

1 OCTOBER 2021

ASX ANNOUNCEMENT

ASX: EGR

## Corporate Presentation and Webinars

Diversified battery anode materials company **EcoGraf Limited (EcoGraf or the Company)** (ASX: **EGR**; FSE: **FMK**; OTCQX: **ECGFF**) is pleased to provide the corporate presentation and webinar links for the recent events the Company participated this week.

### NWR Resources Series – Mining’s Top Microcaps and Midcap Webinar:

Tuesday 28th September

<https://youtu.be/E5t-E6Ub7MU>



### Batterie Event 2021- Lyon, France

Wednesday 29th September

<https://youtu.be/d89iQOvX738>



### Australia-India Business Exchanger (AIBX) – Fuelling Low carbon Economies: Australia-India Critical Minerals Partnership Potential Webinar

Thursday 30th September

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

For further information, please contact:

#### INVESTORS

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Managing Director

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ENGINEERING CLEAN ENERGY





October 2021

## Corporate Presentation and Business Update

ASX: EGR    FSE: FMK    OTCQX: ECGFF

ENGINEERING CLEAN ENERGY

# Disclaimer



## Securities Disclaimer

This presentation is for informational purposes only and does not constitute an offer to sell, or solicit to purchase, any securities. Such offer can be made only through proper subscription documentation and only to investors meeting strict suitability requirements. Any failure to comply with these restrictions may constitute a violation of applicable securities laws.

## Forward looking statements

Various statements in this document 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 document 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](http://www.ecograf.com.au) and [www.asx.com.au](http://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 document 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 document is extracted from an ASX announcement dated 21 June 2017 “Updated Bankable Feasibility Study” available at [www.ecograf.com.au](http://www.ecograf.com.au) and [www.asx.com.au](http://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.

## Competent persons

Any information in this document that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Andrew Spinks, who is a Member of the Australasian Institute of Mining and Metallurgy included in a list promulgated by the ASX from time to time. Andrew Spinks is a director of EcoGraf Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Andrew Spinks consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

Information in this document that relates to Mineral Resources is based on information compiled by Mr David Williams, a Competent Person, who is a Member of the Australasian Institute of Mining and Metallurgy. David Williams is employed by CSA Global Pty Ltd, an independent consulting company and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. David Williams consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

Information in this document that relates to Ore Reserves has been compiled by Mr Steve O’Grady, who is a Member of the Australasian Institute of Mining and Metallurgy. Steve O’Grady is a full-time employee of Intermine Engineering and produced the Mining Reserve estimate based on data and geological information supplied by Mr Williams. Mr O’Grady has sufficient experience which is relevant to the estimation, assessment and evaluation of the economic extraction of the Ore Reserve that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves”. Steve O’Grady consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.



# ***DIVERSIFIED HF<sup>free</sup>™ BATTERY ANODE MATERIAL BUSINESS***

***SUPPORTING THE GLOBAL TRANSITION  
TO CLEAN ENERGY AND E-MOBILITY***



## ***BATTERY ANODE MATERIAL***

*Western Australia  
and Europe battery anode  
material processing facilities*

## ***LITHIUM-ION BATTERY RECYCLING***

*Recovery of carbon  
anode material from  
lithium-ion batteries*

## ***NATURAL GRAPHITE***

*Scalable mining projects for  
long-term supply of natural  
graphite products*

**HF<sup>free</sup>™** = Purification process eliminates Hydrofluoric (HF) Acid



# Corporate summary



## Board and Executive Management



**Chairman**  
Robert Pett



**Managing Director**  
Andrew Spinks



**Director**  
John Conidi



**Executive Director – Finance**  
Howard Rae



**Executive Manager – Project Development**  
Shaun O'Neill



**Executive Manager – Product Development**  
Michael Chan

## Business Locations



## Share Price



**Shares on issue: 449m**  
**Unlisted performance rights: 8.55m**

## Major Shareholders (Top 20 = 55%)

BNP Paribas Nominees 23.9%  
First Sentier Investors 8.6%  
Board & Management 7.5%

Paradice Investment 5.1%

**ASX : EGR**  
**Börse Frankfurt : FMK**  
**USA OTCQX : ECGFF**

Share price A\$0.75  
Market capitalisation A\$337m  
Cash on hand 30 June A\$52.6m



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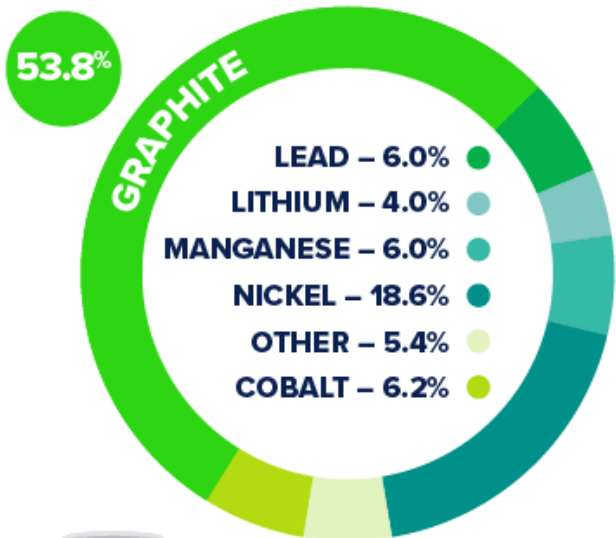
# Lithium-ion Battery Market Overview.



