



Application for Licence Amendment

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

Licence Number	L4328/1989/10
Licence Holder	MARBL Lithium Operations Pty Ltd
ACN	637 077 608
File Number	DER2013/001044-1
Premises	<p>Wodgina Operations</p> <p>M45/49, M45/50, M45/254, M45/353, M45/365, M45/381, M45/382, M45/383, M45/886, M45/887, M45/888, M45/950, M45/923, M45/924, M45/925, M45/949, M45/1188, M45/1252, G45/290, G45/291 and G45/321</p> <p>MARBLE BAR WA 6760</p> <p>As defined by the Premises maps attached to the Revised Licence</p>
Date of Report	25 July 2023
Decision	Revised licence granted

A/MANAGER, RESOURCE INDUSTRIES

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

Table of Contents

1. Decision summary	1
2. Scope of assessment	1
2.1 Regulatory framework	1
2.2 Application summary	1
2.2.1 Expansion of EWL	2
2.2.2 Direct Toxicity Assessment	5
2.3 Department of Mines, Industry Regulation and Safety (DMIRS)	5
3. Risk assessment	6
3.1 Source-pathways and receptors	6
3.1.1 Emissions and controls	6
3.1.2 Receptors	11
3.2 Risk ratings	13
4. Consultation	16
5. Conclusion	18
5.1 Summary of amendments	18
References	19
Appendix 1: Summary of Licence Holder’s comments on risk assessment and draft conditions	20
Appendix 2: Application validation summary	23
Table 1: Proposed design or throughput capacity changes	2
Table 2: Licence Holder controls	6
Table 3: Sensitive human and environmental receptors and distance from prescribed activity	11
Table 4. Risk assessment of potential emissions and discharges from the Premises during operation	14
Table 5: Consultation	16
Table 6: Summary of licence amendments	18
Figure 1: Map of Existing Licence Approved Area and Proposed EWL Boundary, Dry Stack Disposal Area, Groundwater Monitoring and Plant Layout as per approved Mining Proposal	4

1. Decision summary

Licence L4328/1989/10 is held by MARBL Lithium Operations Pty Ltd (Licence Holder) for the Wodgina Operations (the Premises), located at M45/49, M45/50, M45/254, M45/353, M45/365, M45/381, M45/382, M45/383, M45/886, M45/887, M45/888, M45/950, M45/923, M45/924, M45/925, M45/949, M45/1188, M45/1252, G45/290, G45/291 and G45/321, MARBLE BAR WA 6760.

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 L4328/1989/10 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 04 May 2023, the Licence Holder submitted an application to the department to amend Licence L4328/1989/10 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Expansion of the Eastern Waste Landform (EWL) boundary to align with the Department of Mines, Industry Regulation and Safety (DMIRS) Mining Proposal REGID 113904;
- Dry stack tailings to be co-mingled with waste rock within the entire EWL footprint;
- Replace the EWL and Tailings Storage Facility 3 (TSF3) groundwater monitoring bores listed in condition 27, Table 12 of Licence L4328/1989/10; and
- Extension to the date of the Direct Toxicity Assessment from the 30 April 2023 to 30 April 2024.

The licence amendment issued 21 October 2022 allowed the operation of a dry stack tailing plant with the disposal of dry stack tailings via co-mingling with mine over-burden waste into the EWL. The deposition area in the EWL was restricted to <10 ha due to the DMIRS Part 2 Mining Proposal small mining operations approval.

On the 28 March 2023, the Licence Holder received approval from DMIRS in a full mining proposal (Reg ID 113904) to extend the dry stack disposal in the EWL to the entirety of the landform (excluding it from batters).

As a result of the increased EWL deposition area, the applicable monitoring bores will need to be relocated.

This amendment is limited only to changes to Category 5 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Categories 52, 54, 57, 85B and 89 have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence.

Table 1: Proposed design or throughput capacity changes

Category	Current design throughput capacity	Proposed design throughput capacity	Description of proposed amendment
5	8,750,000 tonnes per annual period	No change.	Extend the dry stack disposal in the EWL to the entirety of the landform (excluding it from batters). As a result of the increased EWL deposition area, the applicable monitoring bores will need to be relocated.
52	64 MW gas power station	No change.	N/A
54	210 cubic metres per day	No change.	N/A
57	500 tyres	No change.	N/A
85B	0.82 gigalitres per annual period	No change.	N/A
89	3,650 tonnes per annual period	No change.	N/A

2.2.1 Expansion of EWL

Beneficiation plants onsite will continue to separate tailings into dry and wet streams. Wet streams will continue to be transported to Tailings Storage Facility TSF3E and Atlas In-pit disposal locations. The coarse fraction will be dewatered and transported to the load out area and then transported from the load out area to the EWL for deposition in the same processes as currently approved.

