

QUARTERLY ACTIVITIES REPORT

30 June 2020

LATROBE MAGNESIUM PROJECT

1. Updated Feasibility Study

In April 2020, LMG updated its feasibility study to its 3,000 tpa magnesium plant to incorporate the latest production flowsheet. The updated numbers estimated to generate EBITDA in the range between \$4.0 million to \$4.5 million per annum when it is operating at its name plate capacity.

The initial plant is estimated to still employ up to 54 on-going direct employees and contractors and 50 to 75 construction jobs.

The feasibility study estimates the capital cost to be in the order of \$54 million. This estimate includes design growth and contingencies of \$6 million. LMG has commenced a Value Engineering exercise to determine whether the capital cost can be reduced to \$50 million. It has identified certain areas where this reduction may be achieved.

2. Latrobe Council Planning Permit

On 5 June 2020, LMG.s application to the Latrobe City Council for planning approval to use and develop the site for its initial 3,000 tpa magnesium plant at 320 Tramway Road Hazelwood North was approved and a certificate issued.

LMG remains committed to progressing this project to safely re-process mining waste, generating jobs and developing a new industry in the Latrobe Valley.

3. GHD Planning Reports

LMG held a community briefing in Traralgon in December 2019 where it released its calculations of expected traffic movements and CO₂ emissions. The Company committed to publicly releasing the results of further studies by its consultants, GHD. Due to COVID-19 restrictions on public gatherings, LMG cannot hold further public meetings at this time. LMG placed two advertisements in the Latrobe Express noting where project information can be accessed and questions answered, including further study results.

In January 2020, GHD was engaged to undertake:

- an operational noise assessment;
- preparation of an air emissions report;
- an energy and greenhouse gas emissions assessment; and
- preparation of a traffic report.

These studies were based on the information supplied to GHD by Latrobe Magnesium's engineers and others and the results of these studies, summarised below, assume that the information is complete and correct:

Noise Report

This report considers the potential noise impacts of the type and scale of the proposed facility within the general area of Tramway Road and surrounding community. The report assesses potential noise impacts against relevant Victoria noise guidelines, legislation and policy, in particular EPA's *Noise for Industry in Regional Victoria* guidelines. As part of these studies, GHD undertook unattended noise monitoring and attended measurements at the nearest noise sensitive receiver.

GHD found that "results of the noise impact predictions show that operational noise from the site is expected to comply with applicable noise criteria."

Air Emissions Report

This report includes an assessment of the likely emissions to air from the facility and ground level concentration (GLC) impacts within the surrounding area. Air dispersion modelling was used to assess the incremental impact (applying emissions from the LMG plant alone) and the cumulative impact (applying emissions from both the LMG plant and ambient (background) concentrations of pollutants on GLCs within a 6 km radius of the proposed plant.

GHD used the Victorian EPA regulatory air dispersion model, AERMOD, to assess the likely air quality impacts. Dispersion modelling was conducted for each of the five years 2013 to 2017, using meteorological data files prepared in accordance with EPA guidelines.

GHD considers "the LMG plant to be of low risk to human health given the low incremental results in regard to the SEPP AQM [State Environment Protection Policy Air Quality Management] and the low relative increase in particulates compared with the existing ambient environment".

"The likelihood of exposure to emissions from the LMG plant is low due to the location of the LMG plant and the rapid decline in pollutant concentrations with distance from the maximum GLC"

Energy Use and Greenhouse Gas Emissions (GHG) Assessment

LMG also commissioned an energy and greenhouse gas assessment of the proposed facility. There are three major sources of quantifiable GHG emissions; combustion of stationary fuels, combustion of transport fuels and the consumption of electricity. The Table below provides a summary of emissions from these three sources.