# Compelling lithium-ion battery market opportunity



## MINERAL DEMAND FROM ENERGY STORAGE



+700% BY 2025

EV MARKET FORECAST TO DRIVE +700% GROWTH IN NATURAL GRAPHITE DEMAND BY 2025

## GOVERNMENTS GLOBALLY PHASING OUT SALES OF NEW INTERNAL COMBUSTION VEHICLES

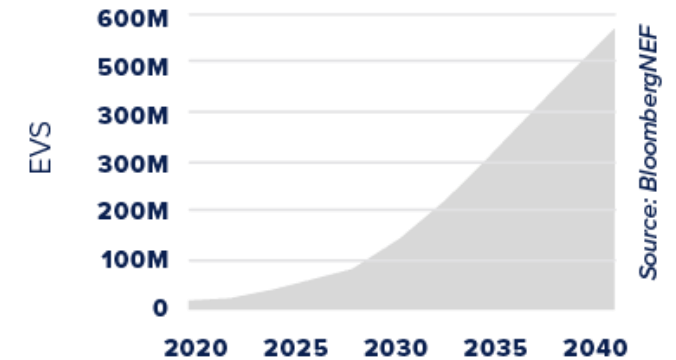


THERE WILL BE

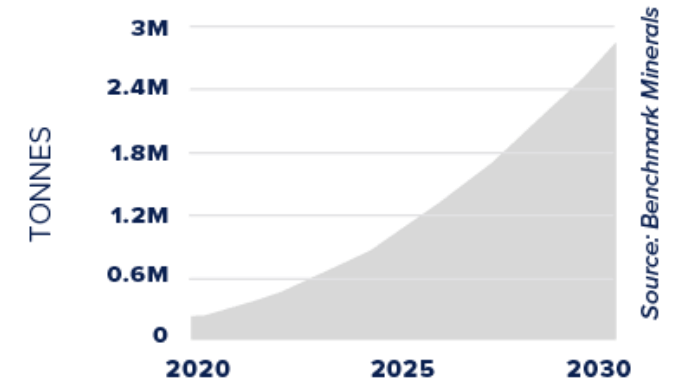


DIFFERENT EV MODELS GLOBALLY

## EV DEMAND



## ANODE DEMAND





# European demand in 3 key regions

More than 1,000 GWh/a LiB cell production capacity already announced until 2030

## WESTERN EUROPE

### UK $\Sigma \sim 55$ GWh/a

Britishvolt	2023	10 (30)
Envision AESC	2010/25	1.9/9/25
AMTE Power	2023	2

### Germany $\Sigma \sim 270$ GWh/a

CATL	2022	14 (up to 100)
Tesla	2022	Up to 50
Northvolt & VW	2024	16 (40)
ACC (Stellantis/Saft)	2023	8 (32)
SVOLT	2023	24
Farasis	2022	16
Microvast	2021	1.5 (6)
VARTA	2024	1.5 - 3 <sup>1</sup>
Leclanché	2020	1 (2.5)

### France $\Sigma \sim 125$ GWh/a

Verkor	2023	16 (50)
ACC (Stellantis/Saft)	2023	8 (32)
Envision AESC	2027	24 (43)

### Location TBA

Volkswagen	tba	(160)
Northvolt & Volvo	2036	Up to 50
BYD	tba	(34)
CALB	tba	tba

$\Sigma \sim 1,000$  GWh/a

## NORTHERN EUROPE

### Norway $\Sigma \sim 70$ GWh/a

Freyr	2023	40
Morrow	2024	8 (32)
Panasonic	tba	tba

### Sweden $\Sigma \sim 40$ GWh/a

Northvolt	2021	32 (40)
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## EASTERN EUROPE

### Poland $\Sigma \sim 65$ GWh/a

LGES	2018	15 (65)
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### Slovakia $\Sigma \sim 10$ GWh/a

InoBat	2024	10
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### Hungary $\Sigma \sim 50$ GWh/a

SK Innovation	2020	7.5 (18)
Samsung SDI	2018	2.5 (30)
GS Yuasa	tba	tba

### Italy $\Sigma \sim 110$ GWh/a

Italtvolt	2024	70
ACC	Until 2030	37
FAAM	2021	2.5

Source: Roland Berger as at mid July 2021

<sup>1</sup> Estimate based on 100-200 m units of 21,700 cells



# EU Commission's battery ESG regulations

## New measures announced to promote sustainability

### POLICY

**Responsible sourcing.** New mandatory procedures to ensure sustainable and ethical sourcing of raw materials such as graphite.

**Carbon (CO<sub>2</sub>) footprint, performance and durability labelling.** All batteries sold in Europe must declare their carbon footprint.