The methodology for the disposal and use of infrastructure and equipment will be consistent with the previously approved methodology for dry stack disposal operations (approved 21/10/2022). The final stage of the process will involve the stockpiled dry tailings loaded by front-end loader onto haul trucks for disposal at the EWL dry stack tailings disposal area. The tailings geochemical assessment has been previously assessed. The area of the deposition is proposed to be amended from 9.7 ha to 116.5 ha.

No changes to throughput are proposed, only an increase in the area of the EWL that the dry tailings are to be stacked.

Tailings Test Work

The Licence Holder is replicating tailings test work with a geochemical assessment based on actual tailings produced. The geochemical leaching testwork using tailings generated onsite was initiated with MBS Environmental, earlier this year. The geochemical characteristics of the combined tailings and different streams are being testing and analysed separately, including the dry/course tailings that are proposed to be co-disposed with waste rock. The results will provide adequate source data for seepage and pit lake modelling and inform environmental risk to the proposed co-disposal strategy.

Naturally Occurring Radioactive Materials (NORMs)

MBS (2022) undertook a waste characterisation study of waste material to be mined, including the interpretation of radionuclide results.

The Licence Holder has advised that overall, naturally occurring radiation levels for all lithologies are low and do not exceed relevant criteria assessed by MBS (2022), as they are well below the levels of activity (exemption limits) which would trigger possible further assessment.

Additionally, the MBS (2019) geochemical assessment of production tailing samples and supernatant tailing fluids determined that during the test work program naturally occurring radioactivity was calculated for each sample.

Assessment of all supernatant tailings fluids for radiation potential indicated no radiation risk to human health based on extremely low total activity concentrations of head of chain uranium, thorium and rubidium relative to applicable exemption limits for further investigation. The gross alpha and beta activity concentrations were consistently below screening values (0.5 Bq/L) recommended for identifying radiological hazards in livestock and human drinking water, or for irrigation purposes (MBS, 2019).

NORMs have been analysed within the tailings and determined to be below relevant assessment criteria.

Groundwater Monitoring Bores

The expansion of the EWL footprint will result in the decommissioning of the existing EWL groundwater monitoring bores. New groundwater monitoring bores will be required to be installed to ensure that groundwater around the periphery of the landform is monitored for potential Acid Mine Drainage and other contaminants. New locations have been selected based on the known groundwater flows in the area surrounding the landform.

Depth to groundwater ranges from 6 to 17 metres below ground level (mbgl).

Refer to Figure 1 for existing versus proposed EWL dry stack tailings disposal and groundwater monitoring.

