



Application for Licence Amendment

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

Licence Number	L7994/2003/4
Licence Holder	Shire of Brookton
File Number	App-0028559
Premises	<p>Brookton Wastewater Treatment Plant</p> <p>Lot 448 Robinson Road, BROOKTON WA 6306</p> <p>Legal description –</p> <p>Lot 448 on Plan 192654</p> <p>As defined by the Premises maps attached to the Revised Licence</p>
Date of Report	8 May 2025
Decision	Revised licence granted

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

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1. Decision summary

Licence L7994/2003/4 (L7994) is held by the Shire of Brookton (Licence Holder) for the Brookton Wastewater Treatment Plant (the Premises), located at Reserve 35832, Brookton.

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 construction and operation of the Premises. As a result of this assessment, Revised Licence L7994 has been granted.

The Revised Licence issued because of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises. The Revised Licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

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 10 April 2025, the Licence Holder applied to the department to amend Licence L7994/2003/4 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Facilitate desludging of the WWTP by installing a temporary PVC lined hardstand pad and Geopro desludging tubes.

This amendment is limited only to changes to Category 54 activities from the Existing Licence.

Table 1 below outlines the proposed changes to the existing Licence

Table 1: Proposed design or throughput capacity changes

Category	Current design capacity	Proposed design capacity	Description of proposed amendment
54	120 tonnes per annual period	120 tonnes per annual period	Amendment to allow de-sludging of the WWTP

The Premises consists of a single Oxidation/Settlement Pond (Pond) which requires desludging over time. The Licence Holder is proposing to install a temporary bunded PVC lined hardstand pad (Pad) on a compacted base of clayey sand adjacent to the Oxidation Pond to allow and facilitate desludging of the Pond. Existing Licence conditions require that the Pond is maintained to avoid overtopping, and the accumulation of sludge has decreased Pond capacity. A sludge survey report has been submitted as part of the Application.

The Pad will contain a series of GeoPro desludging tubes (Tubes) that will be filled with pond sludge via slurry pipelines from a micro-dredge operating in the Pond. The Tubes are made of a very strong porous textile fabric which is stitch seamed and able to cope with the high volume of sediment pumped into the tubes. The sludge will be transferred from the micro-dredge to the Tubes via a slurry pipeline. It is expected that three 30 m by 8.6 m Tubes, each with a capacity of 400 m³, will be used for this desludging campaign; with an anticipated recovered sludge volume of 1000 m³.

Return water (sludge filtrate from the Tubes) collected within the Pad will be mechanically pumped back into the Pond, forming a closed loop with no discharge to the environment. The Tubes have proven to mitigate odour that would otherwise emanate from exposed sludge on a Pad.

At the conclusion of the desludging campaign, the Tubes will be dewatered, and the Tubes and PVC Liner will be removed and disposed of to a licensed landfill site. The Pad compacted base will be removed also. The Licence Holder has requested licence conditions drafted into the proposed amended licence remain on the Licence post desludging to facilitate future desludging campaigns.

Figure 1 outlines an overview of the proposed Pad and associated pipelines.



Figure 1 Pad and associated pipelines.

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 construction and 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

Emission	Sources	Potential pathways	Proposed controls
Dust	Construction of Pad PVC Liner and pipeline. Vehicle movements	Air/windborne pathway	Siting. Minimal vehicle movements. Premises size reduces speed of vehicles.
Noise			Siting. <i>Compliance with Environmental Protection (Noise) Regulations 1997.</i>
Odour	Sludge-filled Tubes		Tubes and associated pipelines are sealed.
Leachate	Desludging filtrate	Seepage to soil and infiltration to groundwater	Siting. Hardstand Pad constructed with a PVC Liner to meet not less than 1×10^{-8} m/s permeability with bunds surrounding hardstand Pad. Return water piped back into Pond.
Contaminated stormwater	Pad runoff	Overland flow to surface water	Bunded Pad to divert stormwater away from desludging activity.

3.1.2 Receptors

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

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

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

Human receptors	Distance from prescribed activity
Residential Premises	100 m west of the premises boundary. 107 m, 127 m and 226 m south-west of boundary.
Environmental receptors	Distance from prescribed activity
Surface water lines Avon River South - Minor	25 m east of the premises boundary.