**Traceability.** All raw materials used in batteries to be procured according to OECD recognised guidelines for sustainable sourcing. Thanks to blockchain technology, each battery will have a digital passport tracking all upstream components.

**Recycling and establishing a circular economy.** A minimum proportion of battery content to be made up of recycled materials. To close the loop and retain valuable materials used in batteries - such as cobalt, lithium, nickel and graphite - for as long as possible, the Commission proposes to establish new requirements and targets on the collection, treatment and recycling of batteries.

### ECOGRAF'S ESG

- ✓ EcoGraf™ HF free proprietary purification process
- ✓ Epanko developed under Equator Principles
- ✓ EcoGraf™ recycling
- ✓ Renewable energy inputs into businesses
- ✓ Implementing low impact mining methods
- ✓ Implementation of Block Chain technology
- ✓ EcoGraf™ HF free proprietary purification process eliminates use of toxic hydrofluoric acid
- ✓ EcoGraf™ recycling enables customers to achieve improved recycling efficiencies

EcoGraf's sector leading ESG credentials are matched to support the global transition to clean energy



*EIB new energy lending policy supporting projects relating to the supply of critical raw materials*



**DEVELOPMENT READY**

# Battery Anode Material Business.

**HFfree™**



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**>60% YIELD**

**MAXIMISE EFFICIENCY  
AND PROFITABILITY**

---

**75% WATER**

**TO BE REUSED IN OPERATION**

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# Battery graphite business summary



State-of-the-art facility to deliver high quality, sustainably produced HF<sub>free</sub> battery anode material products

Initial commercial production plant commencing at 5,000tpa, expanding to 20,000tpa

- ✓ EcoGraf™ **HF<sub>free</sub>** proprietary purification process eliminates use of toxic hydrofluoric (HF) acid
- ✓ Feasibility, engineering and costing studies completed by GR Engineering Services
- ✓ Four years of pilot plant test work undertaken in Germany:
  - ✓ Successful application of EcoGraf™ purification process to a range of global feedstock supplies
  - ✓ Long-term feedstock agreement with leading German trading group TECHNOGRAFIT GmbH
- ✓ Extensive product testing completed and sales arrangements via thyssenkrupp AG
- ✓ Financing with Australian Government US\$35 million debt facility
- ✓ Completing pre-construction works for detailed engineering design

