condition 8 Table 4	Existing Text: Emission Discharge of saline waste Description	Noted. References changed to "desalination wastewater" in accordance with Table 1 Acceptance Specification.

Condition	Summary of licence holder's comment	Department's response
	Discharge of saline waste to infiltration ponds 1, 2 and 3 Requested Amendment: Emission Discharge of ~~Saline waste~~ non-toxic salts Description Discharge of ~~Saline waste~~ non-toxic salts to infiltration ponds 1, 2 and 3 Justification: Consistent wording throughout the licence.	
Monitoring		
Condition 12 Table 6	Existing Text: Emission point reference Saline waste Monitoring location Tankered saline waste receival point. Requested Amendment: Emission point reference Saline waste non-toxic salts Monitoring location Tankered Saline waste non-toxic salts receival point Justification: Consistent wording throughout licence.	Noted. References changed to "desalination wastewater" in accordance with Table 1 Acceptance Specification.
Condition 13 Table 7	Existing Text: Monitoring well location Monitoring wells as shown in Figure 4, Schedule 1 of the Licence Requested Amendment: Monitoring well location 2/97, 5/97, 4/14, 5/14, 1/18, 3/18, 4/18, 6/18A	Noted. Well numbers added to Table 7. Note 1 added to bottom of Table 7

Condition	Summary of licence holder's comment	Department's response
	Note 1: In-field non-NATA accredited analysis permitted. Justification: Requested bores were accepted by DWER (Amendment Report, Section 3.4, Table 6). Note 1 missing from table: Note 1 against 5 parameters, but no note at bottom of the table.	
Records and Reporting		
Condition 18(b)	Existing Text: (b) submit the environmental report to the CEO by 1 October 2023 and biennially thereafter Requested Amendment: (b) submit the environmental report to the CEO by 1 October ~~2023~~ 2024 and biennially thereafter Justification: The Biennial Environmental Report was changed during the DWER initiated amendment to 1/10/2022 and biennially thereafter. Amending the due date to 2023 means DWER will not receive the next report until 2025 (three year gap).	Noted. Date amended date to 2024.
Condition 19	Existing Text: The licence holder must provide to the CEO by 31 December 2024, a subterranean fauna assessment of the premises groundwater monitoring bore network (as depicted in Figure 4), undertaken in accordance with EPA Technical Guidance Subterranean Fauna Survey for Environmental Impact Assessment (December 2021). Requested Amendment: The licence holder must provide to the CEO by ~~31 December 2024~~ 30 June 2025, a subterranean fauna assessment of the premises ~~groundwater monitoring bore network (as depicted in Figure 4),~~ undertaken in accordance with EPA Technical Guidance Subterranean Fauna Survey for Environmental Impact Assessment (December 2021). Justification: Water Corporation request an additional six months to ensure consultant can conduct fieldwork, interpret data, draft report and complete reviews prior to submission to	Noted. Submission compliance date amended to 30 June 2025 as requested. Text not changed as it makes no material change to condition and still allows for flexibility as requested.