RIWI Act – Surface Water Areas and Irrigation Districts Avon River Catchment Area	Within the premises boundary.
Threatened Ecological Communities (TEC) Buffer Zones Eucalypt woodlands of the Western Australian Wheatbelt – Priority 3	Within premises boundary and immediately surrounding the premises boundary.
Threatened and Priority Fauna Birds: <ul style="list-style-type: none"> Peregrine falcon (<i>Falco peregrinus</i>) – OS Mammals: <ul style="list-style-type: none"> Numbat (<i>Myrmecobis fasciatus</i>) – EN Red-tailed phascogale (<i>Phascogale calura</i>) -CD Bilby (<i>Macrotis lagotis</i>) – VU Reptile: <ul style="list-style-type: none"> Southern death adder (<i>Acanthophis antarcticus</i>) – P3 	28 recorded sightings of 5 species of threatened or priority fauna within a 1 km radius of the premises.

3.2 Risk ratings

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

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

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

The Revised Licence L7994 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e.

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

Table 4. Risk assessment of potential emissions and discharges from the Premises during construction and 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				
Construction								
Construction of PVC Lined Pad and associated pipelines including vehicle movements (reversing beepers).	Dust	Air/windborne pathway causing impacts to health and amenity	Residences 100 m west	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	The Delegated Officer has considered the scale of the works and the separation distance between the source and receptors as indicating that the risk of dust emission impacts is not foreseeable. Dust can be adequately regulated by section 49 of the EP Act.
	Noise		Threatened ecological communities within and surround Premises	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of noise emissions as not foreseeable. Noise emissions are adequately regulated under the <i>Environmental Protection (Noise) Regulations 1997</i> .
Operation								
Operation of Micro-sludge, Tubes and associated pipelines including Vehicle movements	Dust	Air/windborne pathway causing impacts to health and amenity	Residences 100 m west Threatened ecological communities within and surround Premises	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	The Delegated Officer has considered the scale of the works and the separation distance between the source and receptors as indicating that the risk of dust emission impacts is not foreseeable. Dust can be adequately regulated by section 49 of the EP Act.
	Noise		Residences 100 m west	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of noise emissions as not foreseeable. Noise emissions are adequately regulated under the <i>Environmental Protection (Noise) Regulations 1997</i> .

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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				
	Odour		Residences 100 m west	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Existing condition 10	N/A
	Leachate	Seepage potentially causing ecosystem disturbance or impacting groundwater quality	Groundwater	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 26	N/A
	Contaminated stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Seasonal minor creek 25m east Threatened ecological communities within and surround Premises	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 26	N/A

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

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

4. Consultation

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

Table 5: Consultation

Consultation method	Comments received	Department response
Licence Holder was provided with draft amendment on 30 April 2025.	Licence Holder responded on 2 May 2025. Refer to Appendix 1	Refer to Appendix 1

5. Conclusion

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

5.1 Summary of amendments

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

Table 6: Summary of licence amendments

Condition no.	Proposed amendments
7 (b)	Freeboard requirement amended for condition clarity and enforceability.
26	Inclusion of a new condition to allow construction of the Pad and Tubes to facilitate desludging.
25	<p>Inclusion of a notification requirement to notify DWER when a Pad and Tubes will be constructed at the Premises to facilitate Desludging. The Licence Holder has requested the Specified works conditions remain on the Licence to allow future desludging operations at the Premises.</p> <p>Inclusion of Note 2:</p> <p>(ii) type of Tubes (or equivalent) to be used for future desludging campaigns; and</p> <p>(iii) information requirement for notification of the Liner used at the Pad in any Desludging works.</p> <p>Inclusion of Notification of Desludging – removal of Pad, Liner, Tubes and associated pipes.</p> <p>Inclusion of Note 3:</p> <p>(ii) conclusion of desludging; and</p> <p>(iii) at what licensed waste facility the desludging material was disposed.</p> <p>Deleted the word 'geobag' and substitute 'Tubes'.</p>
19	Inclusion of sub-condition (b) to include records of any desludging works conducted under condition 26.
Definitions	Deleted 'Geobag' Definition and added 'Tubes' and 'Desludging' in Table 10