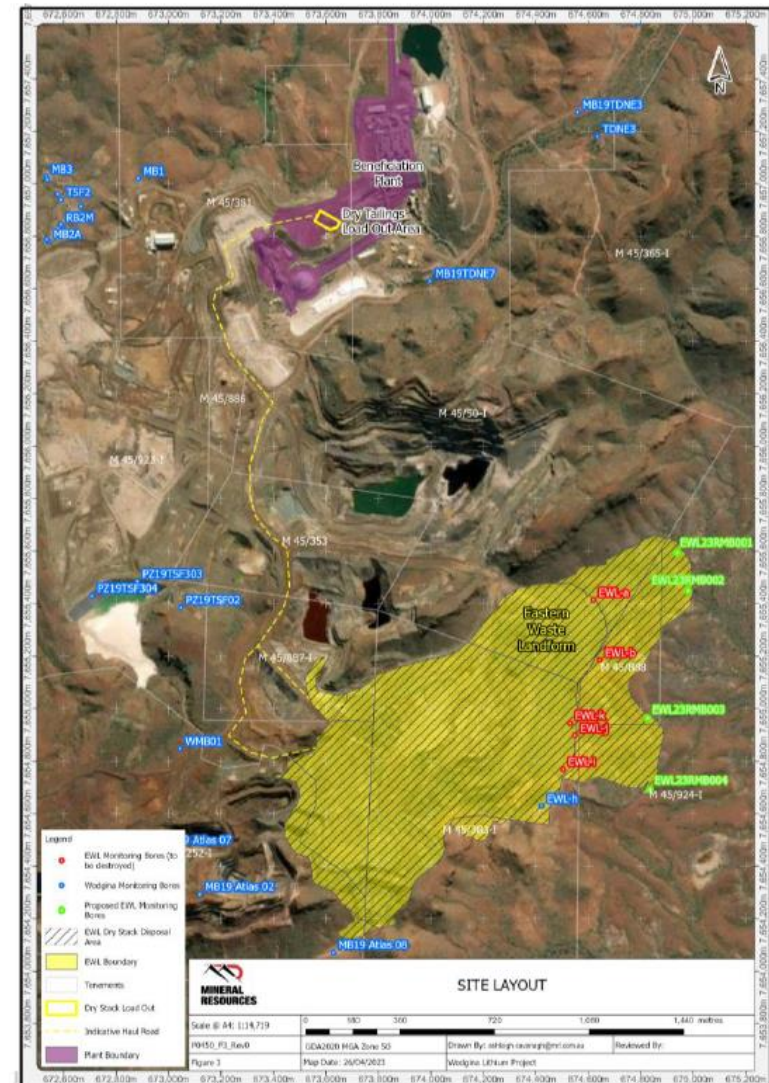
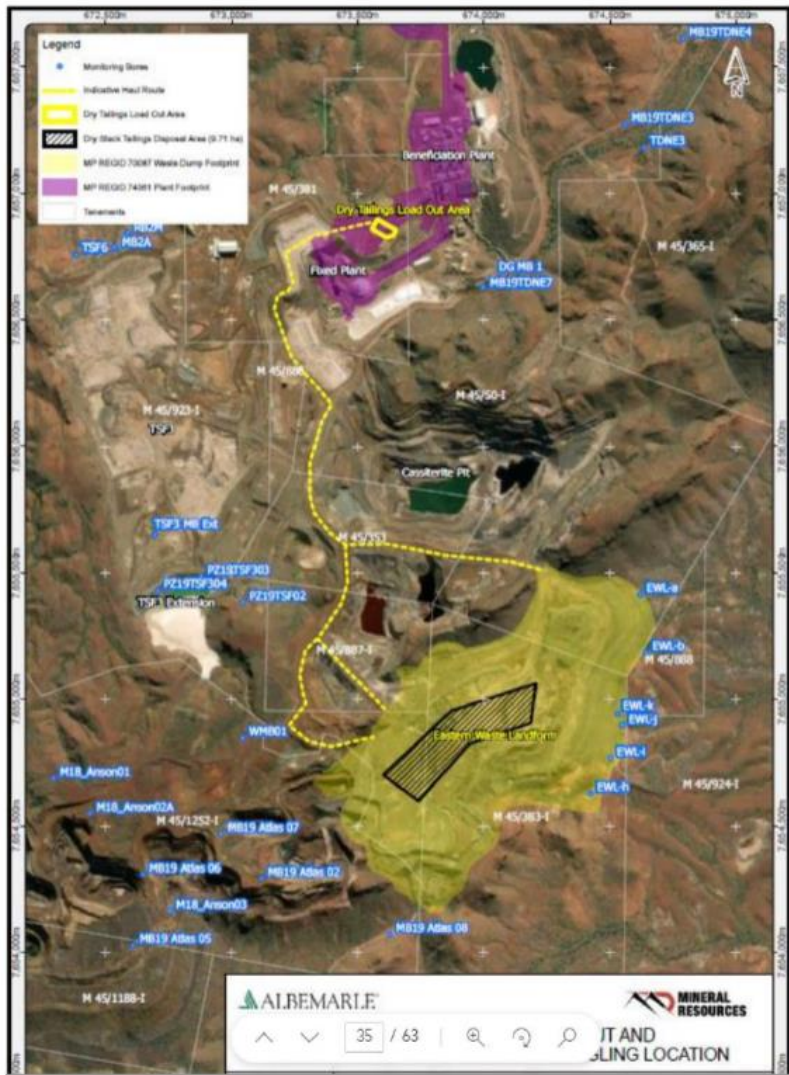


Figure 1: Map of Existing Licence Approved Area and Proposed EWL Boundary, Dry Stack Disposal Area, Groundwater Monitoring and Plant Layout as per approved Mining Proposal.

Licence: L4328/1989/10

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2.2.2 Direct Toxicity Assessment

Condition 34 within the licence instrument (L4328/1989/10) stipulates a required delivery date of the Direct Toxicity Assessment (DTA) by the 30 April 2023. Due to delays relating to land access and the ephemeral nature of streams in the region, delivery of the DTA assessment cannot be completed to the timing required by Condition 34. The Licence Holder is requesting an extension to the delivery of the DTA required by Condition 34 to 30 April 2024, to allow sufficient time to conduct sampling and subsequent reporting time during the 2023-2024 wet season.

2.3 Department of Mines, Industry Regulation and Safety (DMIRS)

Original 2022 Application

The original 2022 application was referred to DMIRS for advice to assist with avoiding regulatory duplication and for an assessment of the design of the EWL regarding stability and closure plan.