**EcoGraf's first facility to meet high growth global battery demand**



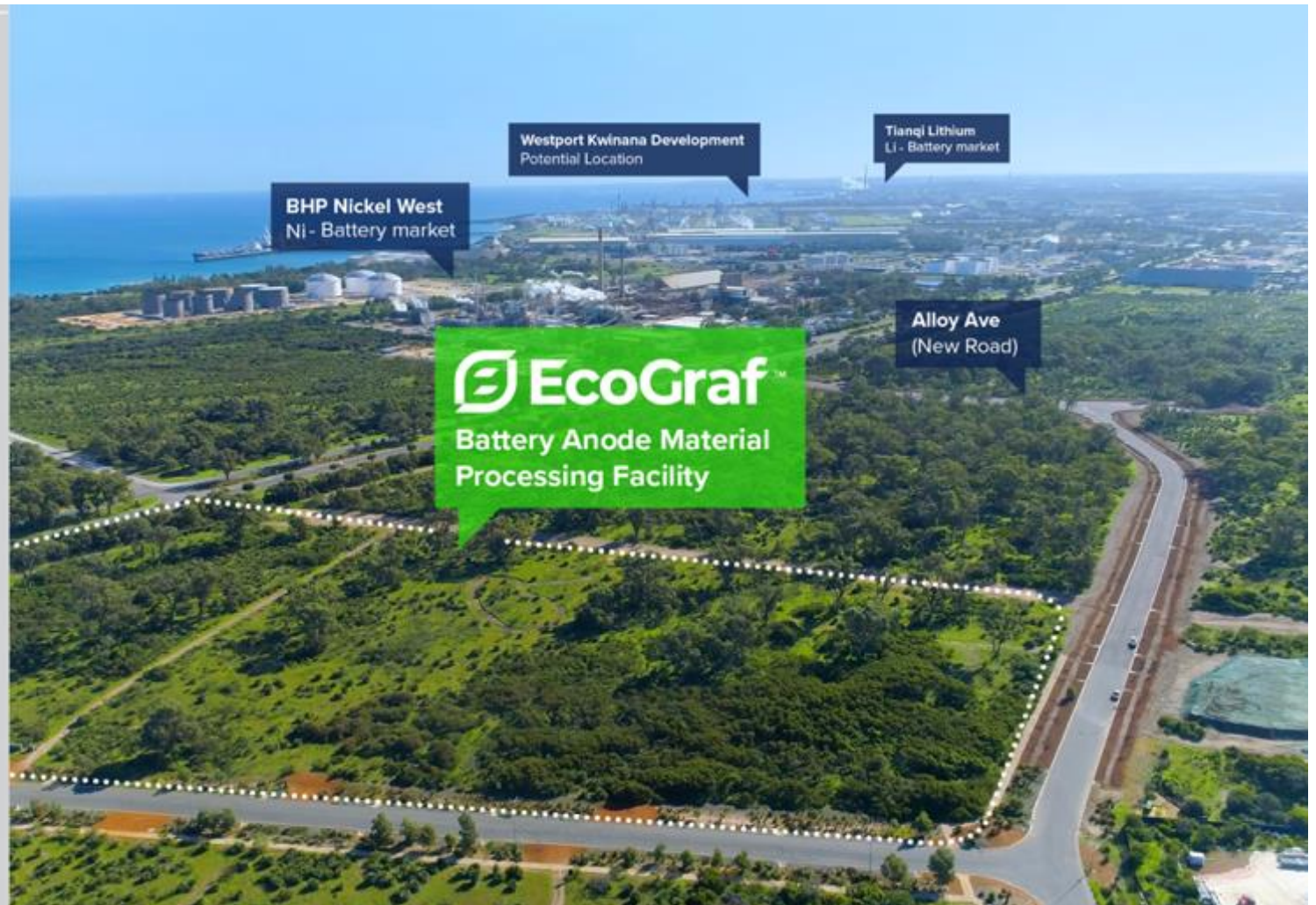
## Capital investment

## Financial returns @ 20,000tpa

Initial 5,000tpa	15,000tpa Expansion	Pre-tax project NPV <sub>8</sub>	Pre-tax equity NPV <sub>8</sub>	Annual EBITDA	IRR
US\$22.8m	US\$49.2m	US\$642m	US\$448m	US\$35m	42.4%

Refer ASX announcement dated 5<sup>th</sup> November 2020

# Western Australia: Kwinana-Rockingham location



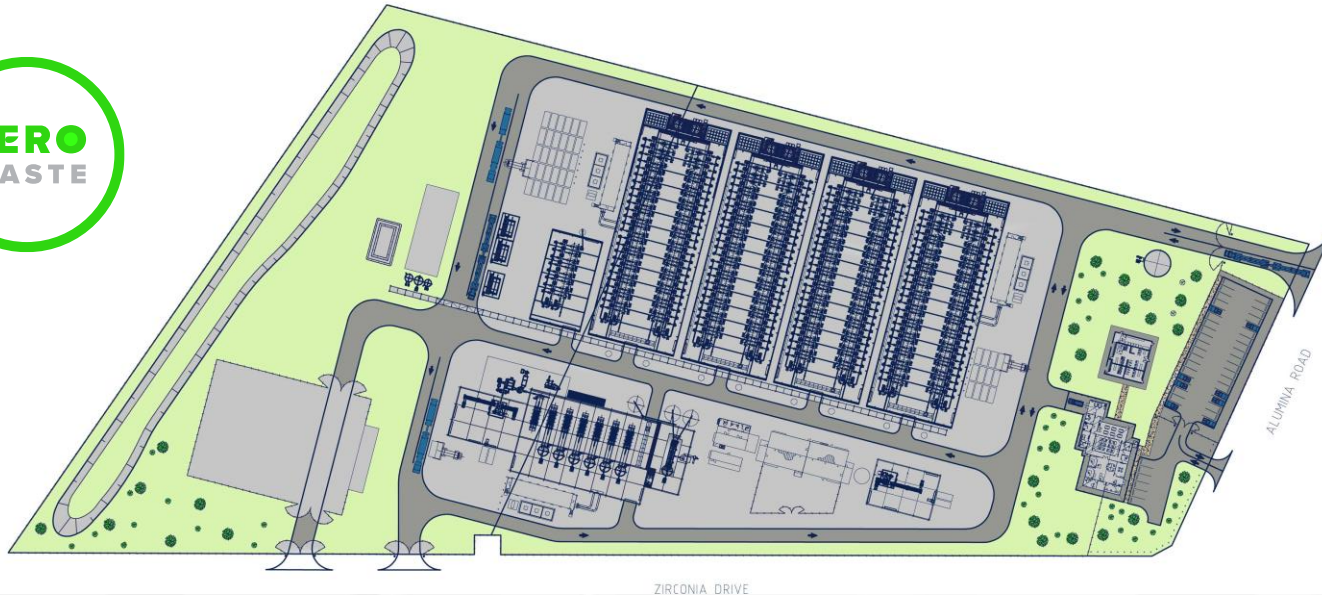


# Western Australian Battery Anode Materials Processing Facility

## CURRENT STATUS

- Export Finance Australia support received for US\$35m expansion loan
- Pre-construction works in progress to provide data for detailed engineering design and EPC procurement programs
- Opportunities identified for improved product yield and adoption of a zero-waste operating strategy
- Finalising regulatory approval submissions, site infrastructure and power, water, gas and reagent procurement arrangements
- Recruitment of experienced professionals to support the construction and operational commissioning programs

ENGINEERING CLEAN ENERGY



**HFfree™**

The new state-of-the-art processing facility will incorporate the Company's proprietary EcoGraf™ HFfree purification technology to manufacture 20,000tpa spherical graphite for the lithium-ion battery market.





