



16 AUGUST 2019

ASX ANNOUNCEMENT

EcoGrafi Development Update

Pre-Development work underway for Kwinana facility in Western Australia

Kibaran Resources Limited (“Kibaran” or the “Company”) (ASX: KNL), is pleased to provide an update for the proposed battery graphite production facility in the Kwinana Industrial Area (“KIA”) of Western Australia located 30km south of Perth.

The Company is advancing the pre-development activities in response to the engineering study’s positive findings for the proposed Kwinana development (refer announcement dated 11 June 2019).

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. Pre-tax net present value is US\$141m, generating an internal rate of return of 36.6 per cent and EBITDA of US\$35m.

A Final Investment Decision (“FID”) is scheduled for the first half of next calendar year. Key activities underway include:

- Working with LandCorp to finalise lease arrangements for a site within KIA
- Independent verification process testwork and equipment testing campaign by major suppliers
- Local permitting and environmental approvals
- Advancing sales, offtake and financing arrangements
- Designing the R&D facility and advancing collaboration with Future Batteries Industry CRC

The Company is working with LandCorp, the Western Australian Government’s land development agency to secure the proposed site. The site has an area of 6.7ha which will be sufficient given the planned 20,000tpa footprint area is 2ha and the additional area of 4.7ha will allow future expansion and further downstream development such as a coating plant which would add further value to the battery spherical graphite.

Kibaran has initiated discussions with a number of organisations and Government departments with respect to obtaining approvals and licences to develop the project to meet the FID and development timetable. Work programs underway include:

- Engagement with Western Power
- Department of Water and Environmental Regulation (DWER) application for Works Approval and Assessment level under the EP Act
- Briefing meeting with EPA
- A transport study and bush fire management plan for the development approval from the local council as part of the application

The Company has commenced testwork to obtain independent verification of the process flowsheet and produce suitable samples for third party vendor testwork. This is expected to be completed by the end of the quarter and will support the financing discussions, permitting and provide confidence in the final process flowsheet design.

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The Company is confident that sales agreements will be secured given the positive feedback received from the extensive customer product qualification program undertaken and the strong European customer support.

The Kwinana development schedule outlines the staged 5,000tpa and 20,000tpa production. Subject to a successful FID, the Company expects, based on the current timetable, commercial production to commence after 11 months for the initial 5,000tpa. This production will provide commercial quantities to enter the battery manufacturers production lines as a precursor to the 15,000tpa construction and 20,000tpa production.

