

ASX ANNOUNCEMENT

15 SEPTEMBER 2022

CURTIN UNIVERSITY PROVIDES INITIAL FINDINGS ON HIGH REACTIVITY METAKAOLIN FOR GREEN CEMENT

HIGHLIGHTS

- First data under research agreement with Curtin University has been received
- Study finds potential for metakaolin to provide significant CO₂ emission reductions to the cement industry
- Study identifies significant potential supply deficit
- The global green cement market is forecast to be worth US\$56 billion by 2027¹

Suvo Strategic Minerals Limited (ASX: SUV) (“Suvo” or “the Company”) is pleased to announce it has received data under the first phase of the research agreement [announced on 10 March](#) with Curtin University.

Led by Senior Lecturer of the School of Civil and Mechanical Engineering Dr Thong Pham, Curtin University is investigating the application of high reactivity metakaolin (HRM) as a sustainable solution in decarbonising cement.

The first phase of the study, which largely focused on a literary review and data analysis to evaluate the feasibility and potential for the HRM application, has now been completed.

Study findings

Curtin University’s initial findings note the current sectors of concrete adopting metakaolin (MK) include:

- High and ultra-high performance, high strength and lightweight concrete
- Precast concrete
- Marine concrete structures
- Fiber-reinforced cementitious composites

The study findings show MK has numerous potential applications in the cement industry, particularly as a supplementary cementitious material (SCM) in conjunction with other SCMs to maximise its potential.

¹ Source: Green Cement Market 2022-2027, IMARC Group

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Importantly it found the production of concrete incorporating MK emits significantly less CO₂ compared to ordinary Portland cement (OPC). The study estimated that up to a 31% reduction in CO₂ emissions can be achieved with a 20% MK replacement.

Cement production is the world's single biggest industrial cause of carbon pollution, and is responsible for 8% of global emissions. Accordingly, the use of MK to produce green cement could have significant global benefits.

The study findings also note concrete incorporating MK can provide up to a 40% improvement in mechanical properties, such as compressive strength, flexural strength, and tensile strength.

This can help increase the lifespan of concrete structures by up to 50%, leading to another potential 14% reduction in CO₂ emissions, as well as a reduction in cement, water, and aggregate demand.

Researchers also found MK concrete possesses better durability characteristics, significantly extending its application to marine structures. This characteristic of concrete incorporating MK can greatly elongate the life span of concrete structures under harsh conditions.

Using assumptions from previous studies, Curtin University researchers note MK can be used in a concrete mixture between 10 - 40% of the mass of cement while potentially improving the mechanical properties of concrete.

Based on this, the study highlights a potential demand range of 0.72 - 2.88 million tonnes per annum of MK from the Australian construction industry alone.

With no current onshore production, this means there would be a significant supply gap, with the Australian construction industry likely being required to import MK to meet its demand.

Suvo Executive Chairman Henk Ludik commented:

"These initial study findings from Dr Thong Pham and his team at Curtin University illustrate the success that was achieved with metakaolin as a pozzolanic, outside Australia.

With cement production currently accounting for about 8% of global emissions, the metakaolin produced by Suvo has the potential to provide a significant reduction in global CO₂ emissions. We look forward to replicating the success achieved elsewhere in Australia, to play a meaningful role in the decarbonisation of the cement industry and consequently in the mining, infrastructure and industrial sectors in the Asia Pacific region."

-ENDS-

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Company Profile

Suvo Strategic Minerals Limited is an Australian hydrous kaolin producer and exploration company listed on the Australian Securities Exchange (ASX:SUV). Suvo is focused on production at, and expansion of, their 100% owned Pittong hydrous kaolin operation located 40km west of Ballarat in Victoria. Suvo's exploration focus is on near-term kaolin and high purity silica assets with 100% owned Gabbin (kaolin), Eneabba and Muchea (silica sands) projects located in Western Australia.

Pittong Operations

The 100% owned Pittong Operations, located in Victoria 40km west of Ballarat, is the sole hydrous kaolin operations in Australia, which has been in operation since 1972. Pittong comprises the Pittong, Trawalla and Lal Lal deposits located on approved Mining Licences MIN5408, MIN5365 and MIN5409 respectively.

At Pittong mining contractors deliver crude kaolin ore to stockpiles from the two currently operating mines, Pittong and Lal Lal. The plant takes its feedstock from the ROM and it is processed into four separate products for end users. These products are 10% moisture lump, high solids slurry, 1% moisture powder and 1% moisture pulverised powder. The solids slurry is used in paper and board manufacturing. The other products are used in paper, coatings, paint and specialist industries including rubber and pharmaceutical applications. Around 20-25kt per annum is supplied to various end users.

Gabbin Kaolin Project

The 100% owned Gabbin Kaolin Project (White Cloud) is located 215km northeast of Perth, Western Australia. The project area comprises four granted exploration licences (E70/5039, E70/5332, E70/5333, E70/5517) for 413km², centred around the town and rail siding of Gabbin. The generally flat area is primarily cleared farming land devoid of native bushland and is currently used for broad-acre cereal cropping. A mining access agreement is in place over the current resource area with the landowner and occupier.

The main rock types at Gabbin are primarily Archaean granite, gneiss, and migmatite. These rocks are overlain and obscured by Tertiary sand and Quaternary sheetwash. The weathering profile is very deep and contains thick kaolin horizons capped by mottled clays or laterite zones. The current JORC 2012 Mineral Resources are 72.5Mt of bright white kaolinised granite with an ISO Brightness of 80.5%.

Eneabba Silica Sands Project

The 100% owned Eneabba Silica Sands Project is located 300km north of Perth, Western Australia. The project comprises four granted exploration licences (E70/5001, E70/5322, E70/5323, E70/5324) for 169km².

The project is located on the Eneabba Plain whose sandy cover is very flat to gently undulating. Outcrop is rare due to the accumulations of windblown and alluvial sand at surface. Below this is a thin hard silcrete or lateritic claypan which overlies deep white and yellow sands.

Forward looking statements

Information included in this release constitutes forward-looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue", and "guidance", or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company's actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company and its management's good faith assumptions relating to the financial, market, regulatory and other relevant environments that will exist and affect the Company's business and operations in the future. The Company does not give any assurance that the assumptions on which forward looking statements are based will prove to be correct, or that the Company's business or operations will not be affected in any material manner by these or other factors not foreseen or foreseeable by the Company or management or beyond the Company's control.

Although the Company attempts and has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in forward looking statements, there may be other factors that could cause actual results, performance, achievements or events not to be as anticipated, estimated or intended, and many events are beyond the reasonable control of the Company. Accordingly, readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the Company does not undertake any obligation to publicly update or revise any of the forward-looking statements or to advise of any change in events, conditions or circumstances on which any such statement is based.