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Neville Hattingh
CEO
Element Environment
Via email: neville@elementenvironment.com.au

**RE: Marulan South Limestone Mine Continued Operations – Air Quality and Greenhouse Gas Management Plan Additional Information**

Dear Neville,

The following outlines additional information and clarification to address the New South Wales (NSW) Department of Planning and Environment (DPE) comments on the *Marulan South Limestone Mine (SSD 7009) Air Quality and Greenhouse Gas Management Plan* (**Todoroski Air Sciences, 2022**) (hereafter referred to as the AQGHGMP). **Table 1** outlines our response and where they have been addressed in the AQGHGMP.

**Table 1: Response to additional information**

| Item | Response | Section in AQGHGMP |
|---|---|---|
| *1. To accurately reflect the commitments published in Marulan South Limestone Mine Continued Operations Environmental Impact Statement dated 20 March 2019:*<br>• *Please include implementation targets for fitting haul trucks and mobile equipment with timer based shut off, as part of the idling time reduction program.*<br>• *Please reflect reduction target of 96 operating hours reduced to 62 hours over the period of 4 years for crushing equipment efficiency.*<br>• *Please include fuel reduction targets of 5-11%, as an outcome of the training program for operators.*<br>• *Additionally, please provide evidence demonstrating how the desired outcomes of this management plan are aligned with FY2030 climate targets published by Boral in media release 23/09/2021.* | The commitments identified are current mine management reduction strategies implemented at the time of writing the *Marulan South Limestone Mine Continued Operations Environmental Impact Statement* (EIS) (**Element Environment, 2019**).<br><br>These existing management strategies have been reflected in the AQGHGMP.<br><br>The EIS and associated Greenhouse Gas (GHG) Assessment were prepared well before the published Boral media release. The media release identified that Boral has set FY2030 climate targets to reduce its Scope 1 And 2 emissions by 46% and reduce relevant Scope 3 emissions per tonne of cementitious materials produced by 22%, from a FY2019 baseline. These climate targets are for the company on whole with each site contributing differently.<br><br>The current GHG management measures and other potential management measures identified in the EIS would contribute to minimising the generation of GHG | Section 9.2 |

| Item | Response | Section in AQGHGMP |
|---|---|---|
| | emissions for the site and would assist Boral to achieve the FY2030 climate targets.<br><br>Additional measures subject to investigation/ approval to reduce GHG emissions at the Marulan South Limestone Mine include:<br>• Use of alternative fuels for the lime kiln to transition from natural gas and coal to solid waste derived fuels (like that used at Berrima site);<br>• Pit design optimisation and driver training to reduce fuel usage of haul trucks;<br>• Transition site to renewable electricity sources either by onsite generation or via power purchase agreements; and,<br>• Investigate use of carbon capture technology for kiln emissions.<br><br>The AQGHGMP has been updated to include these additional measures. | |
| *2. Condition of consent D6 requires management plans to be consistent with the conditions of EPL 944. Please include information detailing which acceptable load calculation method will be utilised for this project, in accordance with EPL 944 condition L2.2.* | EPL 944 includes Load Limits for air pollutants including; coarse particulates, fine particulates, lead, mercury, nitrogen oxides and sulfur oxides.<br><br>The load calculation method utilised for the Project is source monitoring. An annual stack emission test is performed and used to calculate the load based on the operational hours of the plant.<br><br>The AQGHGMP has been updated to include reference to the load calculation method. | Section 4.2.2 & Section 6.1 |
| *3. Condition of consent B31(C)(ii) requires Boral to describe best practice management is being employed to minimise the development's air quality impacts. Please provide details of best practice management employed to minimise load limit emissions produced from the kiln and hydration plant.* | The AQGHGMP has been updated to include the following best practice management measures for the kiln and hydration plant:<br>• Visual monitoring of stack emissions;<br>• Baghouse filter installed on the kiln stack;<br>• Regular servicing and monitoring of baghouse filter as per manufactures specification to ensure operating efficiency;<br>• Continuous particulate monitor installed on kiln stack;<br>• Maintain ancillary equipment to avoid process upsets; and<br>• Annual stack emission testing to verify performance. | Section 5 |

Please feel free to contact us if you would like to clarify any aspect of this letter.

Yours faithfully,
Todoroski Air Sciences

Philip Henschke

**References**

Element Environment (2019)

"Marulan South Limestone Mine Continued operations Environmental Impact Statement", prepared for Boral Cement Limited, March 2019.

Todoroski Air Sciences (2022)

"Marulan South Limestone Mine SSD 7009 Air Quality and Greenhouse Gas Management Plan", prepared for Boral Cement Limited by Todoroski Air Sciences, February 2022.