Condition	Summary of licence holder's comment	Department's response
	DWER. Updated and amended wording to allow flexibility of assessment type based on expert consultant advice.	
Condition 20	<u>Existing Text:</u> The licence holder must provide to the CEO by 1 June 2026 an updated monitoring data review (2015 – 2026) detailing the impacts of wastewater infiltration at the premises, including: (a) Revised aquifer transmissivity calculations using: (i) appropriate methodology for unconfined aquifers, such as such as Neuman's method, Boulton's method (if any delay yield is suspected), Moench Method, or Jacob's Corrections for drawdowns in thin unconfined aquifers, and (ii) a saturated thickness of ~15.5m (not just 5m as given and used in pump test analysis), b) Visual representation of saline mixing with local groundwater illustrating the inferred site infiltration using data with a clear legend and date of samples to confirm assumptions in the diagram, c) Time series data of the groundwater levels for the monitoring network bores for the monitoring period presented as an appendix in the report, (d) Laboratory analyses of brine tankered to the premises for disposal, and (e) Revised infiltrated water salinity calculations based on testing of both tankered brine, and blended treated wastewater discharged to infiltration basins. <u>Requested Amendment:</u> Condition to be discussed and agreed prior to finalisation of decision notice and final licence. <u>Justification:</u> Water Corporation's Water Resource Science (WRS) group have noted that the draft Amendment Report contains feedback regarding the February 2024 "Jurien Bay Wastewater Treatment Plant – Review of Operational Data and Groundwater Assessment", under the heading "3.3.2 Groundwater modelling". In order to better understand the feedback provided and establish expectations regarding addressing the DWER review comments, WRS would appreciate a meeting with DWER. This meeting could also provide DWER an opportunity to highlight to Water Corporation/WRS matters of concern regarding proposed site activities.	Noted. DWER has provided the Licence Holder with a summary of technical advice received on the adopted methodology and reliability of the findings in the "Jurien Bay Wastewater Treatment Plant – Review of Operational Data and Groundwater Assessment". This summary is within section 3.2.2 of this Amendment Report. Technical advice outlines data gaps within the submitted report. Condition 20 in the revised licence therefore outlines actions to be taken by the Licence Holder to address data gaps through the provision of a updated monitoring review, encompassing results obtained between 2015 – 2026. It is outlined in section 3.4 of this decision report that non-toxic salts will only be authorised for discharge to the environment for a further two years *to provide sufficient time for the licence holder to commission and submit an updated monitoring data review. This review, in conjunction with the findings of the stygofauna survey, will better facilitate the risk assessment of the environmental impacts of ongoing brine disposal at the premises.* If the Licence Holder wishes to discuss technical hydrogeological advice received and their obligations to validate the data submitted with the "Jurien Bay Wastewater Treatment Plant – Review of Operational Data and Groundwater Assessment", the Delegated Officer recommends the Licence Holder contact DWER's hydrogeological branch directly for further guidance.

Condition	Summary of licence holder's comment	Department's response
Notification		
Condition 21 Table 9	Existing Text: Notification requirement[1] No less than 14 days in advance of works[3] Requested Amendment: Notification requirement[1] No less than 14 days in advance of works Justification: Delete Note 3 Note 3 against removal of sludge notification time, but no note 3 at bottom of the table.	Amended Note 1 to Note 3 as per Table 9.
Comments received 01/07/2024		
Cover page	*With regard to ongoing discussions between Water Corporation and DWER, Water Corporation request premises categories 54 & 61 along with assessed capacity be included on the licence cover page. Conditions relating to waste acceptance references the relevant waste codes but not the premises category. This would be similar what we received recently for Busselton WRRF (L5952/1991/12) refer attached.*	Noted. Table 1 amended to align with the waste acceptance table in licence for Alkimos Wastewater Treatment Plant (L8434/2010/2).
13 (Table 7)	*Heavy metals and radionuclides monitoring parameters are not contributing to the characterisation of the groundwater system or helpful in assessing the potential fate of comingled TWW and saline waste from TWS desalination. Supporting data previously provided with the application demonstrated that there are not elevated levels of heavy metals or radionuclides in the receiving aquifer or the saline waste stream.* *It is noted that the data review provided in support of the application could not identify spatial salinity distribution that was consistent with impacts to the receiving aquifer from site infiltration activities. This was primarily because the receiving aquifer was shown to be more saline than the comingled liquid waste being infiltrated. However, spatial distribution of total nitrogen was consistent with site activities influencing receiving aquifer water quality.* *Comingled liquid waste disposal at the site has been shown to influence total nitrogen concentration down-gradient of the site but not influence salinity.*	Noted. Request endorsed by Groundwater Science Central. Table 7 amended accordingly.

