

ASX Announcement (ASX:AXE)

2 December 2019

PEPR submitted for Campoona Graphite Project

Highlights

- Archer submits a Program for Environment Protection and Rehabilitation (“PEPR”) for the Campoona Graphite Project.
 - Archer to pursue downstream partnership and development opportunities with lithium-ion battery manufacturers, graphite processing options, and high-value graphene and graphitic materials.
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Archer Materials Limited (“Archer”, the “Company”) (ASX:AXE) is pleased to announce that the Company’s wholly owned subsidiary Pirie Resources Pty. Ltd., has submitted a Program for Environment Protection and Rehabilitation (“PEPR”) to the South Australian Government to seek authorisation to conduct drilling and mining operations in relation to its Campoona Mineral Lease (ML 6470), the site of the proposed Campoona Shaft graphite mine, in South Australia.

Archer Executive Chairman, Mr Greg English, said: “Submitting the PEPR application is the next step in the development of the high grade Campoona Shaft graphite deposit. We have successfully prepared and lodged the PEPR within the period prescribed by the Mining Act.”

Campoona Graphite Project Background and Market Opportunities

Significant progress has been made by Archer on the development of the Campoona Graphite Project since the granting of a Mineral Lease (ASX Announcement December 1, 2017). On 6 April 2018, Archer announced that graphite from Campoona is structurally near-perfect down to the atomic scale and on 21 August 2018, it was announced that 99%+ and 95% natural Campoona flake graphite was used to produce commercially scalable full-cell configuration Li-ion batteries at the University of New South Wales. On 12 March 2019, Archer announced the successful conversion of 95% and 99%+ natural flake graphite from Campoona into high value spherical graphite using proprietary technology developed by Archer’s Japanese Partner for integration into Li-ion batteries.

Graphite is listed as a critical mineral by Australia, the US, EU, and Japan. Australia’s demonstrated economic resource is approximately 7,140 kilo tonnes[†], however graphite is not currently produced in Australia. Global production of graphite is estimated at 1200 kilo tonnes with a global market value of over US\$1 billion[‡]. Li-ion batteries consist of a group of batteries which operate with graphite in the anode[§]. Improvements in the anode are based on using graphite with high structural quality and purity, and an appropriate particle size and optimal morphology for effective lithium-ion intercalation chemistry.

[†]<https://www.industry.gov.au/sites/default/files/2019-03/australias-critical-minerals-strategy-2019.pdf>

[‡]<https://comtrade.un.org/>

[§]<https://onlinelibrary.wiley.com/doi/full/10.1002/9781119951438.eibc2300>

Next Steps

The work program described in the PEPR allows for a bulk sample up to 60 tonnes to be collected, and for the sample to be processed off-site, including into graphite and graphene materials. The collection of bulk graphite samples would allow Archer to pursue downstream opportunities with lithium-ion battery manufacturers and end-users so that the Campoona Graphite Project can be successfully developed to return maximum benefit to shareholders and the community.

In addition to the Campoona Graphite Project, advanced materials and the development of quantum computing technology remains a core focus of the Company. It should also be noted that graphene materials can alternatively be produced from the Carbon Allotropes inventory and not only from Campoona graphite. More information on Archer's mineral exploration activities can be found in ASX Announcement 30 October 2019.

About Archer

Archer provides shareholders exposure to financial returns from innovative technologies and the materials that underpin them. The Company's strategy is to build an industry-leading Materials Technology company, that delivers maximum value to shareholders through the commercialisation of assets at various stages of the materials lifecycle. Archer has strong intellectual property, broad-scope mineral tenements, world-class in-house expertise, a diverse advanced materials inventory, and access to over \$300 million of R&D infrastructure.

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