

**ASX Announcement**

By eLodgement

15 September 2022

# International Graphite achieves first product from pilot micronising and spheroidising plant at Collie

## HIGHLIGHTS

- Pilot scale graphite micronising and spheroidising equipment – key processes in the production of battery anode material – have been successfully commissioned at Collie.
- The most advanced known pilot scale graphite micronising and spheroidising plant to be installed and operated in Australia.
- Vendor pricing is now being sought to expand micronising equipment to product qualification scale.
- Future micronising production facilities are supported by a A\$2 million grant from the Western Australian Government.

International Graphite Limited (ASX: IG6) has successfully commissioned new pilot scale micronising and spheroidising equipment at its Collie downstream processing facility in Western Australia.

Executive Chairman Phil Hearse said, “***This is a major step in developing our operating knowledge and systems in the graphite downstream processing industry, leading to building a team that will understand the operational needs of graphite processing. It gives us further credibility in the global graphite market, provides the opportunity to engage with end-users, and shows the industry that we are serious contenders in development of our vertically integrated graphite business.***”

The pilot plant is the most advanced and largest known facility of its type in Australia and is the first stage in the Company’s roadmap to full-scale commercial production. Operation of the pilot plant is designed to:

- Demonstrate the Company’s ability to produce a high quality spheroidised graphite product suitable for battery anode material (**BAM**).
- Support the design and development of a commercial line of micronised graphite product.
- Begin establishing International Graphite’s presence in the graphite marketplace.
- Build operating expertise in graphite product handling and packaging.

- Assist in the development of a process for the purification of graphite concentrates.

The pilot scale micronising and spheroidising equipment consists of two specialised machines used to size and shape graphite concentrates from a nominal ~150 micron to ~20 micron.

A classifying impact mill is used to grind the graphite flakes to a fine size while avoiding over-grinding using a built-in classifier. The mill consists of a feed hopper, screw feeder, grinding chamber, rotary classifier and cartridge filter driven by an exhaust fan.

The graphite spheroidising mill shapes and folds the graphite flakes from platelets to a spherical shape which is required for BAM production. The spheroidising mill consists of a feed system, spheroidising chamber, rotary separator, air classifier and cartridge filter driven by an exhaust fan.

Samples of the feed, micronized product and spheroidised product from the pilot plant run are shown in Figure 1.



**Figure 1 – Feed and products from the pilot plant**

In the future, International Graphite's planned downstream graphite operations aim to process graphite concentrates from the Company's Springdale Graphite Project (**Springdale** or the **Project**), near Hopetoun and 25km south of Ravensthorpe in Western Australia (Figure 2). The micronised and spheroidised graphite product will then be purified and is also planned to be coated to produce a finished BAM product suitable for the manufacture of Li-ion battery anodes. Production of a coated BAM product in Australia for export to anode manufacturers would capture the full value chain of BAM material.