Condition	Summary of licence holder's comment	Department's response
	It is suggested that monitoring parameters be revised to those that have shown most useful in tracing the potential transport of comingled TWW and saline waste: pH, EC, Total N, redox potential, dissolved oxygen, Total P, TDS, major cation and major anions.	
20 (b)	*DWER have requested, as part of an updated monitoring data review, that a "Visual representation of saline mixing with local groundwater" be presented that illustrates "the inferred site infiltration using data with a clear legend and date of samples to confirm assumptions in the diagram"* *Can DWER please clarify which method(s) are expected? I.e. Piper diagram or Durov/extended-Durov diagram? Water Corporation want to ensure that the provided analysis meets DWER's expectations.*	Noted. Visual representation should include both diagrams, showing the local groundwater initial chemistry and time series data, and samples from M2 and also from blend of TWW and saline waste. Time series analysis of salinity of groundwater during the operation. Condition 20 (b) amended for clarity.
20 (c)	*DWER request the testing of "blended treated wastewater" as part of requested revised infiltrated water salinity calculations.* *Sampling from outfall flume (emission point M2) can give representative samples of TWW (without brine being discharged) but results will be strongly influenced by saline waste if it is being discharged into the flume at the time of sampling.* *Can DWER please clarify if this refers to TWW only (without saline waste from TWS desalination) or a blend of TWW and saline waste?*	Assumed this comment relates to 20 (e). The Delegated Officer refers to blended/comingled TWW and saline waste within infiltration pond. Condition 20 (e) wording amended accordingly.
Comments received 25/07/2024		
1, Table 1	*Waste quantity limits (K210/K110)* *Advice received from Wastewater quality have confirmed that for the financial year 2023/2024:* *K210 waste received is 341 kL/ 245.86 t* *K110 waste received is 18.2 kL/16.38 t.* *To allow for emergency tanking and non-standard operations, Water Corporation request the following limitations:* *K210 waste 500 t/ annum* *K110 waste up to 100 t/annum.*	Noted. Figures reflected in amended licence.

Condition	Summary of licence holder's comment	Department's response
20 (b)	*Water Corporation note that it is a serious logistical challenge to get a representative sample of blended TWW and saline waste from RO. These liquid waste streams only properly mix in the infiltration ponds. Current sampling locations are unlikely to give representative results.* *This is discussed further in comments to 20 (c).*	The Delegated Officer has sought further comment from the Licence Holder on the proposed challenges and safety concerns surrounding this sampling requirement. In a response to DWER on 15 August 2023, the Licence Holder advised that *we can accommodate the sampling to get the blended sample however, there are still occupational health & safety aspects we would like DWER to consider. If possible we request sufficient flexibility in the wording of the condition so that it won't be a non-compliance if the sampling isn't completed if access is deemed to be unsafe.* Based on this response the Delegated Officer will retain conditions 20(b) and (c) in the Licence. It is noted that if missed samples within reports presented to DWER can be justified as not taken due to access issues, DWER would not consider this as a non-compliance. However, missing samples and data gaps will add an element of uncertainty to any results obtained from monitoring at the premises.
20 (c)	*It is a serious logistical challenge to get a representative sample of blended TWW and saline waste from RO. These liquid waste streams only properly mix in the infiltration ponds. Current sampling locations are unlikely to give representative results.* *It may be possible instrument at least one of the infiltration ponds for measurement of electrical conductivity. We may also be able to periodically sample from the ponds directly. However, both actions have serious health and safety implications for those undertaking the monitoring.* *Several of the groundwater monitoring bores surrounding the site have had salinities far in excess of the likely blended waste salinity over several years of monitoring (pre-dating the disposal of saline waste from RO).* *It is reasonable to characterise the receiving groundwater quality as substantially more saline than the blended liquid waste being infiltrated at the site.* *Monitoring of the quality of saline waste from RO is achievable in a safe manner (EC monitoring and lab sampling at the RO treatment site). TWW quality can be monitored accurately using the existing sampling points as long as saline concentrate is not being disposed of at the same time. Between these data sources, the likely salinity of the blended liquid waste stream can be easily inferred.*	