The following comments were provided (DMIRS 2022):

- The latest approved Mining Proposal containing the Eastern Waste Rock Dump (EWRD) is registration ID: 70087 which regulates the design of the waste rock dump and PAF cells to minimise the likelihood of AMD.
- DMIRS was assessing a Small Operations Mining Proposal to allow the comingling of tailings within the EWRD (Registration ID: 113388). This Mining Proposal addresses the location of the tailings deposition and quantity of tailings. Conditions recommended to be imposed with the Mining Proposal are:
 - Within the EWRD, no tailings are to be placed within 10 m of the landform's final embankments or underneath an embankment slope.
 - All reasonable measures will be taken to construct tailings storage, vat leach or heap leach facilities in a manner to prevent discharges from the facility to the environment.
- A site wide Mining Proposal (Registration ID: 113904) has been submitted to DMIRS and will incorporate all site activities and a three year mine plan into one proposal as well as moving the site towards risk and outcomes based regulation.

DMIRS 2022 also stated that "DMIRS has reviewed the geotechnical aspects of the proposal and does not have any concerns with the stability of the EWRD as a result of the tailings deposition."

Updated Application 2023

Mining Proposal RED ID: 113904 was approved March 2023 and allows for dry stack tailings to be comingling throughout the entire EWL rather than in the specific area, with the exception of within 10 m of the final batter designs and 2 m from the batters of the final constructed landform. A compacted base layer of NAF material will be placed on any natural surface to a depth of at least 5 m.

The potential impacts of the co-mingling will be monitored through the existing and proposed network of monitoring bores.

DMIRS has provided comments recommending further testing using tailings that are currently generated on site to assess the risk of disposal and comingling tailings with PAF material. Also trigger levels for intervention and mitigation. Specified Actions condition has been incorporated into the licence to address this.

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 - additional	Expansion of dry stack tailings to EWL co-mingled with mine waste	Air/windborne pathway	<ul style="list-style-type: none"> Dust suppression via water carts; The assessment of dry stack material stated that the coarse nature of the tails meant dust generation would be limited. The moisture content at time of deposition will also be unlikely to facilitate dust generation; Based on particle sizing data, the dry/coarse tailings stream has a minor potential for dust generation under strong wind conditions; however the very fine fraction (less than 10 µm) comprises approximately 2% of these tailings by volume (i.e. low) and hence significant dust effects would not be expected; Tailings will have an average 18% moisture; If the dry stack tails are to be left on the pad for an extended period of time, the material will be tarped or sprayed with water to limit dust generation; Implement loading and unloading procedures to ensure dust emissions from material handling is minimised; Working in consideration with wind and weather forecasts and dust alerts from the Bureau of Meteorology as well as onsite weather stations; Maintain a register of complaints. Complaints are investigated and

Emission	Sources	Potential pathways	Proposed controls
			<p>mitigation undertaken where necessary; and</p> <ul style="list-style-type: none"> • Trigger actions list of potential responses where a complaint is received: <ul style="list-style-type: none"> ➢ Ensure nominated site personnel notified; ➢ Review site conditions and monitoring results; ➢ Review operations and consider additional dust mitigation which can be implemented; and ➢ Engage any additional water carts.
Noise		Air/windborne pathway	<ul style="list-style-type: none"> • Regular servicing/maintenance of equipment to reduce noise emissions; • Minimise open cleared area (through staged clearing or progressive rehabilitation); and • The nearest sensitive receptor is the Wodgina Mining Village (~3 km from the EWL). The EWL is at a higher elevation (~240 m) than the Wodgina Mining Village (~180 m), screened by a central ridgeline sitting at approximately 300 m. This screen of 60 m between the operations and sensitive receptor would ensure noise attenuation is reached and a low risk to the receptors.
Seepage with soluble metals / metalloids		Infiltration through underlying soils to groundwater	<ul style="list-style-type: none"> • Dry stack tailings are chemically benign therefore potential seepage is predicted to be neutral; • Tailings geochemical characterisation report determined the moisture content of dry/coarse tailings to be 14.1 % w/w or 635 g (moisture corrected). Actuals recorded as part of standard plant composites (sample point at dry stack) show long term average moisture percentage (mass based) as 19%; • Dry stack depositional strategy involves free-draining coarse tailings material (moisture content ≤ 20%; recorded on a daily basis), comingled with compacted (Hydraulic conductivity < 10⁻³ m/d) and low moisture content (< 1.5%) mine waste rock. The co-mingling (or co-disposal) of PAF waste rock with the coarse tailings within the EWL was selected as a beneficial option, in terms

