

EcoGraf TanzGraphite Expansion Options to Support Market Growth

Epanko and Merelani-Arusha to Provide a Scalable, Long-Term TanzGraphite Production Hub for Key Export Regions

EcoGraf Limited (EcoGraf or the Company) (ASX: **EGR**; FSE: **FMK**; OTCQX: **ECGFF**) advises that due to growing demand for new high quality graphite supplies and an increasingly positive investment environment in Tanzania, it's commenced an assessment of expansion options for its 100% owned TanzGraphite flake graphite business.

Key priorities are identifying the preferred expansion pathway for the Epanko Graphite Project (**Epanko**), supporting Government plans for development of the Merelani-Arusha Graphite Province through the Merelani-Arusha Graphite Project (**Merelani-Arusha**) and evaluating in-country downstream mechanical shaping facilities to create a global graphite supply base.

HIGHLIGHTS

- Commenced evaluation of options for significant expansion of the Epanko Graphite Project beyond its initial 60,000tpa capacity
- Extensive independent testing over the last 5 years confirms the superior quality of Epanko flake graphite and its advantages for use in lithium-ion battery anodes compared to existing graphite supplies
- Epanko Bankable Feasibility Study¹ outcomes confirmed 72% of Epanko Mineral Resource comprises fresh material, producing a product grade of 98.2-99%C, ideal for the Company's EcoGraf HFfree™ purification for battery anode material
- Opportunity to support Government plans for development of Merelani-Arusha Graphite Province with Mining Licence Application submitted for the Company's Merelani-Arusha Graphite Project
- Potential for in-country downstream mechanical shaping facility to provide a high-volume logistics hub to supply EcoGraf's initial Battery Anode Material Facility in Western Australia and planned additional processing facilities in key battery markets

Epanko Graphite Project

EcoGraf is in discussion with a group of financial institutions that have expressed interest in supporting development of Epanko with German development bank KfW IPEX-Bank and in also assisting the Company's plans to produce high purity, EcoGraf™ HFfree battery anode material for the global lithium-ion battery market. In conjunction with this process the Company is having discussions with the Government on the Epanko development arrangements and as a result of the increasingly positive investment environment and growing demand for high quality graphite, EcoGraf has commenced plans to expand its TanzGraphite flake graphite business.

As a first mover in the Tanzanian graphite sector, EcoGraf identified Epanko as a highly prospective, long-life graphite project, with the bankable feasibility study satisfying rigorous due diligence by bank appointed Independent Engineer's SRK Consulting and achieving Equator Principles compliance with International Finance Corporation Performance Standards and World Bank Group Environmental, Health & Safety Guidelines.

This uniquely positions EcoGraf's integrated graphite business to support increasing demand for high purity graphite products, with flake graphite mining operations in Tanzania supplying feedstock for the Company's HF free battery anode material facilities and large and jumbo flake graphite to be exported to high value industrial markets.

In response to increasing demand for graphite, EcoGraf has commenced an evaluation of expansion options for Epanko to identify the most efficient pathway to scale-up production significantly beyond its initial 60,000tpa capacity to supply the high growth battery graphite market.

The quality of Epanko graphite is the result of two key geological advantages, a calc silicate dominant host gangue mineral with very little deleterious elements and very high crystallinity caused by extremely high metamorphic pressure and temperature. Flake graphite crystallinity provides its physical and industrial properties, with the favourable Epanko mineralogy resulting in improved recoveries, product quality and economic efficiency.

As a result of these geological features, Epanko flake graphite is easily liberated using a low-cost, efficient flotation process to produce high quality graphite products, supported by the Company's large scale 200 tonne bulk sample program that has outperformed the Ore Reserve block model grades, confirming the integrity of the model and demonstrating the robust nature and significant upside of the Epanko Mineral Resource Estimate undertaken by CSA Global.

A number of specialists are supporting the Company's internal team and GR Engineering in the expansion assessment, which will leverage extensive geological and mineral processing studies completed for the Epanko bankable feasibility program. The expansion options study is expected to be completed during Q3 2022 and will be incorporated into EcoGraf's flake graphite planning model.

Merelani-Arusha Graphite Province

Merelani-Arusha is located in an established graphite province within Tanzania that has a history of past production, proven flow-sheet design and established export sales. Exploration and evaluation programs have identified an initial Mineral Resource Estimate² with the estimation process completed by independent consultants CSA Global.



TanzGraphite projects, with the Merelani-Arusha project located a short distance from the Kilimanjaro International Airport.



The Government is encouraging new development in the region and to support its future expansion plans, EcoGraf has submitted an application for a Mining Licence at Merelani-Arusha, with technical consultants in Australia, Tanzania and Germany undertaking the initial resource estimation, pit modelling, metallurgical testing, capital estimation, environmental and social studies.

Merelani-Arusha provides a potential additional flake graphite operation in Tanzania and subject to the outcomes of the expansion options study, EcoGraf will commission further studies to support product marketing and debt financing programs for the project.

East African Graphite Supply Chain Hub

Demand for natural graphite, led by the global lithium-ion battery market, is forecast to increase at 31.5%pa³ in the current decade, with customers requiring new sources of supply and seeking to reduce their reliance on existing supply chains in China.