	Definitions.
Schedule 1 Maps	New Desludging Map
Schedule 2	New Schedule 2 for minimum specifications for Tubes
Schedule 3	New Schedule 3 for minimum specifications for Hardstand Pad Liner

References

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

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

Condition	Summary of Licence Holder's comment	Department's response
Condition 7(b)	<p>Request amendment of condition to acknowledge that 300mm freeboard will be maintained under normal operations and typical weather events (i.e. this freeboard is unlikely to be maintained during larger storm events, but the available capacity will mean the pond will not overtop).</p> <p>Suggested wording 'a minimum freeboard of 300 mm is maintained in weather events up to 5% AEP'.</p>	<p>The condition was amended to provide more clarity and enforceability.</p> <p>The Amendment Application was to authorise desludging which by virtue will increase the capacity of the Pond. The Pond has been overflowing due to a reduced capacity due to excessive sludge buildup.</p> <p>The licence now allows for all future temporary desludging activities so desludging can occur more regularly – therefore providing a Pond capacity as originally designed.</p> <p>If the Licence Holder wants to amend the freeboard another separate application can be submitted with data to support the 5% AEP.</p> <p>Condition wording will be retained.</p>
Condition 25 Table 8	<p>Clarification that the 'conclusion of desludging works' includes timing provision for dewatering of the sediments (i.e. sediments would not be sufficiently dewatered within 14 days of the conclusion of desludging/dredging).</p> <p>Suggest wording of 'Notification requirement' is amended to: 'No more than 14 days following removal of pad, liner and tubes'.</p>	<p>Correct – The Tubes will be required to be dewatered prior to removal to landfill as per section 2.2 of the AR - At the conclusion of the desludging campaign, the Tubes will be dewatered, and the Tubes and PVC Liner will be removed and disposed of to a licensed landfill site. Once dewatered then the Tubes and Liner etc can be disposed to landfill.</p> <p>Condition wording will be retained.</p>
Condition 26 Table 9 Liner 2a (i)	<p>Request removal of permeability specification – this is typically applied to permanent ponds and landfill cells and is redundant given the requirement for the use of a PVC (or equivalent) liner.</p>	<p>The permeability specification is the industry standard for liners. It is applied to all liners irrespective of type (i.e. PVC or HDPE or GCL). The standard applies regardless of timeframes (temporary or permanent).</p> <p>Condition wording will be retained.</p>
Condition 26	<p>Given the temporary nature of the works and that the bunded area</p>	<p>No information was provided in the Application for depth to</p>

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Condition	Summary of Licence Holder's comment	Department's response
Table 9 Liner 2a (iv)	is elevated above the ground (i.e. no excavation below ground level) and lined, please consider removing this condition.	groundwater. The condition ensures an added level of protection to groundwater noting regular pond overflows and proximity to the Avon River as well. Condition wording will be retained.
Condition 26 Table 9 Tubes 3 (a)	Request removing specifics on number of geo-tubes and replacing with 'sufficient number of geo-tubes with the capacity to contain all the desludging material' – this will allow flexibility for future maintenance dredging, which is understood to be aligned with the purpose of including this detail on the Licence.	Requested amendment made – changed wording to <i>sufficient number of Tubes with the capacity to contain all the desludging material</i> .
Schedule 2 Schedule 3	Request clarification that these specifications are used as a guide and that equivalent materials may be used.	These specifications are a guide (equivalent) for materials that can be used. The Licence Holder indicated at the Scoping meeting 9 April 2025 the Tubes and Liner hardstand pad would be the most likely infrastructure / process for future desludging and requested that licence conditions allow for temporary desludging and equivalent infrastructure. Any equivalent Tubes or Liner would require the submission of the respective construction specifications - so for example, if the next desludging Liner is HDPE, then DWER would expect the construction specifications for HDPE be submitted under condition 25 notification requirements as per Note 2. This information would be of an equivalent specification as Schedule 3. The provision of Tube/Liner construction specifications is a standard licence or works approval condition requirement.