

bdrew@emmconsulting.com.au

Stephanie Pham
Program Manager
DWER Pilbara Region
Joondalup WA 6027

30 January 2025

Re: Mardie Salt Project - 5C licence amendment application

Dear Stephanie,

EMM Consulting (EMM) acting on behalf of Mardie Minerals Pty Ltd (Mardie Minerals), a wholly owned subsidiary of BCI Minerals, is applying for amendments to GWL205621 for the Mardie Salt Project (the Project).

The amendment application has been made via Water Online (Ref. 064101) with this supporting letter describing the proposed changes. Additional assessment information based on monitoring data collected by Mardie Minerals will be submitted shortly in support of the application.

The application has been made prior to full information being provided in order to manage the assessment timeframes. Mardie Minerals would like to resolve the application at the earliest convenience and prior to the end of the 2024/25 financial year.

1. Background

The Project, currently under construction, is located 80 kilometres south-west of Karratha and when completed will include primary and secondary seawater intakes, a large network of evaporation and crystalliser ponds, salt processing facilities and various other support infrastructure. Mardie Minerals has obtained the necessary approvals from both State and Commonwealth governments for the Project:

- Ministerial Statement 1211 (MS1211) – Optimised Mardie Project
- Works approval W6594/2021/1
- EPBC 2018/8236 and EPBC 2022/9169

2. Tenement changes

A number of tenement changes have occurred since the issuing of the original water licence as a result of the approved Optimised Mardie Project which included new crystallisers as well as some other infrastructure. These tenement changes (see Table 1) are part of this amendment application as water will be used at these locations and potentially abstracted in the future (subject to appropriate approvals being sort from DWER).

Table 1 Tenement changes

Current licence tenements	Licence tenements changes
L08/188, M08/526-B, M08/527-B, E08/2836-I, E08/2647, M08/525-B, E08/2943, E08/1849, E08/2740-I, L08/233	L08/188, M08/526-B, M08/527-B, E08/2836-I, E08/2647, M08/525-B, E08/2943, E08/1849, E08/2740-I, L08/233 New tenements - M08/538, M08/539-B, E08/2741-I, G08/101, G08/102, G08/103, G08/104, G08/93, L08/193

Legal access has been demonstrated for the new tenements by attaching Tenement Summary Reports from TENGRAPH Web PUBLIC to the Water Online application.

3. Water use

Water is a critical requirement for both construction and operation of the Project. The Department of Water and Environmental Regulation (DWER) is currently assessing 26D and short-term 5C licence applications for the take of groundwater from trenches in the footprint of the evaporation ponds to support construction (Water Online Ref.065479 and 065483). This water will come from a new coastal saline resource and will be used in conjunction with seawater from the Secondary Seawater Intake (SSWI) which is currently being used for major construction activities.

Groundwater is also currently taken from the Pilbara, Ashburton, Carnarvon-Superficial resource under GWL205621 for ongoing operational needs at the site like potable water supply to the camp, road maintenance, and other minor construction activities. The current entitlement is for 150,000 kL/year and this amendment application seeks an additional 50,000 kL/year to meet mainly road maintenance and dust suppression requirements into the future. The take of this groundwater will be spread across 14 existing production bore locations.

5. Assessment

Mardie Minerals has used *Operational Policy no. 5.12 – Hydrogeological reporting associated with a groundwater well licence* (DWER 2009) to determine the level of assessment required in support of this amendment application (refer to Table 2).

Table 2 Assessment level criteria

Decision criteria	Points	Comments
Volume requested	The amendment will result in a total of 200,000 kL/year – 4 points	A relatively small 33% increase of 50,000 kL/year is requested.
Level of allocation	>100% - 5 points	The Carnarvon-Superficial resource is fully/over-allocated however a simple risk-based assessment was used to set the allocation limit (2 GL/year) in the <i>Pilbara groundwater allocation plan</i> . Much larger licences have been issued since then and its apparent that a case-by-case assessment is currently used to allocate additional volumes.

Table 2 Assessment level criteria

Decision criteria	Points	Comments
Potential for unacceptable impacts to other users and GDEs	Unlikely to have any impacts on GDEs or other users – 0 points	There are three other licensees in the area that access the Carnarvon-Superficial resource. The nearest is Goldfields Gas transmission Pty Ltd (GWL180103) which is only for 1,100 kL/year. The other licensee is DBNGP (WA) Nominees Pty Ltd. Their abstraction is located ~20 km away and they have two licenses GWL176098 and GWL173398 for 100,000 kL/year and 27,200 kL/year respectively. The low additional volume proposed by Mardie will not impact on these other relatively small and distant licenses. One significant GDE site has been identified at the Mardie Project – Mardie Pool. Local groundwater levels sustain Mardie Pool during dryer periods. Spreading the take of the additional 50,000 kL/year across production bores will significantly limit the potential for any impacts. Production bores are also located outside the Mardie Pool exclusion zone. Mardie Pool is also a dynamic system being strongly influenced by hypersaline water of the tidal flats and annual recharge via wet season rainfall. Mardie Pool can act as both a losing or gaining stream depending on the interaction of these factors.
Salinity	Brackish to fresh (marginal) – 3 points	Mardie Pool is influenced strongly by both coastal saline water and terrestrial freshwater recharge.
	Total = 12 points	Indicates an H1 level of assessment. Noting that Operational Policy 5.12 suggests that for low volume applications with a low risk of impact a detailed assessment may not be warranted.

As a result of the assessment level in Table 1, Mardie Minerals is proposing to use a simple analysis of monitoring data from our network of groundwater monitoring bores, outlined in the Groundwater Monitoring and Management Plan (GMMP) and approved by both state and federal regulators, to demonstrate the low risk posed by taking an additional 50,000 kL/year. Additionally the GMMP will ensure there is a comprehensive adaptive management program in place to identify and respond to any risks and impacts (if they arise).

Mardie Minerals is currently compiling this groundwater information to meet the required annual reporting requirements for state and federal regulations and will submit a short summary to DWER in support of this amendment application shortly.

5. Consultation

Traditional Owners, the Yaburara Mardudhunera and Kuruma Mardudhunera people, will be informed of the request for additional water and this licence amendment application through Mardie Minerals’ regular meetings.

Mardie Minerals is happy to answer any question related to the information presented in this correspondence and looks forward to timely consideration of the amendment application.

Yours sincerely



Ben Drew

Associate, Water Policy and Planning

bdrew@emmconsulting.com.au