# Sustainability focus and product development initiatives



- ✓ Commercial scale testing with leading equipment manufacturer indicates potential for product yield to exceed 60%
- ✓ Zero waste operating strategy with the goal of utilising 100% of feedstock through product innovation and development to maximise yield and value-add bi-products
- ✓ Engineered water processing solutions to treat and recycle wastewater and achieve a 75% reduction in water usage
- ✓ Adoption of renewable energy content

**superBAM**



- + Enhanced performance
- + Higher charge discharge capacity

END USE:  
HYBRID CARS/ POWER TOOLS  
& 3C APPLICATION

**greenRECARB**



- + Carbon additive to Cast/Grey Cast Steel & EAF Steel manufacturing

END USE:  
CAST & GREY CAST STEEL  
FOUNDRY/EAF FURNACE

**ecoCEM**



- + AA, AAA, 8V alkaline battery, NMC CEM material

END USE:  
AA, AAA, Li-ION CEM  
CATHODE & CAN COATING



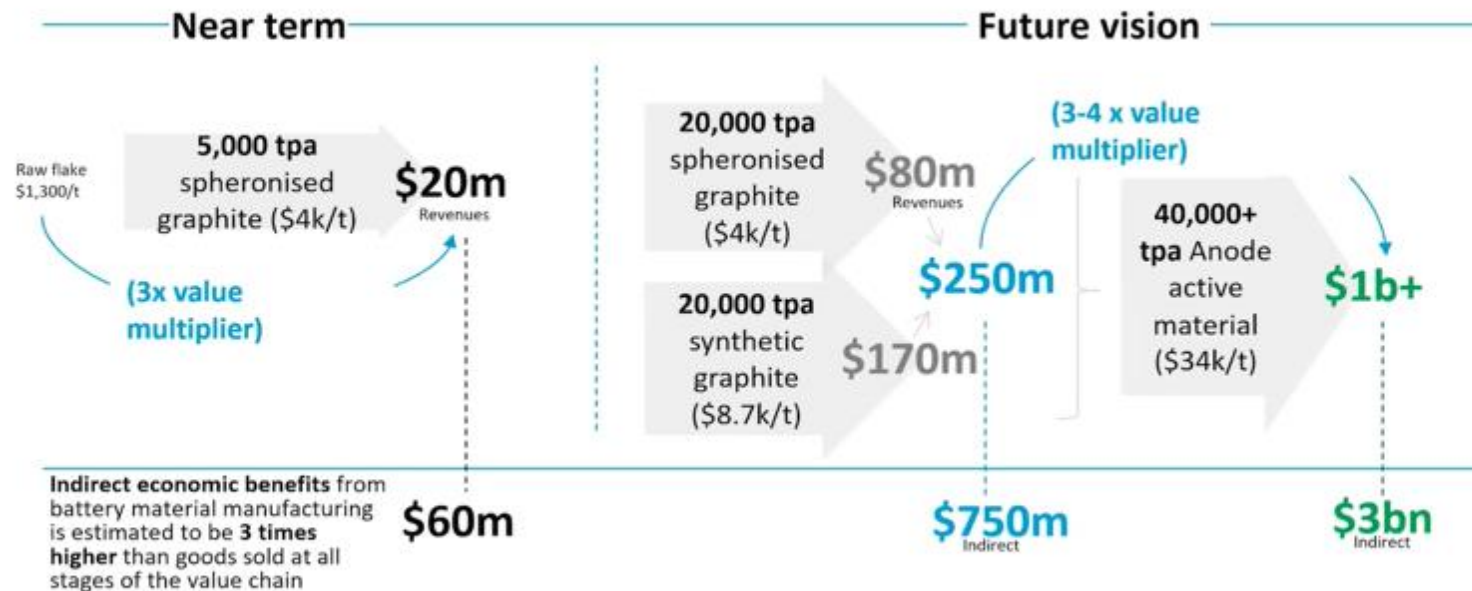
**greenRECARB** is a green carbon recarburiser additive for the steel manufacturing industry

- Steel manufacturing using electric arc furnaces requires up to 4% carbon additive as recarburiser which is currently sourced from high polluting petroleum coke materials
- Product development program in progress to support changes in steel manufacturing methods, including the use of hydrogen to produce green steel

# Future vision of lithium-ion battery manufacturing in Australia



## ROM economic impact of WA anode manufacturing is large



Sources:  
Roskill Lithium-ion Batteries Outlook to 2029 4th Ed  
Roskill Natural and Synthetic Graphite outlook 13th Ed  
CEMAC (2020) Benchmarks of Global clean energy manufacturing, 2014-2016, page 64. US DOE.  
Ecogral ASX announcements  
Author calculations.



