



Department initiated Amendment

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

Licence Number	L6831/1997/12
Licence Holder	Shire of Collie
File Number	DER2017/000540-1
Premises	<p>Gibbs Road Putrescible Landfill Gibbs Road COLLIE WA 6255</p> <p>Legal description – Lot 500 on Deposited Plan 76826</p> <p>As defined by the Premises map attached to the Revised Licence</p>
Date of Report	15 October 2024
Decision	Revised licence granted

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MANAGER WASTE INDUSTRIES
REGULATORY SERVICES

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

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1. Decision summary

The Delegated Officer has determined to make amendments to Licence L6831/1997/12. The amendments are administrative in nature therefore they do not alter the risk profile of the Premises, providing that activities, emissions and receptors as stated in existing approvals remain unchanged.

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

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

2. Scope of assessment

2.1 Regulatory framework

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

2.2 Amendment summary

Licence L6831/1997/12 is held by the Shire of Collie (Licence Holder) for the Gibbs Road Putrescible Landfill (the Premises), located at Lot 500 on Deposited Plan 76826 Gibbs Road, Collie.

The Premises relate to the categories and the assessed design capacity under Schedule 1 of the Environmental Protection Regulations 1987 (EP Regulations), which are defined in existing Licence L6831/1997/12.

On 31 January 2024, the department initiated an amendment to Licence L6831/1997/12. The amendment is limited to:

- construction of six additional groundwater monitoring bores (two at each new monitoring location);
- expanding the groundwater monitoring network to include the additional bores;
- addition of monitoring requirements for Perfluoroalkyl and polyfluoroalkyl substances;
- decommissioning of groundwater monitoring bore MW3;
- removing completed Specified Action requirements; and
- including the requirement for a revised Hydrogeological Assessment following three years of additional groundwater monitoring.

These changes have been initiated following a review of the following documents:

- Asbestos Management Plan;
- Landfill Closure Management Plan;
- Operational Stormwater and Leachate Management Plan; and
- Groundwater Monitoring Plan and Hydrogeological Report.

These documents were submitted to satisfy Existing Licence Conditions 25 and 26, Specified Actions one (1) to five (5). The Delegated Officer has reviewed the relevant documentation and determined that the Specified Action requirements of the licence have now been met. However, a number of deficiencies were identified in the documents that require addressing by the Shire.

It has been determined that deficiencies in the Operational Stormwater and Leachate Management Plan and the Landfill Closure Management Plan can be addressed separately and do not need to be included as further actions within the licence.

Whilst some of the deficiencies in the Groundwater Monitoring Plan and Hydrogeological Report can be addressed outside of this licence amendment, the department has determined the installation of new groundwater monitoring bores and changes to the existing monitoring network to be a priority due to the potential for contaminant migration from the landfill to the Collie River. The department does not consider the proposed locations of the additional groundwater monitoring bores in the submitted Groundwater Monitoring Plan and Hydrogeological Report to be suitable. This is due to the following reasons:

- The inferred groundwater flow direction is potentially biased in the north direction due to the inclusion of groundwater elevation at MW3. The screen of MW3 penetrates a mine void, and therefore, data collected from this bore is not representative of aquifer conditions. The proposed location of MW6 and MW7 is potentially too far north to assess leachate pathways.
- The surface water feature shown in Figure 1 and associated drainage to the Collie River may have been overlooked. Therefore, MW5 and MW2 may not capture the potential leachate pathway from the landfill to the Collie River.
- The report provides limited justification and detail on the proposed design of the bores.

The department has determined multilevel installations (one shallow well and one intermediate depth well) at each of the three locations, shown as yellow dots in Figure 1, to be appropriate to assess potential impacts from the landfill and assess groundwater flow and interactions beneath the premises. However, an on-ground assessment and review of mine adit locations should be conducted before drilling the bores. The department provides the following justifications for the new locations and number of bores:

- The new location of bore MW5 in the southwest corner of the site will assess potential leachate pathways near the drainage path of the surface water feature to the Collie River. This bore location will also supplement the lithological information missing in the area.
- The new location of bore MW6 central to the site, places it closer to landfill operations and upgradient to the surface water feature. It will also improve interpretations near existing bore MW3.
- The location of bore MW7 is a downgradient of landfill features such as sumps and the pyrolysis plant.
- The installation of one shallow well and one intermediate depth well at each new monitoring location will allow for the detection of shallow and deep contamination and assessment of vertical hydraulic gradients along the western boundary and central to the premises. Installing the shallow screen across the water table at these locations would allow for the detection of Light Non-Aqueous Phase Liquids (LNAPLs).