EcoGraf is positioned to support this high growth through its TanzGraphite flake graphite projects and environmentally superior, high purity EcoGraf™ HF_{free} battery anode material products. The Company's extensive testing programs with prospective customers and independent consultants have repeatedly demonstrated the superior performance of Epanko Tanzanian graphite in mechanical shaping, purification and electrochemical testing⁴ and the efficiency of the EcoGraf™ HF_{free} process.

To optimise supply chain efficiencies EcoGraf is assessing the potential to establish a future centralised mechanical shaping facility in Tanzania to process Epanko and Merelani-Arusha flake graphite into battery graphite feedstock and fines by-products. Tanzania has access to clean hydro-power and is ideally located for supplying graphite into the battery and industrial graphite markets of Asia and Europe.

Preliminary engineering studies for Tanzanian battery graphite shaping have been completed by GR Engineering and operating a mechanical shaping plant in Tanzania is expected to lower carbon emissions, provide logistics efficiencies and create a more flexible supply chain as production expands.



This announcement is authorised for release by Andrew Spinks, Managing Director.

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Note 1: Refer ASX Announcement 21 June 2017

Note 2: Refer ASX Announcement 8 September 2015

Note 3: Benchmark Mineral Intelligence, Graphite Market Study, September 2020

Note 4: Refer ASX Announcements 18 October 2021 and 5 November 2020



About EcoGraf

EcoGraf is building a diversified battery anode material business to produce high purity graphite products for the lithium-ion battery and advanced manufacturing markets. Over US\$30 million has been invested to date to create two highly attractive, development ready graphite businesses.

The first new state-of-the-art **EcoGraf** processing facility in Western Australia will manufacture spherical graphite products for export to Asia, Europe and North America using a superior, environmentally responsible HF_{free} purification technology to provide customers with sustainably produced high performance battery anode material. Subsequently, the battery graphite production base will be expanded to include additional processing facilities in Europe and North America to support the global transition to clean, renewable energy in the coming decade and the rapid growth in battery materials.

In addition, the Company's breakthrough recovery of carbon anode material from recycled batteries using its EcoGraf™ process will enable the recycling industry to reduce battery waste and use recycled carbon anode material to improve battery lifecycle efficiency.

To complement these battery graphite operations, the Company is also advancing the **TanzGraphite** natural flake graphite business, with development of the Epanko Graphite Project, which will supply additional feedstock for the battery anode material facilities and provide customers with a long term supply of high quality graphite products for industrial applications such as refractories, recarburisers and lubricants.

A fly-through of Stage 1 of the new EcoGraf™ HF_{free} BAM Facility in Western Australia is available to view at:

<https://www.youtube.com/watch?v=XcZ6Xbg9Jgq>



Forward looking statements

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.

Production targets and financial information

Information in relation to the feasibility study conducted on the production of battery graphite using the Company’s EcoGraf technology, including production targets and forecast financial information derived from the production targets, included in this announcement is extracted from an ASX announcement dated 5 December 2017 “Battery Graphite Pilot Plant”, as updated on 17 April 2019 “EcoGraf Delivers Downstream Development” and 5 November 2020 “Completion of EcoGraf™ Processing Facility Development Report”, available at www.ecograf.com.au and www.asx.com.au. The Company confirms that all material assumptions underpinning the production targets and forecast financial information derived from the production targets set out in the announcement released on 5 December 2017, as updated on 17 April 2019 and 5 November 2020 continue to apply and have not materially changed.

Information in this announcement relating to the Bankable Feasibility Study conducted on the Epanko Graphite Project, including production targets and forecast financial information derived from the production targets, included in this announcement is extracted from an ASX announcement dated 21 June 2017 “Updated Bankable Feasibility Study” available at www.ecograf.com.au and www.asx.com.au. The Company confirms that all material assumptions underpinning the production targets and forecast financial information derived from the production targets set out in the announcement released on 21 June 2017 continue to apply and have not materially changed.

Mineral resources

Information in this announcement relating to Mineral Resources at the Merelani-Arusha Graphite Project has been previously reported by the Company in accordance with the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (**JORC Code**) (refer to the ASX announcement dated 8 September 2015 “Merelani Upgrade Paves Way for PFS”), available at www.ecograf.com.au and www.asx.com.au. The Company confirms that it is not aware of any new information as at the date of this announcement that materially affects the information included in the Company’s previous announcement and that all material assumptions and technical parameters underpinning the estimates in the Company’s previous announcement continue to apply and have not materially changed.

Information in this announcement relating to Mineral Resources at the Epanko Graphite Project has been previously reported by the Company in accordance with the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (**JORC Code**) (refer to the ASX announcement dated 31 March 2017 “Epanko Mineral Resource Upgrade”), available at www.ecograf.com.au and www.asx.com.au. The Company confirms that it is not aware of any new information as at the date of this announcement that materially affects the information included in the Company’s previous announcement and that all material assumptions and technical parameters underpinning the estimates in the Company’s previous announcement continue to apply and have not materially changed.

Information in this announcement relating to Ore Reserves at the Epanko Graphite Project has been previously reported by the Company in accordance with the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ (**JORC Code**) (refer to the ASX announcement dated 21 June 2017 “Updated Bankable Feasibility Study”), available at www.ecograf.com.au and www.asx.com.au. The Company confirms that it is not aware of any new information as at the date of this announcement that materially affects the information included in the Company’s previous announcement and that all material assumptions and technical parameters underpinning the estimates in the Company’s previous announcement continue to apply and have not materially changed.

