



11 JUNE 2019

ASX ANNOUNCEMENT

## EcoGrafi Lithium Valley Development

### Proposed Western Australian EcoGrafi facility to form part of multi-hub battery graphite production base

#### Highlights

- Engineering study finds WA battery graphite processing plant will be financially and technically robust
- Proposed Kwinana EcoGrafi plant to manufacture battery graphite worth US\$72m a year for export to lithium-ion battery manufacturers and employ ~75 people once in production
- Kwinana will form part of a multi-hub roll out development strategy with expected combined earnings of US\$77m EBITDA

Kibaran Resources Limited (“Kibaran” or the “Company”) (ASX: KNL), is pleased to report the completion of studies by GR Engineering Limited for the development of an EcoGrafi battery graphite production facility in the Kwinana Industrial Area of Western Australia known as WA’s Lithium Valley, located 30km south of Perth.

The plant has a forecast up-front capital cost of US\$22.8 million for an initial 5,000tpa, followed by a further US\$49.2 million to expand production to 20,000tpa of battery-grade graphite.

Graphite will be procured and processed at the Kwinana facility from a range of suppliers and will be exported to lithium-ion battery customers in Asia, Europe and the US.

The engineering study estimates that the Kwinana plant would have a pre-tax net present value of US\$141m, generate an internal rate of return of 36.6 per cent and post annual EBITDA of US\$35m.

These financial results compare favourably to Kibaran’s similar facility planned to be constructed in the Asia-Pacific region (refer ASX announcement EcoGrafi Study Delivers Downstream Development 17 April 2019) and are based on the updated engineering study from the optimised EcoGrafi flowsheet (refer ASX announcement Exceptional Results from European Customer Qualification Programme 21 March 2019).

Battery graphite feedstock will be sourced from existing producers to enable EcoGrafi processing to commence independently of the Epanko Graphite Project in Tanzania in order to satisfy customer requirements for additional, more environmentally sustainable sources of lithium-ion battery minerals. Once in production, the planned Epanko Graphite Project will also enable Kibaran to evaluate potential downstream processing graphite opportunities within Tanzania and the east African region.

Significant progress is being made on the Epanko debt financing arrangements with the Government of Tanzania, enabling KfW IPEX-Bank to progress the German Government United Loan Guarantee (refer ASX announcement *Kibaran Receives Government Support for Epanko Debt Financing Arrangements* 23 May 2019)

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In light of the engineering study's strong findings for Kwinana, Kibaran will now seek to secure funding and environmental approvals, with a view to making a Final Investment Decision in the first half of next calendar year.

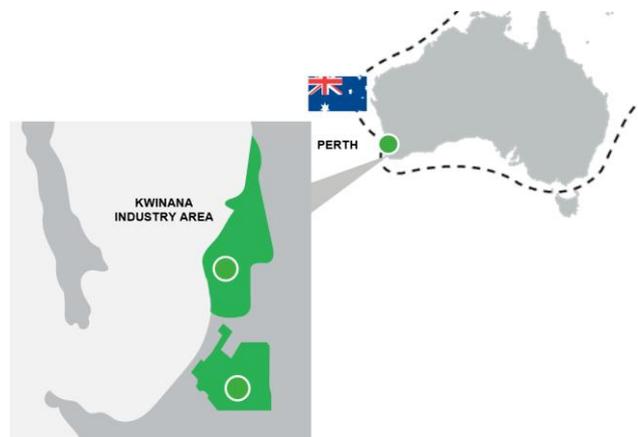
The Kwinana plant will incorporate Kibaran's proprietary **EcoGrafi** purification process, which has the advantage of not using highly toxic hydrofluoric acid, a key ingredient in all graphite processing plants currently operating in China.

Confirmation has recently been received from LandCorp, the Western Australian Government's land development agency, that a 4ha site will be made available for the new plant within the Kwinana Industrial Area. Importantly, a review of seaborne freight options undertaken as part of the engineering study highlighted that the Kwinana location will be cost-competitive to existing battery graphite supplies from China and provides additional benefits such as:

- Australia's reputation as a reliable supplier of high-quality industrial products;
- Ethical transparency in raw material production supply chains; and
- Protection of intellectual property rights for additional downstream processing activities.