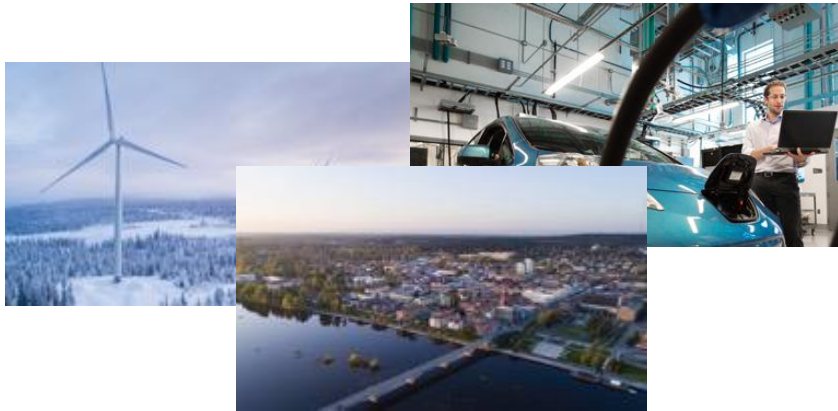
REFERENCED FROM DR JARED FORD, CRITICAL MINERALS PRESENTATION - FULL VIDEO: <https://vimeo.com/583643371>

## Evaluation of industrial site in Sweden

The reservation agreement signed with the Skellefteå municipality for a 65,000m<sup>2</sup> site

### Key advantages of Skellefteå's main industrial area:

- ✓ Abundant supply of clean, renewable energy with the lowest industrial power costs in Europe
- ✓ Ready access to key battery and industrial markets across Europe







# Global expansion strategy for battery anode business

## Supply of battery anode materials to key growth markets



Current battery anode materials supply chain is 100% reliant on China. Strategy to expand production and regionalise additional manufacturing facilities in Europe, Asia and the US to support increasing demand



**DEVELOPMENT READY**

# Natural Flake Graphite Business.



**EQUATOR  
PRINCIPLES**

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***US\$44.5M***

***ANNUAL EBITDA***

---

***60,000TPA***

***NATURAL FLAKE GRAPHITE***

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**IFC**

**International  
Finance Corporation**  
WORLD BANK GROUP



# Natural graphite business summary



## Long life Epanko Graphite Mine to supply industrial and battery markets

### Defined, de-risked and ready for construction

- ✓ Bankable Feasibility Study completed by GR Engineering Services
- ✓ Bank appointed Independent Engineer's Review completed by SRK Consulting
- ✓ Supporting Tanzania's industrialisation strategy
- ✓ Granted Mining Licence



### Sector leading ESG credentials

Equator Principles development model, satisfying:

- ✓ International Finance Corporation Performance Standards
- ✓ World Bank Group Environmental, Health & Safety Guidelines



### Scalable production plant

60,000tpa initial development with low cost expansion to meet market demand

### Sales agreements with major international customers

thyssenkrupp (Germany) and Sojitz Corporation (Japan)



## Capital investment

## Financial returns @ 60,000tpa

60,000tpa	Pre-tax NPV <sub>10</sub>	Annual EBITDA	IRR
US\$89m	US\$211m	US\$44.5m	38.9%

Refer ASX announcement dated 21 June 2017

# Significant contribution to Tanzanian economy



## **US\$3+ BILLION**

*direct contribution to the economy over 40+ years through local procurement of goods and services, employment, royalties, taxes, interest income, dividends and inspection fees*

## **300 TANZANIANS**

*to be directly employed (over 95% of all staff) for 40+ years  
4,500 indirect jobs + new industry*

## **COMMUNITY DEVELOPMENT**

*via new housing, school, Church, medical dispensary, health insurance, training and positive engagement to build lasting social partnerships*

- Transforming financial and social upliftment for the Mahenge region
- Strong multiplier effect across the economy, with an estimated **US\$9+ billion additional indirect economic benefits over 40 years**
- New manufacturing industry
- 64% of economic returns to Tanzania

## **EPANKO STANDARDS**

*Operate under International Finance Corporation - Equator Principles*

*Opportunity to support further manufacturing industries*

## **RENEWABLE ENERGY**

*estimated to increase from 25% to 65% by 2050*

*opportunity for graphite in solar panel batteries to power remote villages*



# High returning 60ktpa BFS positions Epanko for development

- Robust technical and financial BFS completed, conforming with IFC standards
  - Average production of 60,000tpa graphite concentrate
  - High proportion of >150 micron concentrate at carbon grades demanded by the market
  - Potential to produce a 99% carbon concentrate from <150 micron flake to supply high growth battery anode market
- BFS utilised industry leading consultants
  - Including GR Engineering, Knight Piesold, CSA Global and IMO Metallurgy
  - Technical due diligence completed by independent bank appointed engineer SRK
- BFS economics are based on sale into refractory and other established markets
  - Significant upside potential through access to high value markets, including spherical and expandable graphite



## Epanko bankable feasibility study outcomes

Development period	(months)	19
Average annual throughput	(tonnes)	695,000
Strip ratio	(waste to ore)	0.4:1
Average feed grade	(% TGC)	8.3
Graphite recovery	(%)	94.7
Average product carbon grade	(%)	96
Graphite production	(tonnes per year)	60,000
Mining cost	(US\$/t processed)	7.93
Processing cost	(US\$/t processed)	19.61
General & administration cost	(US\$/t processed)	4.75
Transport and port charges	(US\$/t sold)	107
C1 FOB cost	(US\$/t sold)	500
All in Sustaining cost <sup>1</sup>	(US\$/t sold)	572
Pre-production capital cost	(US\$ million)	88.9