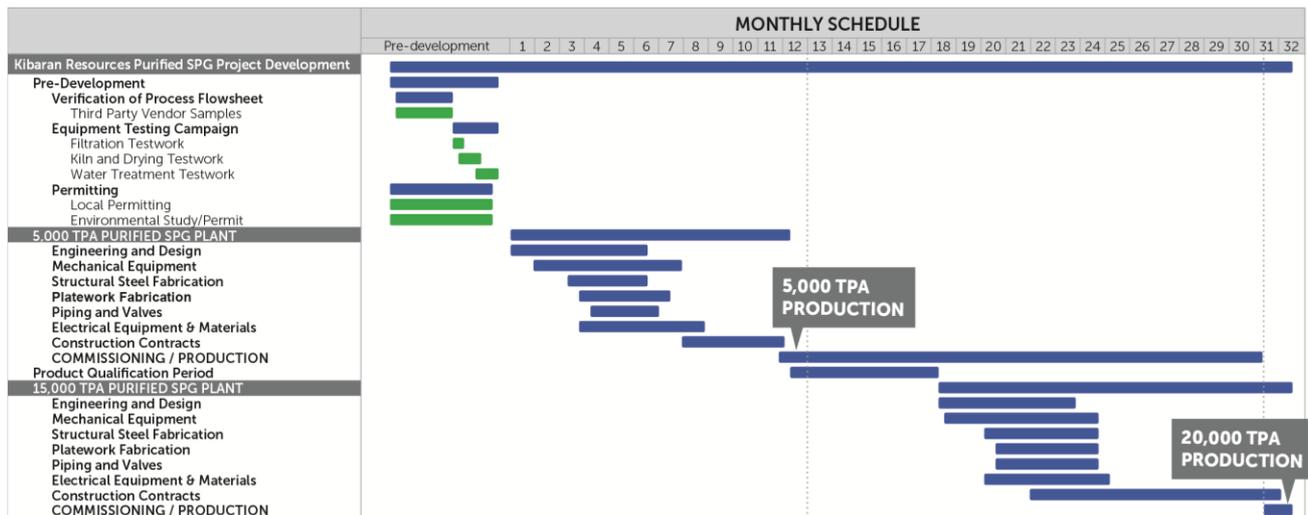


Figure 1: Kwinana development schedule

Kibaran is in discussion with the Australian Federal and State Governments on the benefits of the unique **EcoGraf** process, as there are a range of mechanisms initiated by the Government to incentivise Australian industry to develop lithium-ion battery capabilities. The Company's development meets the criteria for the planned creation of WA's Future Battery Industry within the Kwinana Industrial Area.

Demand and Pricing Update

The long-term battery (spherical) graphite demand remains positive with Benchmark reporting EV penetration rates increasing from 2% in 2018 to 25% by 2025, requiring approximately 800,000 tonnes of battery (spherical) graphite, more than six times the volume currently produced.

Prices during 2019 have maintained their 2018 increases where the standard grade price increased 20% from US\$3,000/tonne to US\$3,600/tonne.

German Government Supporting Battery Manufacturing

The German Government announced last month support for three battery cell alliances with earmarked funds of 1 billion euros for the domestic production of battery cells to reduce German EV car manufacturers dependence on Asian markets and support a battery industry in Europe¹.

Battery graphite is a major component of the Lithium-ion battery, by mass it's half the raw materials weight of the battery.

At present, China is the only producer of commercial quantities of natural flake battery (spherical) graphite, which requires hydrofluoric ("HF") acid to achieve 99.95% carbon grade. Hubei and Shandong provinces are the largest producing areas and there is increasing pressure on producers due to environmental and occupational health & safety regulations.

HF acid is critical for the production of high purity flake and battery graphite in China.

The proposed Kwinana development will incorporate the proprietary **EcoGraf** purification process, which has the advantage of not using HF acid and is positioned as an eco-friendly alternative new supply.



EcoGraf International Patent Application Update

An Australian provisional patent application was filed on 13 December 2017 in the name of Kibaran Resources Limited for a “Method of Producing Purified Spherical Graphite”.

Subsequent to the provisional patent, an international patent application (“PCT application”) was filed on 12 December 2018 claiming priority date from Australian provisional patent application. The PCT application was based on the Australian provisional patent application but refined based on the optimised test work program completed in 2018.

The World Intellectual Property Organisation administers the PCT system and does not publish any information before the earliest priority (filing) date.

The PCT application is not a requirement for any agreements, funding or development.