Appendix 2: Application validation summary

Application type					
~~Works approval~~	☐				
~~Licence~~	☐	~~Relevant works approval number:~~		~~None~~	☐
		~~Has the works approval been complied with?~~		~~Yes ☐ No ☐~~	
		~~Has time limited operations under the works approval demonstrated acceptable operations?~~		~~Yes ☐ No ☐ N/A ☐~~	
		~~Environmental Compliance Report / Critical Containment Infrastructure Report submitted?~~		~~Yes ☐ No ☐~~	
		~~Date Report received:~~			
~~Renewal~~	☐	~~Current licence number:~~			
~~Amendment to works approval~~	☐	~~Current works approval number:~~			
Amendment to licence	☒	Current licence number:	L8050/1991/4		
		Relevant works approval number:		N/A	☒
~~Registration~~	☐	~~Current works approval number:~~		~~None~~	☐
Date application received		3001/2024			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Water Corporation			
Premises name		Jurien Bay Wastewater Treatment Plant			
Premises location		Lot 11300 (Crown Reserve 40417) Airstrip Road JURIEN BAY WA 6516			
Local Government Authority		Shire of Dandaragan			
Application documents					
HPCM file reference number:		2010/003526-1~6			
Key application documents (additional to application form):		• *Cover letter* • *Completed application form* • *Invertebrate Solutions (2023). Desktop and field assessment for* • *subterranean fauna for the Borefield and Waste Water Treatment* • *Plant upgrade – Jurien Bay, Western Australia. October 2023 (Appendix A).* • *Water Corporation (2024). Jurien Bay WWTP – Review of Operational Data and Groundwater Assessment (Appendix B).*			
Scope of application/assessment					
Summary of proposed activities or changes to existing operations.		**6.** *Licence amendment* Amendments to facilitate the ongoing receipt of desalination wastewater at the premises infiltration ponds. Deletion of now redundant security and improvement conditions (fencing and well construction).			

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)
Cat 54 – sewage facility	300 cubic metres per day	No change
Category 61 – liquid waste facility	150 cubic metres of desalination wastewater (D300) per day for a maximum of 6-months (as well as tankered consignments of septage and grease trap wastes)	Ongoing receipt of desalination wastewater

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 ☐ No ☒	Referral decision No: Managed under Part V ☐ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☐ No ☒	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No ☒	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	Certificate of title ☐ General lease ☐ Expiry: Mining lease / tenement ☐ Expiry: Other evidence ☐ Expiry:
Has the applicant obtained all relevant planning approvals?	Yes ☐ No ☐ N/A ☒	Approval: Expiry date: If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☐ No ☒	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes ☐ No ☒	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes ☐ No ☒	Application reference No: Licence/permit No: Licence / permit not required.

Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☐ No ☒	Name: N/A Type: Proclaimed Groundwater Area/Surface Water Area Has Regulatory Services (Water) been consulted? Yes ☐ No ☐ N/A ☒ Regional office: Swan Avon / Mid-West Gascoyne / Kwinana Peel / Northwest / Southwest / Goldfields / South Coast
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: P1 / P2 / P3 / N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☒ N/A ☒
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004*, *Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☒ No ☐	Listed controlled waste – waste facility.
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No ☒	
Is the Premises subject to any EPP requirements?	Yes ☐ No ☐	
Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☒ No ☐	The Jurien Bay WWTP was reported to DWER as a suspected contaminated site from suspected nutrient impacts to soil and groundwater in May 2007. The site was classified as 'Possibly Contaminated — Investigation Required' pursuant to the Contaminated Sites Act 2003 in February 2014. Following a PSI conducted in 2018, the site was re-classified to 'Not Contaminated — Unrestricted Use' on 10 February 2020. There are no registered contaminated sites mapped within 1 km of the Jurien Bay WWTP site.