<sup>1</sup>: Includes royalties (US\$39/t), sustaining capital (US\$15/t), off-site corporate functions (US\$10/t) and rehabilitation (US\$8/t)

Refer ASX announcement dated 21 June 2017

# High quality graphite deposit with scale

- Mineral Resource supports potential for depth and strike extensions of the Ore Reserve pit shells
- Mineralisation commences at surface with minimal cover
  - Average LOM strip ratio 0.4:1
- Favourable mineralogy delivers quality and drives robust project economics
  - High proportion of large flake sizes
  - Graphite easily liberated and delivers high yield
  - Higher carbon grade achieved through simple processing
  - Low levels of in-situ deleterious elements



## Epanko Mineral Resource estimate >8% TGC

JORC classification	Tonnage (Mt)	Contained graphite (t)
Measured	7.5	738,900
Indicated	12.8	1,280,000
Inferred	10.4	1,030,600
<b>Total</b>	<b>30.7</b>	<b>3,049,500</b>

Refer ASX announcement dated 21 June 2017



Epanko rocks have undergone extremely high metamorphic pressure and temperature forces that have created unique 'cheetah' like rock textures



# EcoGraf provides mine-to-market ESG supply chain assurance



- EcoGraf's Epanko mine development satisfies Equator Principles social and environmental planning standards
- Long-life, high quality supply of natural flake graphite for industrial and battery markets
- Ideally located to support European customers' supply chain management under the Paris Agreement on climate change
- German and Australian Government funding support
- US\$60m debt funding proposal developed in conjunction with Germany's KfW IPEX-Bank and presented to the Government of Tanzania with the aim of simplifying and fast-tracking the financing process
- Recent initiatives by the Government of Tanzania to encourage greater foreign investment expected to support the project funding program

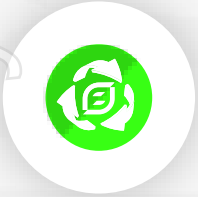
**Epanko to transform the regional economy, operating for over 40 years and contributing over US\$3 billion to Tanzanian economic and social development**

**>40 YEARS  
OF MINE OPERATION**

**US\$3B  
DIRECT CONTRIBUTION  
TO TANZANIA**







**PILOT SCALE READY**

# Lithium-ion Battery Recycling Business.

**HFfree™**



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***US\$44.5M***

***ANNUAL EBITDA***

---

***60,000TPA***

***NATURAL FLAKE GRAPHITE***

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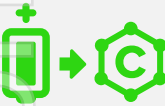
# Battery recycling



## Market Overview



Recycling efforts have focused on cathode metals



Carbon anode materials are currently not recovered

PRODUCTION SCRAP	Carbon material which is a waste product generated from each stage of battery anode manufacturing, cell manufacturing and battery testing
BLACK MASS	Carbon material remaining after hydrometallurgical processes have recovered the high value cathode metals from end-of-life lithium-ion batteries

## Benefits and Opportunity



Reducing battery production costs



Lowering the EV carbon footprint

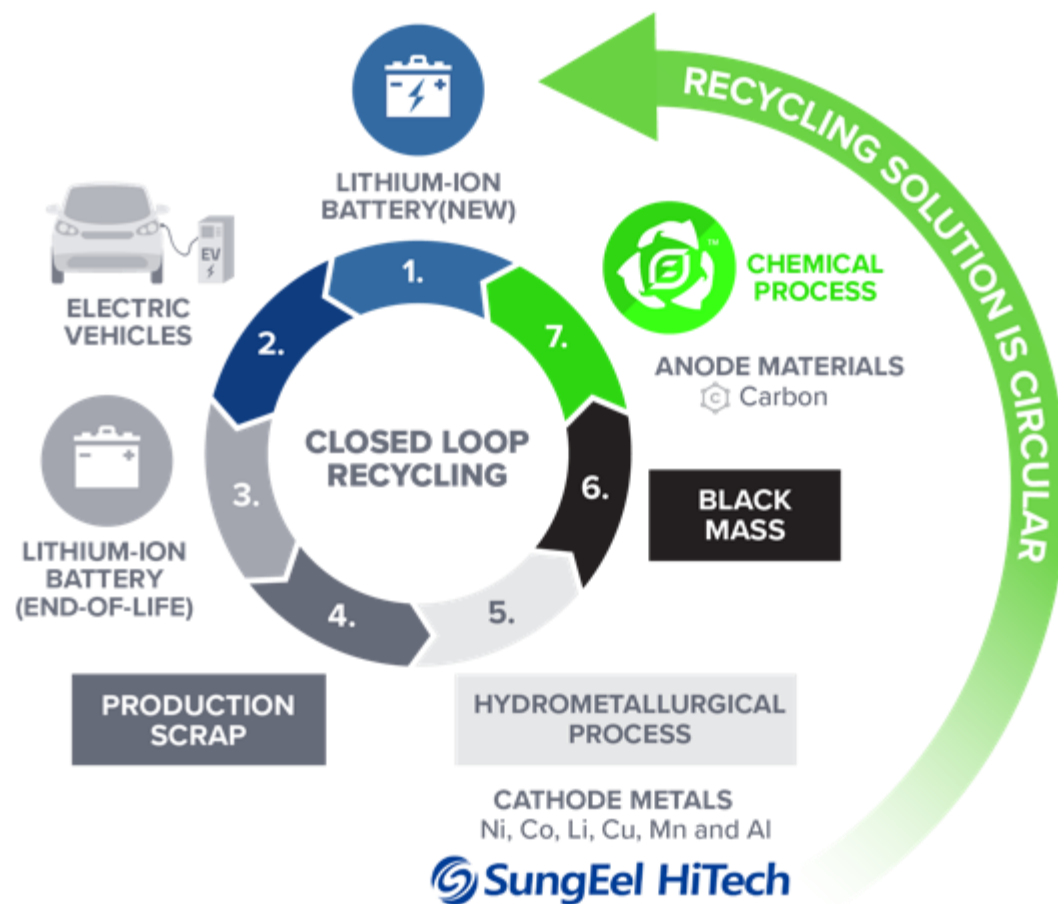
Proposed EU legislation requires more battery recycling and greater transparency in the raw materials supply chain.



