Government of Western Australia
Department of Water and Environmental Regulation

Amendment Report

Application for Works Approval Amendment

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

Works Approval Number	W6919/2024/1
Works Approval Holder	Covalent Lithium Pty Ltd
ACN	623 090 139
File Number	DER2024/000078 APP-0028573
Premises	Earl Grey Lithium Project Marvel Loch-Forrestania Road MOUNT HOLLAND Legal description Mining Tenement M77/1080 As defined by the Premises map in Schedule 1 of the Revised Works Approval
Date of Report	24 June 2025
Decision	Revised works approval granted

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Alana Kidd
MANAGER, GREEN ENERGY

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

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1. Decision summary

Works Approval W6919/2024/1 is held by Covalent Lithium Pty Ltd (works approval holder, Covalent) for the Earl Grey Lithium Project (the premises), located at mining tenement M77/1080.

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 works approval W6919/2024/1 has been granted.

The revised works approval issued because of this amendment consolidates and supersedes the existing works approval previously granted in relation to the premises. The decision report for the works approval 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 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 15 April 2025, the works approval holder submitted an application to the department to amend works approval W6919/2024/1 (W6919) under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- New infrastructure including an in-pit sump, pump and dewatering pipelines to be connected to the existing dewatering infrastructure.
- An extension to time limited operations by 7 months from 25 June 2025 to the 25 January 2026**.**

Covalent has requested additional dewatering infrastructure as the volumes of water presenting in the in-pit sumps has been higher than predicted through groundwater modelling. A further 7-month extension to time limited operations to accommodate the infrastructure construction is required. Covalent is expected to apply for an amendment to licence L9326/2022/1 during time limited operations to include Category 6- mine dewatering and associated infrastructure. It should be noted Covalent is not proposing to increase the Category 6 design capacity of 500,000 tonners per annum in the works approval.

2.2.1 Dewatering changes to infrastructure

Covalent engaged Groundwater Resource Management Pty Ltd (GRM) to undertake a review of local hydrogeology and concluded the following.

- Peak monthly abstraction occurred in January (37,867 kL) and were higher than modelled (estimated 432 kL per day).
- In higher rainfall months rainfall contributed around 7,000 kL per month.
- Additional groundwater is likely entering the Earl Grey pit along or adjacent to the footwall.
- Localised recharge around margins of some dolerite dykes and along permeable faults within Earl Grey pit is contributing to additional groundwater flow, that was not accounted

for in previous dewatering assessments.

- Groundwater inflows are predicted to stabilise around the current levels in the short to medium term (6-12 months), ranging between 1,000 to 1,300 kL/day (12 to 15L/s), and possibly even reducing from these levels, until the Stage 3 pit is developed.

Covalent proposes to install additional in-pit sumps and pipelines from the pit floor to the pit crest. The new pipelines would be tied into the existing out-of-pit pipelines and the flow meters moved in front of the connection. Covalent may consider that the out-of-pit lines may be duplicated or replaced by larger diameter pipelines to accommodate increases in pit dewatering rates and to run multiple in-pit pumps. All proposed out-of-pit pipelines will be constructed in line with existing pipe installation requirements in W6919, including:

- pipes to be installed in excavated trench or within a bunded area and graded longitudinally to either the Earl Grey Lithium Pit or the Bounty Gold Earl Grey (BGEG) Pit; or if low points exist, in-ground sumps with a minimum capacity of 50 m^3 are to be constructed (to collect water in the event of pipe rupture);
- air valve(s) to be positioned at an intermediate high point; and
- scour valve to be positioned at intermediate low point along the pipeline route.

Covalent's consultant GRM, proposed that if mine dewatering rates remain elevated or increase over the next 6 months, and there is no link to increased rainfall then the following measures should be implemented.

- Undertake a water balance for the Earl Grey pit to estimate rainfall runoff and net groundwater inflow components of the mine dewatering.
- Revise the water balance to confirm that BGEG pit will still have capacity to store higher Earl Grey pit dewatering.
- If net flows look to remain high or increase, then undertake further hydrogeological investigations including additional ground water modelling and predictive simulations to estimate future mine inflows.

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 time limited operation which have been considered in this Amendment Report are detailed in Table 1 below.

Table 1 also details the proposed control measures the works approval holder has proposed to assist in controlling these emissions, where necessary.

Table 1: Works approval holder controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Vehicle movement Construction of pipeline, in-pit sump, transfer station, dewatering pumps	Air/windborne pathway	• Restricting all vehicles to designated routes with speed limits strictly enforced. • Using water trucks and/or non-water stabilisers to suppress dust on roads and laydown areas. • Visual inspections to ensure dust control measures are working. • Vegetation health monitoring.
Time limited operations			
Hypersaline water	Operation of pipeline transferring hypersaline water (pumps, storage tank, pipeline ruptures, etc.), overtopping of pits.	Spills and leaks from pipeline and pumps, overtopping of sumps and dam.	• Pipelines will be located within bunds to ensure all liquors are captured and are not released into the environment. • Effluent pumped to a holding tank south of the Earl Grey Gold Pit with the primary proposed use being for dust suppression. • Excess water will be disposed to the Earl Grey (EGP) Pit void. • Catch pits or sumps will be constructed along above ground pipeline corridors to ensure leaks or spillages are contained within bunded areas. • Daily inspection of pipeline, tank/dam and discharge point when dewatering occurs. • Any spills are reported as environmental incident and cleaned up immediately. • Water balance to determine surface and groundwater components. Further hydrogeological investigations.

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), the delegated officer has excluded employees, visitors and contractors of the works approval 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.