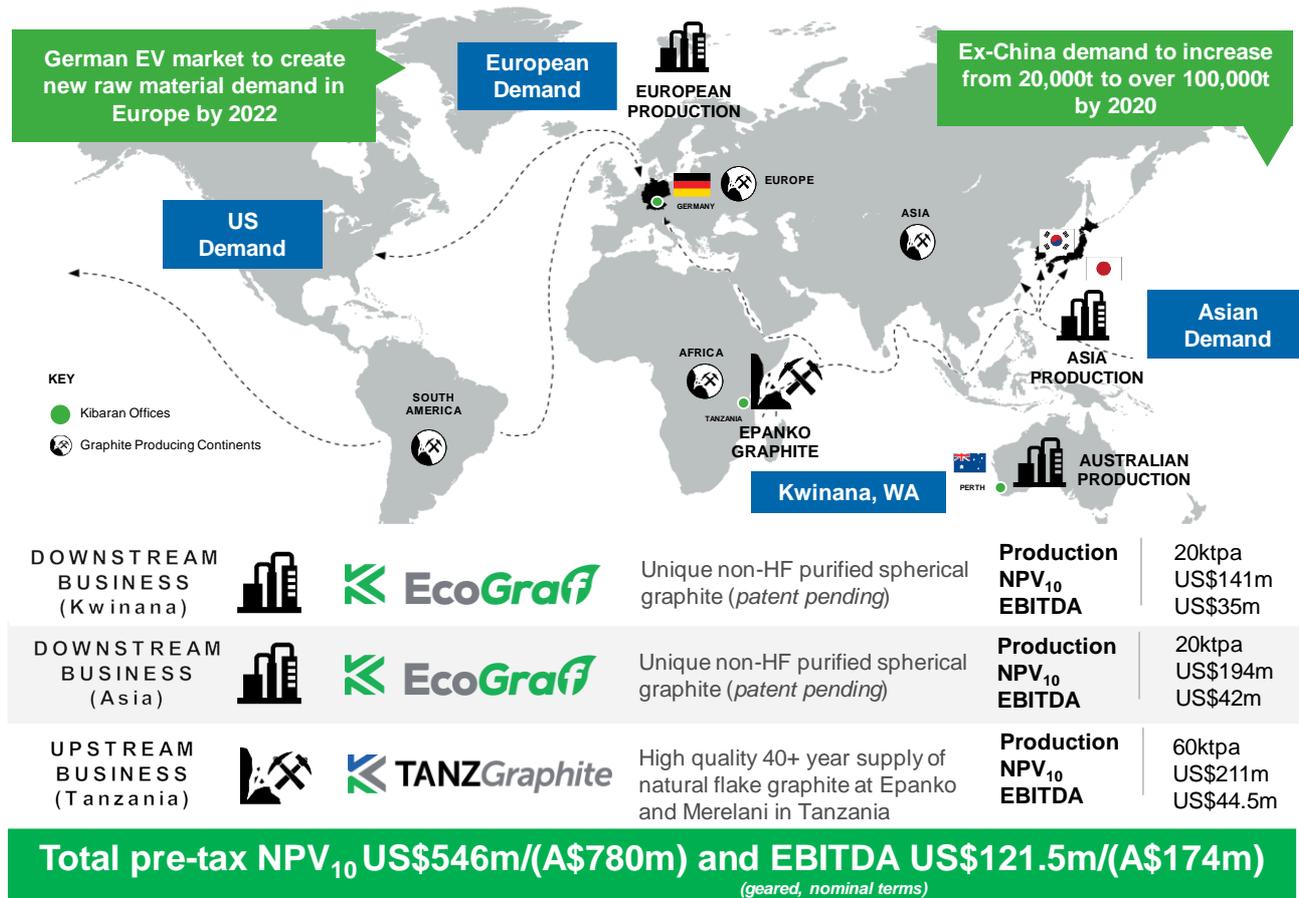


Figure 2: Global demand and diversification of supply to drive multi-hub battery graphite production base

The production targets and forecast financial information referred to in this ASX announcement were originally reported to the ASX by the Company on 21 June 2017, 5 December 2017 and 17 April 2019. All material assumptions underpinning the production targets and forecast financial information reported in those ASX announcements continue to apply and have not materially changed.

Various statements in this announcement constitute statements relating to intentions, future acts and events. Such statements are generally classified as “forward-looking statements” and involve known and unknown risks, uncertainties and other important factors that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed herein. The Company gives no assurances that the anticipated results, performance or achievements expressed or implied in these forward-looking statements will be achieved.

Note 1. Refer https://www.reuters.com/article/us-europe-batteries-germany/germany-to-support-three-battery-cell-alliances-economy-minister-idUSKCN1TJ1L6?utm_source=applenews.

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