Emission	Sources	Potential pathways	Proposed controls
			<p>of lowering the seepage volume from encapsulation cells. Low moisture in the dry stack tailings poses low risk of seepage;</p> <ul style="list-style-type: none"> • Dry stack tailings will fill void spaces between the mine waste, limiting the availability of water to travel through the EWL; • A compacted base layer of NAF material will be placed on any natural surface to a depth of at least 5 m; • Comingled dry stack tailings within the EWL will have a minimum 2 m non-acid forming waste rock cover upon final construction of the landform; • The Licence Holder is replicating tailings test work with a geochemical assessment based on actual tailings produced. The geochemical leaching testwork using tailings generated onsite was initiated with MBS Environmental, earlier this year. The geochemical characteristics of the combined tailings and different streams are being testing and analysed separately, including the dry/course tailings that are proposed to be co-disposed with waste rock. The results will provide adequate source data for seepage and pit lake modelling and inform environmental risk to the proposed co-disposal strategy; • Dry stack tailings are to be placed greater than 10 m from the final batter design during operations; • Contact surface water runoff from active PAF waste areas during operations will be retained on the landform by PAF cell-bunding to prevent potential AMD as surface water runoff; • Dry tailings load out area is concrete banded; • Dry tailings load out area contains an under drainage network that reports to a sump before draining back to the processing plant where it is returned to the processing circuit; • Inspections will be made of the pad and drainage to ensure correct functioning; and • Establishment of new monitoring bores.

Emission	Sources	Potential pathways	Proposed controls
Stormwater with soluble metals / metalloids		Direct discharges	<ul style="list-style-type: none"> • Onsite water transfers will be conducted in compliance with obligations regulated by DWER; • Water quality monitoring will be conducted as per the licence; • Erosion control measures installed during initial stages of clearing activities; • Installation of sedimentation basins or baffling to reduce sediment-laden surface water leaving mine operations; • Topsoil stockpiles located to south of EWL will have a drain installed (sized to 1% AEP) to convey large flows, with rock armouring installed along embankment where high velocities are expected; • Sediment basins to be desilted prior to onset of wet season; • Minimising cleared/open areas; • Landforms designed for PMP rainfall event or suitable alternative; • Identification, collection and segregation of competent NAF waste to provide capping to waste rock landforms; • Encapsulation of any identified dispersive material; • Toe bunds on waste rock landforms; • Inspections of drainage and sediment basins prior to and during rainfall events; • Placement of dry/course tailings at a minimum 10 m from the outer surface of the EWL; • Regularly grading the perimeter of the EWL and maintaining a gradient of 3% over a 10 m distance at the edge of the PAF, directing surface water flows away from the active batter edge; • Finish each lift of the EWL with a 500 mm perimeter bund to capture batter runoff; and • Perimeter bunds will be formed from and placed on NAF material.
PAF wastes and AMD		Surface water	<ul style="list-style-type: none"> • Dry stack tailings are chemically benign and classified as non-acid forming;

Emission	Sources	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> • Licence Holder has stated no net seepage is expected to occur; • Reduced opportunity for water and oxygen ingress into PAF cells due to dry stack tailings filling in voids between the mine waste, therefore reduced risk in dump due to smaller particle size; • PAF cells will be implemented and managed as per the Okane (2023) Wodgina East Waste Landform 2-Year LOM Landform Design Update. Okane have recommended QC checks and audits occur during construction to identify wastes are disposed of in a designated location and the specified placement and compaction criteria are met. Location of PAF placement is tracked through regular spatial pick up and compliance to design checks as part of standard survey control; • A compacted base layer of NAF material will be placed on any natural surface to a depth of at least 5 m; • Comingled dry stack tailings within the EWL will have a minimum 2m non-acid forming waste rock cover upon final construction of the landform; • Dry stack tailings are to be placed greater than 10 m from the final batter design during operations; • Contact surface water runoff from active PAF waste areas during operations will be retained on the landform by PAF cell-bunding to prevent potential AMD as surface water runoff; • Placement of dry stack tailings in the EWL will ensure it is more than 10 m for final rehabilitated batters and has a further 10 m of NAF rock cover; • Contact surface water runoff from active PAF waste areas during operations will be retained on the landform by PAF cell-bunding to prevent potential AMD as surface water runoff; • Cover system to comprise a 2 m thick interim cover of PAF cells and a final 5 m thick NAF cover at final closure; and • Basal layer of NAF material will be constructed on the natural surface to limit the contact of baseflow with PAF waste. The NAF basal layer is to be

Emission	Sources	Potential pathways	Proposed controls
			constructed to fill local depressions / drainage lines and form a free draining, competent pad for PAF deposition. The current design (REGID 70087) includes 5 m+ of NAF waste, and located substantially above the maximum flood level of the southern drainage line.
Tailings spills		Direct discharges of dry stack tailings spills	<ul style="list-style-type: none"> Existing plant controls, including bunding and sump pumps; and Stockpile fluids and stormwater drain to a run-off sump and are pumped to the dry tailings area sump.