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 2: Sensitive environmental receptors and distance from prescribed activity

Environmental receptors	Distance from prescribed activity
Groundwater	There are no registered bores within the site; however, 12 registered bores within approximately 4 and 10 km from the southern boundary of Works Approval: W6460/2020/1. Two registered bores within approximately 6 and 10 km from the north-eastern boundary of the site (360 Environmental, 2020). Based on previous investigations, depth to the water table ranged from 58 metres below ground level (mbgl) to 70 mbgl. Groundwater is saline to hypersaline with total dissolved solids (TDS) levels varying between 7,640 mg/L and 119,000 mg/L. (360 Environmental, 2020).
Surface water	No major surface water features within 5 km of the site. The only notable surface water feature is a constructed ephemeral drainage line that starts at the northwest tip of the airstrip and runs northeast past the processing plant area. Apart from this constructed drainage line, the Project area does not intersect any other identifiable drainage lines or creeks, with runoff generally occurring as sheetwash in a northeasterly direction.
Threatened and Priority fauna	Several conservation significant fauna species have been found recently (last 5 years) at the site. *Leipoa ocellate* (Malleefowl) and *Dasyurus geoffroii* (Chuditch) have been sited within the premises boundary.
Threatened and Priority flora	Classified threatened (under the WA Biodiversity Conservation Act 2016) and vulnerable (under the EPBC Act) species *Banksia sphaerocarpa var. dolichostyla* are reported to be present at the site.
Priority Ecological Communities (PEC)	The prescribed premises lies within the Ironcap Hills vegetation assemblages (Mt Holland, Middle, North and South Ironcap Hills, Digger Rock and Hatter Hill) (greenstone ranges) which is Priority 3 PEC.

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 works approval 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 works approval holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the works approval holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

The revised works approval W6919/2024/1 that accompanies this Amendment Report authorises construction and time-limited operations. The conditions in the Revised Works Approval have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence amendment to L9326/2022/1 is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. mine dewatering activities. A risk assessment for the operational phase has been included in this Amendment Report, however licence conditions will not be finalised until the department assesses the licence application.

Table 3. Risk assessment of potential emissions and discharges from the Premises during construction, and operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Works approval holder's controls sufficient?	Conditions[2] of works approval	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Works approval holder's controls**				
Construction								
Vehicle movement Construction of pipeline, in-pit sump, transfer station, dewatering pumps	Dust	Air/windborne pathway causing impacts to native vegetation health.	Native vegetation including: Banksia sphaerocarpa var. dolichostyla are reported to be present at the site.	Refer to Section Table 1: Works approval holder controls	Minimal onsite impact C = Slight The risk event could occur at some point L = Possible **Low Risk**	Y	Conditions 2 and 3	N/A
Operation (including time-limited-operations operations)								
Operation of pipeline transferring hypersaline water (pumps, storage tanks, pipeline ruptures, etc.), overflows from mine pits.	Hypersaline water	Pathway: Spills and leaks from pipeline and pumps, overtopping of sumps and pits. Impact: localised erosion and /or adverse impacts to soils, surface water or groundwater quality. Impact: to native vegetation from pooling of discharged water or from waterlogging of soils with saline – hypersaline water.	Land Underlying groundwater Fauna and flora within and near the Project Area.	Refer to Section Table 1: Works approval holder controls	Mid-level onsite impacts, minimal offsite impacts at local scale. C = Moderate The risk event could occur at some point L = Possible **Medium Risk**	Y	Conditions 1, 8, 9, 12	N/A

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

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

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
Works approval holder was provided with draft amendment on18 June 2025	Covalent provided a Water Storage Tank Layout Map to replace Figure 3. Covalent requested an additional 90 days for time limited operation (TLO) till 25 January 2026 considering steady inflows and time to complete reports Covalent corrected wording in section 2.2 to describe the changes.	The delegated officer noted this and updated Figure 3. The delegated officer noted these changes and agreed and has updated section 2.2 of the Amendment Report and extended TLO in the works approval to 25 January 2026.

5. Decision

The delegated officer has determined to grant an amendment to allow the construction and time limited operation of additional dewatering infrastructure within the premises.

The delegated officer considered that the additional dewatering infrastructure was acceptable on the basis that the applicants proposed dewatering infrastructure will not alter the emission profile or assessed risk associated with the emissions from the premises. The applicant's proposed water balance reporting has been included within the time limited operations report to determine the groundwater and surface water components, and to establish whether the Bounty Gold Earl Grey pit has sufficient capacity to store Earl Grey pit dewater.

Furthermore, the delegated officer added additional updates to reporting conditions to allow for multiple Environmental Compliance Reports, and the extension of time limited operations till 25 October 2025 (4-month extension) to accommodate the additional infrastructure construction.

6. Conclusion

Based on the assessment in this Amendment Report, the delegated officer has determined that a revised works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

6.1 Summary of amendments

Table 5 provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the revised works approval as part of the amendment process.

Table 5: Summary of works approval amendments

Condition no.	Proposed amendments
Works approval history	Update works approval history to include this amendment
Condition 3 and 4	Reference to multiple Environmental Compliance Reports added.
Condition 7	Extension of time limited operations from 25 June 2025 to 25 January 2026.

Condition 12	Reporting requirement for a water balance demonstrating surface and groundwater components of the dewatering undertaken and that BGEG pit has sufficient capacity to store Earl Grey pit dewatering.
Schedule 1 Figure 2	Updated layout of dewatering pipeline(s) and discharge point to include new infrastructure
Schedule 1 Figure 3	Updated water storage tank layout.

References

1. Covalent Pty Ltd (2025), Applicant and supporting documents for amendment to W6919/2024/1, Perth, Western Australia.
2. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
4. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
5. DWER 2024, Covalent Pty Ltd Works Approval W6919/2024/1 issued 4/2/2025, Perth, Western Australia.