The premises overlies an underground mine, the Wallsend Colliery, which currently discharges acid mine drainage to the Collie River. The information provided shows that bore MW3 has intersected an adit or gallery within the Wallsend Colliery. The department has reviewed the bore completion report, which indicates that MW3 has not been grouted. Therefore, the bore provides a direct pathway for potential leachate to the underground colliery and potential discharge to the Collie River with the acid mine drainage. Due to the landfill being potentially directly connected with the Collie River due to the completion of MW3, the department requires that MW3 be decommissioned.

The requirement for a future Hydrogeological Assessment was considered appropriate during a Licence Review for the Premises, as documented in the Decision Report dated 5 July 2021. Following receipt and review of the Specified Action documentation, the Delegated Officer

considers a revised Hydrogeological Assessment is still appropriate given the lack of site-specific data and uncertainty surrounding groundwater flow and interactions at the Premises.

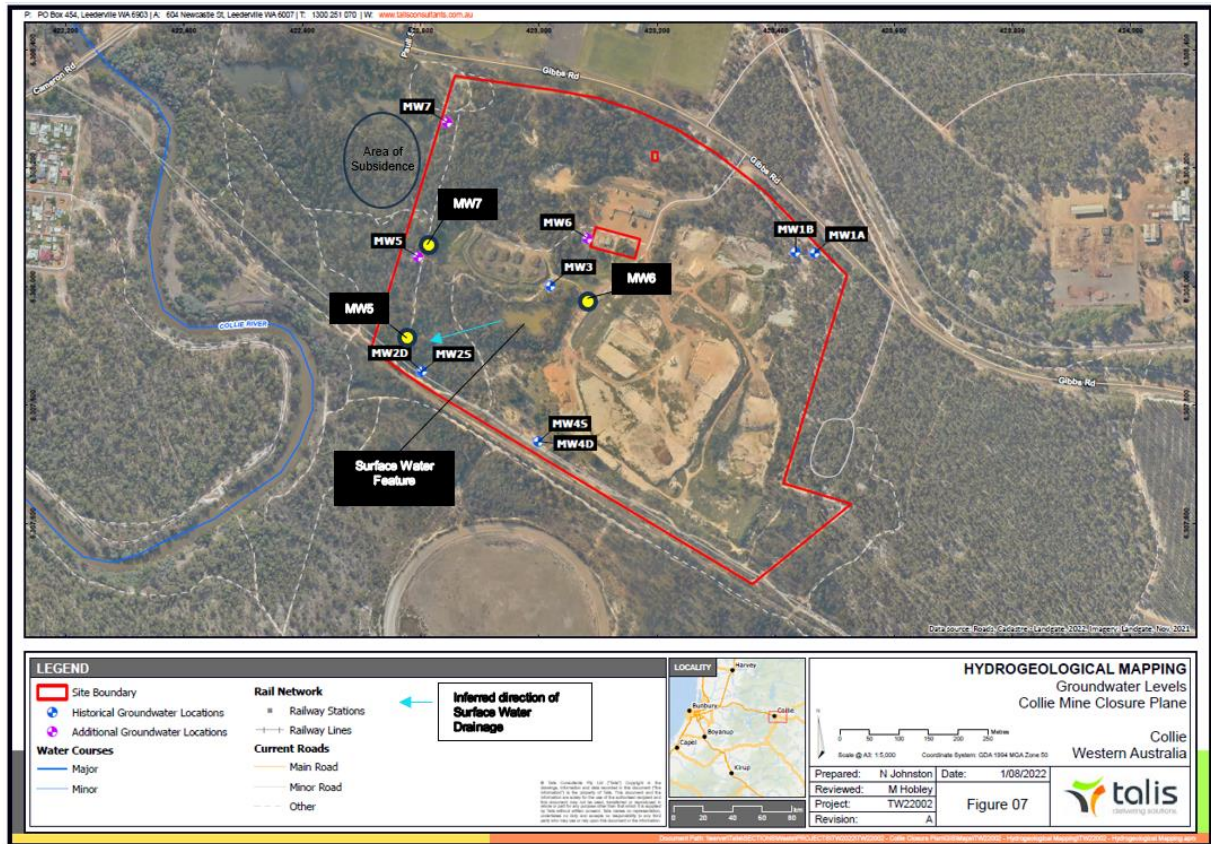


Figure 1: Groundwater monitoring bore locations (New bore locations proposed by Licence Holder shown in pink and DWER recommended locations shown in yellow)

3. Consultation

The Licence Holder was provided with the draft department initiated amendment on 9 February 2024. The Shire of Collie provided comments in relation to the draft on 6 August 2024, which are provided in Table 1.

Table 1: Consultation

Condition	Summary of Licence Holder's comment	Department's response
4, 6, and 27	The Shire of Collie agreed to the new conditions and had no additional comments.	N/A
5	<p>The Shire of Collie requested that the timeframe for the construction of additional monitoring bores be extended to 12 months from the approval of the revised Operational Stormwater and Leachate Management Plan (SLMP) and the revised Landfill Closure Management Plan (LCMP), whichever is the latter.</p> <p>The timeframe for installing the bores is subject to a number of risks outside of the Shire's direct control, including:</p> <ol style="list-style-type: none"> 1. Timeframe for the Shire's consultant to 	<p>Following a meeting with the Shire of Collie and ASK Waste Management on 2 May 2024, the department notes that the Shire will be submitting a revised Operational Stormwater and Leachate Management Plan and a revised Landfill Closure Management Plan.</p> <p>The timeframe to submit these documents is currently by 10 December 2024. The Shire is to request an extension to this</p>

Condition	Summary of Licence Holder's comment	Department's response