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 as a result 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
Pilgangoora Village (not operated by the Licence Holder)	Approximately 8 km from the EWL
Environmental receptors	Distance from prescribed activity
Groundwater	<p>The premises is located within the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act) Proclaimed Pilbara Groundwater and Surface Water Areas.</p> <p>No stock bores are in close proximity. The closest bore that is for camp use is under groundwater licence GWL184329 (Pilgangoora Operations Pty Ltd). This bore is located more than 9 km from the EWL.</p> <p>Depth to groundwater varies (3 – 245 mbgl) across the Premises as a result of major faulting and fractured rock aquifers being interspersed with impermeable bedrock.</p> <p>Depth to groundwater at the EWL varies from 6 to 17 mbgl.</p>
Major watercourses/ waterbodies	As currently designed, the EWL footprint is situated over the headwaters of various local ephemeral drainage lines that flow to the Turner River West. It is also located 50-150 m from the centreline of the 'southern drainage line' traversing past the south of the

	<p>EWL.</p> <p>No permanent surface water flows exist within premises boundary although small pools may occur.</p> <p>All ephemeral surface drainage at the Premises essentially flows in a northerly direction.</p>
Threatened/ Priority Flora	There is Priority 3 flora located within the Premises
Threatened/ Priority Fauna	Numerous Threatened and Priority Fauna are located within the premises boundary.

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 L4328/1989/10 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. Category 5 activities.

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 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								
Deposition of dry stack tailings to EWL (co-mingled with mine waste)	Dust	Air/windborne pathway causing adverse impacts on vegetation	Native vegetation Priority Flora	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 9, Table 4 Infrastructure and equipment requirements Requires dry tailings load out area with operational requirements for dust suppression	N/A
	Seepage of soluble metals/metalloids	Infiltration through underlying soils to groundwater which could lead to a reduction in groundwater quality	Soil and groundwater	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 3, Table 2 Management of Waste Requirements for disposal area, dry stack tailings characteristics and load out area Condition 16, Table 8 Authorised discharge points Requires EWL Dry Stack Tailings Disposal Area as an authorised discharge point for the deposition of dry stack tailings co-mingled with mine waste Condition 27, Table 12 Process monitoring Requires process monitoring for the volume of dry stack tailings disposed into the EWL Dry Stack Tailings Disposal Area Condition 28, Table 13 Monitoring of ambient groundwater quality Requires ambient groundwater monitoring at new bores – appropriately	<u>Further testing using tailings that are currently generated on site to assess the risk of disposal and comingling tailings with PAF material.</u> <u>Also trigger levels for intervention and mitigation.</u> <u>More samples have to be analysed in order to represent the variability of the ore body and volume to be mined.</u>

Licence: L4328/1989/10

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				
							located <u>Condition 29 Specified actions to conduct further tailings geochemistry analysis</u> Condition 34, Table 15 Annual Environmental Report Requires volume of dry stack tailings disposed and ambient groundwater monitoring to be reported within the Annual Environmental Report <u>Addition of trigger levels derived for intervention and mitigation.</u>	
	PAF wastes and AMD	Surface water	Soil and groundwater	Refer to Section 3.1	C = <i>Minor</i> L = <i>Likely</i> Medium Risk	Y	No conditions have been imposed. The design of the EWL and PAF cells to minimise the likelihood of AMD will be regulated by DMIRS – refer to section 2.3	N/A
	Tailings spills	Direct discharges of dry stack tailings spills	Native vegetation Priority Flora	Refer to Section 3.1	C = <i>Minor</i> L = <i>Likely</i> Medium Risk	Y	Condition 9, Table 4 Infrastructure and equipment requirements Requires for dry tailings load out area to be appropriately banded with drainage network	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 underline text** depicts additional regulatory controls imposed by department.

