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The Secretary
NSW Department of Planning & Environment
12 Darcy Street
PARRAMATTA NSW 2150

SUBJECT: Stone Ridge Quarry Project – (SUB-59618456)

Dear Secretary,

I would like to commence this brief submission with a short background on my expertise. As a geologist, I have worked for more than 50 years in the industrial minerals and quarry products sectors of the industry. This includes 25 years working largely in the extractive quarry industry covering the range of material types in all states of Australia, with some projects in SE Asia. My particular expertise as a consultant, is resource investigation and assessment, leading to the quantification of resources and determination of resource quality using the principles of the JORC Code – the Australasian Code for Reporting of Exploration Results, Mineral resources and Ore Reserves 2012. I have been contracted by a variety of operators to examine resources at both operating sites and new sites ahead of commencement of extraction activities.

I have visited the Stone Ridge site and am familiar with the investigations that have been conducted on that site to determine the quantity and quality of rock, its suitability for extraction, and for various aggregate product applications. Also, I am familiar with many of the operations currently supplying into the Sydney and surrounding regional markets, the materials presently being marketed, and the overall reserve/resource situation.

Based on my expertise, I wish to make the following points regarding the Stone Ridge application for approval to extract aggregates:

1. The applicant has undertaken an extensive and comprehensive investigation of the Site to gain a full understanding of the geology of the site and surrounds.
2. The geology investigations have been supported by drilling, using both diamond coring and percussion techniques.
3. Testing of recovered drill cores and chip samples has been completed to determine rock quality using: petrographic examination, and standard laboratory physical testing to determine of the suitability of all rock types for various products to meet AS specifications.
4. The Site is capable of supplying various specification aggregates of various qualities ranging from high-strength concrete, asphalt, and road sealing aggregates (at the

top) down to general purpose paving concrete and road base aggregates, to meet requirements for the relevant markets.

5. The Site has a large resource, capable of supplying high-quality aggregates for many decades.
6. The crushed rock fines fraction is suited to 'manufactured sand', and thereby alleviates the stockpiling of these finer gradings that often are retained on site due to low quality and/or lack of markets.
7. The Site is well located in respect of transport to the various markets.
8. While the immediate Hunter Region is an obvious market, the rock is suited to supply into the Central Coast and northern Sydney markets, which are now dependent on imported aggregates as there is little current supply from sources within or near to these markets.
9. The southern Sydney market is supplied from sources in the Illawarra and Southern Highlands, but the northern Sydney market is generally precluded from these supply options due to the longer transport distances.
10. The manufactured sand product will be capable of supplying fine aggregates into the concrete batching market and thereby reduce demand on the diminishing natural sand resources which have traditionally supplied the fine aggregates into concrete.
11. High quality aggregates from Stone Ridge will be capable of supplying Infrastructure Projects in the Hunter, Central Coast, and Sydney regions. Infrastructure Projects often require superior aggregates by virtue of the engineering design requirements needed to obtain the desired outcomes.
12. Through the agreement between ARDG and Forestry Corporation of NSW an ongoing revenue stream will accrue to the State that would otherwise not exist.

This project presents an opportunity within the Lower Hunter region to develop a large tonnage new quarry operation based on a resource which has been thoroughly investigated, with geology that is well understood, and which is supported by appropriate technical investigations. Furthermore, the Site is capable of meeting the full range of aggregate types required for construction projects. An opportunity for development of a site such as Stone Ridge is rare, and gives the State of NSW and Hunter Region a chance of securing: long-term supply of materials, employment opportunities, and tax/royalty revenue streams above those normally accruing from a similar quarry development.

I reviewing this project, my request is that your Department give favourable consideration to approval which will be of benefit to the State and the community.

Yours faithfully,



Graham Lee
(BSc, FAusIMM, MAIG)