	<p>finalise the revised LCMP and SLMP report submissions to DWER (tentatively scheduled for early December 2024 but a 3 month extension may be required due to the Shire's late budget adoption);</p> <ol style="list-style-type: none"> Timing of DWER to review and revert comments around the reports referenced in '1'; Submission of the final report revisions, with groundwater monitoring bore locations to the satisfaction of DWER; Procurement of contractor via formal RFQ process per the Shire's statutory requirement, post-report approval by DWER; The Shire may need to have a Council decision for a formal budget amendment to accommodate this cost once it has been made known via the RFQ process; Lead time of contractor to install bores 	<p>timeframe in writing to the Department should it be required.</p> <p>The Delegated Officer has resolved to extend the timeframe for the groundwater monitoring bores to be installed to 1 March 2026. The Delegated Officer considers this timeframe reasonable for the Shire to achieve, whilst still prioritising the expansion of the groundwater monitoring network.</p>

4. Conclusion

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

4.1 Summary of amendments

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

Table 2: Summary of licence amendments

Condition no.	Proposed amendments
Condition 4, Table 2: Infrastructure and equipment requirements	The groundwater monitoring bores row was amended to include six additional groundwater monitoring bores as determined appropriate by the department.
Conditions 5 and 6 (new)	<p>Conditions included for the construction of the additional groundwater monitoring bores and decommissioning of groundwater monitoring bore MW3.</p> <p>Condition 6 requires submitting a construction report to demonstrate compliance with the requirements of condition 5.</p>
Condition 27 – Specified Actions	Existing Specified Actions 1 through 5 have been removed as these actions have now been satisfied.

Condition no.	Proposed amendments
	A new Specified Action has been included, requiring a revised Hydrogeological Assessment submission. The assessment will be required after three years of additional groundwater monitoring utilising the new groundwater monitoring bores.
General	Condition and Table numbering throughout has been amended as required with the insertion/removal of conditions.
Definitions, Table 9	Updated to include definitions for AS1726 and ASTM D5092/D5092M-16
Monitoring Locations Map, Figure 3 and Figure 4	The new map was inserted to include additional groundwater monitoring locations.
Schedule 2: Monitoring, Table 9	Monitoring locations in Table 9 have been amended to include additional groundwater monitoring locations and requirements to monitor for Perfluoroalkyl and polyfluoroalkyl substances.