4. Consultation

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

Table 5: Consultation

Consultation method	Comments received	Department response
Local Government Authority advised of proposal (01/06/2023)	Town of Port Hedland replied on 25/07/2023 advising that they have no objection to works proposed as part of this tenement, subject to any development of construction or operation workforce camp facilities go through the development application/approval process, prior to construction.	Noted.
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal (01/06/2023)	DMIRS replied on 29/06/2023. Refer to Section 2.3.	DMIRS replied on 29/06/2023. Refer to Section 2.3.
Department of Planning, Lands and Heritage (DPLH) advised of proposal (01/06/2023)	DPLH replied on 29/06/2023 advising that the Eastern Waste Landform area intersects with Aboriginal heritage Places and the amendment area is not covered by an existing Section 18 Ministerial consent.	DWER advised the Licence Holder of this on 30/06/2023. Licence Holder advised the following on 11/07/2023: <i>“As of the 19 June 2023, the Aboriginal Heritage Information System showed that ID 9000 (Mt TINSTONE) had changed status from Registered to Stored Data / Not a Site. Heritage surveys and consultation with the Kariyarra Traditional Owners has found the area to be clear of Aboriginal Cultural Heritage (ACH) sites. On that basis, there are no statutory obligations, approvals or cultural heritage management plans required for the area.</i> <i>Due diligence has been undertaken in relation to the Mining Proposal REGID113904 and all intersections with DPLH Registered Sites and Lodged Places have been managed.</i> <i>MARBL have regular meetings with the Kariyarra Aboriginal Corporation, assist with the facilitation of on ground heritage surveys and are engaging to develop a ACHMP for the Wodgina Project.”</i>

Consultation method	Comments received	Department response
Kariyarra Aboriginal Corporation advised of proposal (01/06/2023)	No comments received.	No comments received.
Licence Holder was provided with draft amendment on (20/07/2023)	Licence Holder replied on 21/07/2023. Refer to Appendix 1.	Licence Holder replied on 21/07/2023. 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
3, Table 2	Addition of dry stack tailings co-mingled with mine waste for final disposal to the EWL. Addition of dry tailings load out area.
9, Table 4	Requirement for the dry tailings load out area to be concrete bunded.
11, Table 6	Addition of new groundwater monitoring well requirements for EWL.
28, Table 13	Removal of existing EWL groundwater monitoring bores and inclusion of new EWL groundwater monitoring bores.
34, Table 15	Addition of Update on the direct toxicity assessment (DTA) undertaken in accordance with ANZECC 2000 guidelines to ensure it is on track for implementation.
36	Extension of DTA report submission to 30 April 2024.
40, Table 16	Addition of construction compliance documents to be provided.
Schedule 1: Maps Figure 11	Update of Figure 11 to new EWL expanded area.

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. MARBL Lithium Operations Pty Ltd, EMAIL 1 - Licence Amendment Application to L4328 04/05/2023, Osborne Park, Western Australia.
5. MARBL Lithium Operations Pty Ltd, EMAIL 2 - Licence Amendment Application to L4328 04/05/2023, Osborne Park, Western Australia.
6. MARBL Lithium Operations Pty Ltd, EMAIL 3 - Licence Amendment Application to L4328 04/05/2023, Osborne Park, Western Australia.
7. MBS (2019) Wodgina Lithium Project: Site Production Tailings Geochemical Assessment. 2019. Prepared for Mineral Resources Limited by MBS Environmental.
8. MBS (2022) Wodgina Lithium Project: Cassiterite Pit Waste Characterisation. 2022. Prepared for Mineral Resources Limited by MBS Environmental.
9. Okane (2023) Wodgina East Waste Landform 2-Year LOM Landform Design Update. Prepared for Mineral Resources Limited by Okane.
10. MARBL Lithium Operations Pty Ltd, Response to Draft Conditions: PROPOSED AMENDMENT TO LICENCE L4328/1989/10 21/07/2023, Osborne Park, 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
3, Table 2	<p>Change:</p> <p>"Dry stack tailings to be deposited in the centre of the Eastern Waste Landform."</p> <p>to</p> <p>"Dry stack tailings to be deposited in the Eastern Waste Landform will not be placed within 10 metres of the final embankments or underneath an embankment slope."</p> <p>Aligns with M45/50i tenement conditions -</p> <p>"Within the Eastern Waste Rock Landform, no tailings are to be placed within 10 metres of the final embankments or underneath an embankment slope."</p>	Updated as requested.
3, Table 2	<p>Change:</p> <p>"Low moisture dry stack tailings not exceeding 19% w/w."</p> <p>to</p> <p>"Low moisture dry stack tailings not exceeding an average of 19% w/w."</p> <p>The dry stack tailings moisture content can vary slightly on a short term time frame (e.g. day to day) due to natural minor variations in plant operation and feed type. This can result in the moisture content being slightly lower or higher than 19% (w/w), however MinRes is confident on meeting this target value on an average basis, which aligns with historic data.</p>	Updated as requested.
11, Table 6	<p>Change Timeframe –</p> <p>"Must be constructed, developed (purged), and determined to be</p>	Updated as requested.