Summary of GHG emissions

Emission Source	t CO ₂ -e / Tonne of Mg	t CO ₂ -e / year
Stationary energy emissions	11.39	34,190
Transport emissions	0.02	52.5
Consumption of electricity	3.89	11,681

At the 2019 community briefing, LMG's estimated direct CO₂ emissions was in the order of 10 tonnes per tonne of magnesium produced. This has increased slightly due to increased energy usage in the latest production flowsheet.

In summary, the magnesium plant is estimated to emit up to 34,190 tonnes of CO₂ per annum. In contrast, the three existing Latrobe Valley power stations emit in excess of 50 million tonnes of CO₂ per annum. Furthermore, the lifecycle impacts of use of lightweight magnesium metals, e.g. in cars, will decrease net greenhouse gas emissions.

Traffic Report

GHD reviewed the potential traffic impact of the proposed magnesium plant at Tramway Road. There will be 14 truck deliveries on weekdays, with the largest vehicle being a 26 metre long B-Double, comprising:

- 4 trucks from Yallourn power station
- 2 trucks from Melbourne
- 3 trucks travelling to Melbourne, and
- 4 trucks travelling to local destinations.

This is the same number of truck traffic movements as estimated by LMG at the December 2019 community briefing.

GHD concluded:

- the proposed on-site car parking provision is appropriate;
- the proposed bicycle parking provision exceeds planning scheme requirements;
- the proposed car park design meets planning scheme requirements with satisfactory access;
- the proposed hard stand area for trucks can accommodate vehicles of up to B-Double size;
- additional traffic generated by the development is predicted to be up to 59 vehicle movements in the AM and PM peak times, including 55 movements by staff and 4 movements by trucks;
- analysis shows that this traffic volume can be accommodated by the surrounding road network.

Overall, the proposed magnesium plant is not expected to create adverse traffic or parking impacts in the area.

Summary

Now LMG's planning application has been awarded by the Latrobe City Council, LMG has lodged it's Research, Development and Demonstration application with the EPA. Under the law, EPA has 30 days to respond to this application. However, the EPA has asked for an extension of time until 20 August 2020 and LMG has agreed to the extension.

Extracts from these GHD reports will be posted on LMG's website. Should a member of the public have any queries in relation to this information, please do not hesitate to contact me on mobile: 0421 234 688 or by email: dopaterson@latrobemagnesium.com.

4. Project Funding

LMG will be making its final investment decision in August 2020 once, it has:

- obtained the necessary development approval from the Environment Protection Agency for its Tramway Road site; and
- secured its project finance and equity funding.

5. Company Funding

In the next quarter, the Company's Research and Development rebate for its annual experiments conducted in the year ended 30 June 2020 is expected to be received and is estimated to be in the order of \$650,000. In February LMG secured a Research and Development funding facility and it will owe some \$480,000. The net amount for the Company will be in the order of \$170,000.



David Paterson
Chief Executive Officer

30 July 2020

About Latrobe Magnesium

Latrobe Magnesium is developing a magnesium production plant in Victoria's Latrobe Valley using its world-first patented extraction process. LMG intends to extract and sell magnesium metal and cementitious material from Yallourn ash, which is currently a waste stream from brown coal power generation.

LMG has completed a feasibility study validating its combined hydromet / thermal reduction process that extracts the metal. Construction is estimated to start on its initial 3,000 tonne per annum magnesium plant in the third quarter of this year with production commencing 18 months later. The plant will then be expanded to 40,000 tonne per annum magnesium 12 months later. The plant will be in the heart of Victoria's coal power generation precinct, providing immediate access to feedstock, infrastructure and labour.

LMG plans to sell the refined magnesium under long-term contracts to USA and Japanese customers.

Magnesium has the best strength-to-weight ratio of all common structural metals and is increasingly used in the manufacture of aluminium sheet in cars, laptop computers, mobile phones and power tools.

The LMG project is at the forefront of environmental benefit – by recycling power plant waste, avoiding landfill and is a low CO₂ emitter. LMG adopts the principles of an industrial ecology system.