Kibaran has held discussions with the Australian Federal and State Governments on the benefits of the unique **EcoGrafi** process. A range of mechanisms have been created by Government to incentivise Australian industry to develop lithium-ion battery capabilities, including the planned creation of WA's Lithium Valley within the Kwinana Industrial Area and Kibaran's battery graphite plant has received strong interest.

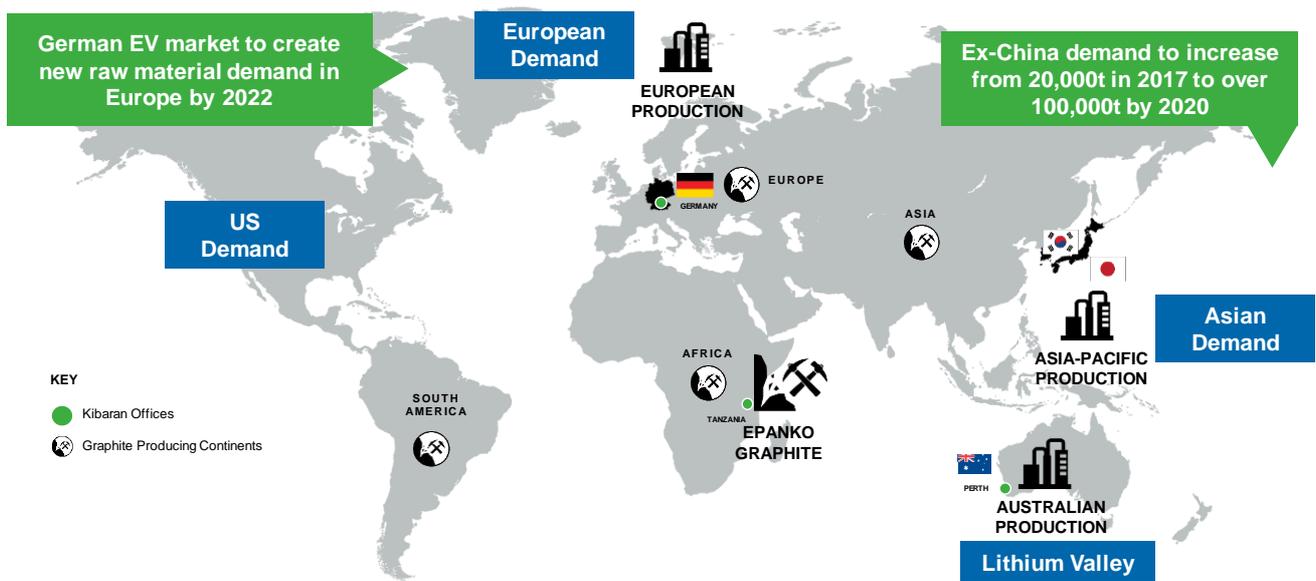
The Western Australian Department of Jobs, Tourism, Science and Innovation is the lead agency for the development of Kwinana Industrial Area and LandCorp is the estate manager of land owned by LandCorp. Kwinana is one of Western Australia's most important strategic industrial areas and hosts companies such as Alcoa, British Petroleum, CSBP, Wesfarmers LPG, Tianqi Lithium Australia, Coogee Chemicals, BHP Nickel West, Verve Energy, Tronox Chemicals and BGC Construction.



*Kwinana Industrial Area – Aerial View and Location*

The Kwinana location is also supported by the Future Batteries Industries Cooperative Research Centre, of which the Company is a member, that is based at Curtin University in Perth and recently received \$25 million of Australian Federal Government funding to further its initiatives. Kibaran is planning to include an R&D capability within the proposed Kwinana facility to support the advancement of further downstream activities and assist Australia's ambition to become a regional lithium-ion battery manufacturing centre.

As global demand for battery graphite expands, there is an increasing customer requirement for new, more geographically diversified and environmentally sustainable sources of high quality supply. Kibaran plans to capitalise on this opportunity through the establishment of multiple **EcoGrafi** battery graphite manufacturing facilities in the Asia-Pacific, Australia and Europe.



Global demand and diversification of supply to drive multi-hub battery graphite production base

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