Condition	Summary of Licence Holder's comment	Department's response
	<p>operational prior to the use of the expanded Eastern Waste Landform.”</p> <p>to</p> <p>“Must be constructed, developed (purged), and determined to be operational prior to the progressive expansion of the Eastern Waste Landform and resulting decommissioning of existing EWL monitoring wells (i.e. EWL-a, EWL-b, EWL-h, EWL-l-i, EWL-j and EWL-k).”</p> <p>Enables the continual monitoring of these bores whilst the new ones are being installed.</p>	
27, Table 12	<p>Change</p> <p>“PARAMETER:</p> <p>Seepage captured by recovery bores EWL23RMB001, EWL23RMB002, EWL23RMB003, EWL23RMB004</p> <p>Averaging Period</p> <p>Cumulative.”</p> <p>to</p> <p>“PARAMETER:</p> <p>Groundwater monitoring bores EWL23RMB001, EWL23RMB002, EWL23RMB003, EWL23RMB004</p> <p>Averaging Period</p> <p>N/A.”</p> <p>Process monitoring of the EWL is completed by groundwater monitoring wells, not seepage recovery bores. Monitoring of cumulative flow is not applicable. Confusion may have been caused by the naming convention, thus the following needs to be updated in Table 12, Table 13, and Figure 11.</p> <p>Updated figure attached.</p>	Updated as requested.
28, Table 13	<p>Monitoring location</p> <p>EWL monitoring bores</p> <p>Include a footnote in Table 13 against existing EWL monitoring bores noting they will continue to be monitored as per the licence condition until</p>	Updated as requested.

Condition	Summary of Licence Holder's comment	Department's response
	decommissioning in line with the EWL expansion. Enables the continual monitoring of these bores whilst the new ones are being installed.	
Figure 11	Map updated	Updated as requested.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY				
Application type				
Works approval	<input type="checkbox"/>			
Licence	<input type="checkbox"/>	Relevant works approval number:		None <input type="checkbox"/>
		Has the works approval been complied with?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:		
Renewal	<input type="checkbox"/>	Current licence number:		
Amendment to works approval	<input type="checkbox"/>	Current works approval number:		
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L4328/1989/10	
		Relevant works approval number:	N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:	None	<input type="checkbox"/>
Date application received	04/05/2023			
Applicant and Premises details				
Applicant name/s (full legal name/s)	MARBL Lithium Operations Pty Ltd			
Premises name	Wodgina Operations			
Premises location	M45/49, M45/50, M45/254, M45/353, M45/365, M45/381, M45/382, M45/383, M45/886, M45/887, M45/888, M45/950, M45/923, M45/924, M45/925, M45/949, M45/1188, M45/1252, G45/290, G45/291 and G45/321 MARBLE BAR WA 6760			
Local Government Authority	Town of Port Hedland			
Application documents				
HPCM file reference number:	DWERDT75401, DWERDT775402, DWERDT775403			
Key application documents (additional to application form):	Application Form Supporting Documentation Appendices A-C Appendices D-E Appendices F-I			
Scope of application/assessment				

Summary of proposed activities or changes to existing operations.	<p>Licence amendment for the following:</p> <ul style="list-style-type: none"> • Expansion of the Eastern Waste Landform (EWL) boundary to align with DMIRS Mining Proposal REGID 113904; • Dry stack tailings can be co-mingled with waste rock within the entire EWL footprint; • Replace the EWL and Tailings Storage Facility 3 (TSF3) groundwater monitoring bores listed in condition 27, Table 12 of Licence L4328/1989/10; and • Extension to the date of the Direct Toxicity Assessment from the 30 April 2023 to 30 April 2024.
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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)
5	8,750,000 tonnes per annual period	Extend the dry stack disposal in the EWL to the entirety of the landform (excluding it from batters). As a result of the increased EWL deposition area, the applicable monitoring bores will need to be relocated.
52	64 MW gas power station	N/A
54	210 cubic metres per day	N/A
57	500 tyres	N/A
85B	0.82 gigalitres per annual period	N/A
89	3,650 tonnes per annual period	N/A

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input checked="" type="checkbox"/> Expiry:

		Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why? Mining tenure
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: CPS 9911/1
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Type: Proclaimed Groundwater Area/Surface Water Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office: North West
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Mining Proposal regulated under the <i>Mining Act 1978</i> . Reg ID 70087 – Cassiterite Pit Extension Mining Proposal Rev 1. Reg ID 74092 - Wodgina Lithium Cassiterite Pit (NE Node) Expansion) Mining Proposal. Reg ID 74361 – Wodgina Infrastructure Expansion Mining

		Proposal. <i>Environmental (Unauthorised Discharges) Regulations 2004.</i>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Classification: Possibly contaminated – investigation required (PC–IR) Date of classification: 20/05/2011