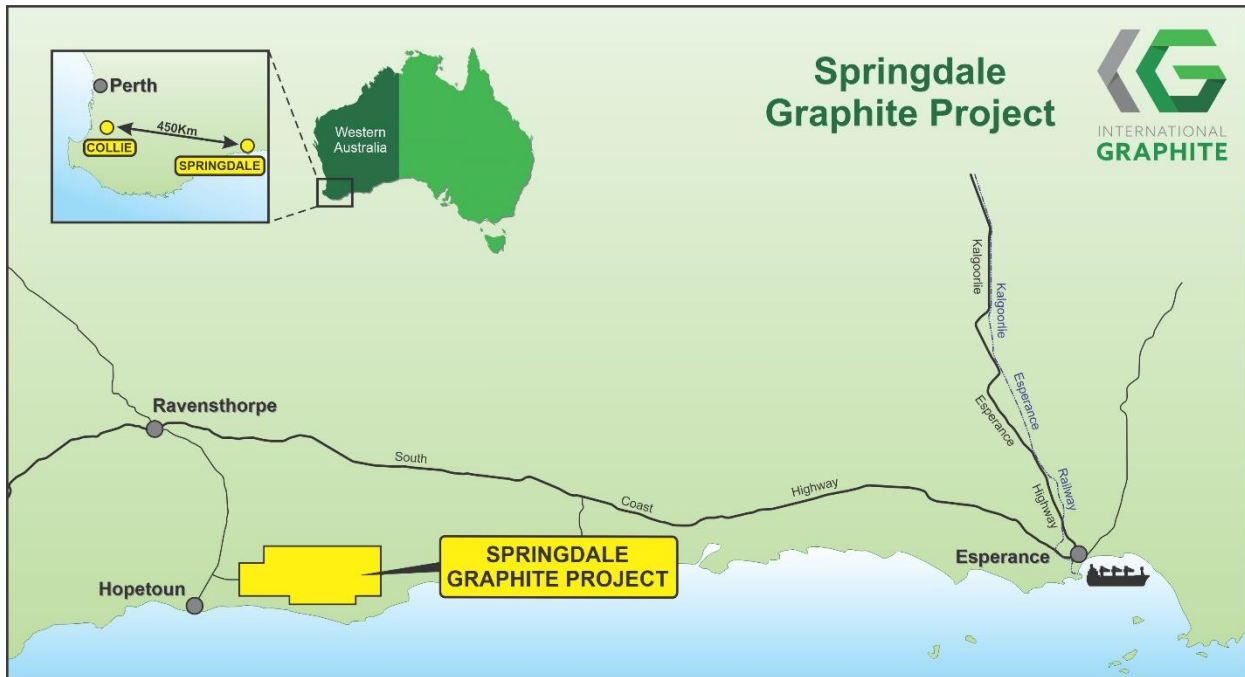


**Figure 1: Commissioning of pilot facilities, Collie**

International Graphite will continue operating the Collie pilot facilities to refine operating systems and material handling capability, implement comprehensive quality control and quality assurance scalable to commercial operations, develop intellectual property including patents and trademarks, health, safety and environmental management systems, and develop cost models.

The Collie facility also houses a speciality high temperature (thermal) purification furnace which has been delivered to site but is yet to be commissioned. Thermal purification is a pathway to purifying graphite concentrates without the need for alkali or acid based traditional purification methods, and is an alternate purification pathway that the Company is exploring.

The Company is focused on the development of a commercial scale micronising plant in Collie that is expected to be operational in the second half of 2023. Initially, it will treat third party concentrates and finished products will be sold, as a conductive additive to battery cathodes and other industrial applications, or as an intermediate product used in the production of spheroidised purified graphite.



**Figure 2: International Graphite location map**

International Graphite is currently engaging with equipment manufacturers to procure the next scale of micronising equipment – ‘production qualification scale’ -- to demonstrate the Company’s ability to provide the quality control necessary to gain customer sales agreements.

The Company is also finalising contract documentation with the Western Australian Government relating to the \$2 million Collie Futures Industry Development Fund award. The funding was announced in September 2021 and is to be applied to the Collie facilities including a graphite micronising commercial production facility.

This announcement has been authorised for release by the Board of Directors of International Graphite Limited.

**Phil Hearse**  
Executive Chairman

**For more information please contact:**

**Robert Hodby**  
CFO/Company Secretary  
robert.hodby@internationalgraphite.com.au  
+61 407 770 183

**Marie Howarth**  
Media & Communication  
marie.howarth@internationalgraphite.com.au  
+61 412 111 962

## About International Graphite

International Graphite is an emerging supplier of processed graphite products, including battery anode material, for the global electric vehicle and renewable energy markets.

The Company is developing a sovereign Australian 'mine to market' capability, with integrated operations wholly located in Western Australia. The Company intends to build on Australia's reputation for technical excellence and outstanding ESG performance with future mining and graphite concentrate production from its 100% owned Springdale Graphite Project and commercial scale downstream processing at Collie. International Graphite is listed on the Australian Securities Exchange (ASX: IG6) and Tradegate and Frankfurt Stock Exchange (FWB: H99, WKN: A3DJY5) and is a member of the European Battery Alliance ([EBA250](#)) and European Raw Minerals Alliance ([ERMA](#)).