Prioritising high value natural and synthetic industrial applications for reuse of carbon anode material in industrial applications.

A composite image. The left side shows a close-up, profile view of a woman wearing clear safety glasses, looking upwards. The right side shows a low-angle, upward-looking view of several tall, slender trees with dense green foliage, reaching towards a bright sky.

## EcoGraf positioned to recover and reuse carbon anode material



**99.98% C**  
**RESULTS OF RECYCLED**  
**ANODE MATERIAL**

**EcoGraf™**  
+  
**SungEel HiTech**

**AGREEMENT SIGNED WITH**  
**SOUTH KOREA'S LARGEST**  
**LIB RECYCLING GROUP**

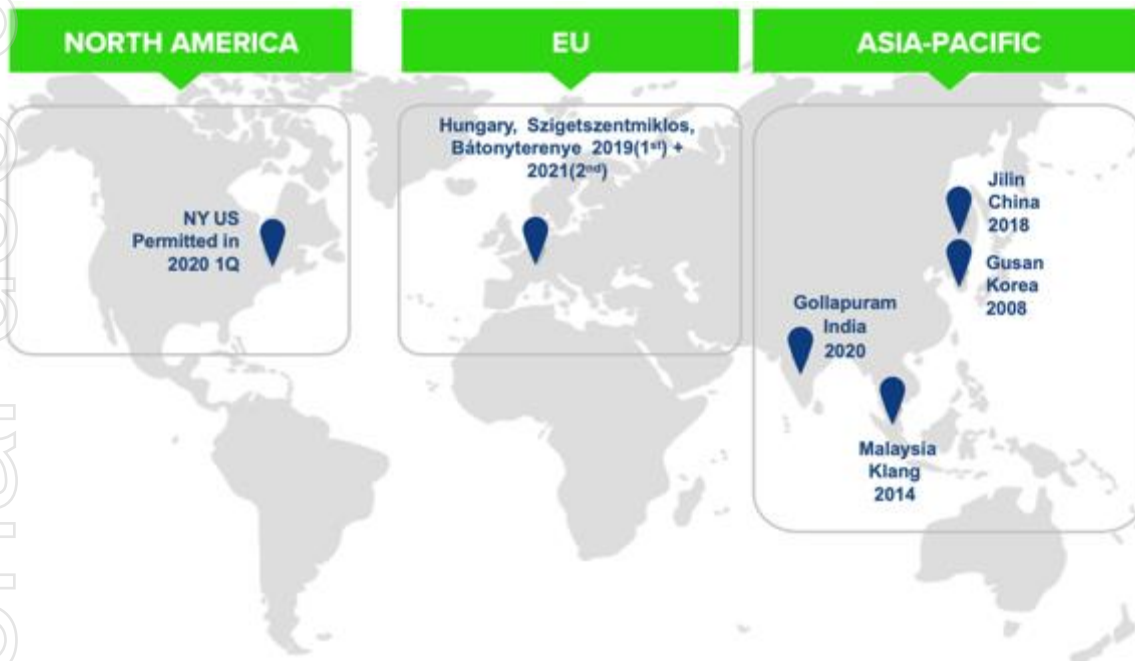


# SungEel HiTech strategic co-operation



Collaboration presents opportunity to provide tailored EcoGraf™ process in SungEel lithium-ion battery recycling plants

## SungEel Global Pre-treatment Facilities



LITHIUM-ION BATTERY

SungEel is one of the major lithium-ion battery recycling companies in Asia and works with leading electric vehicle OEMs and battery manufacturers



EcoGraf™ HF<sub>free</sub> purification process achieves recycled lithium-ion battery anode material purity of up to 99.98%C

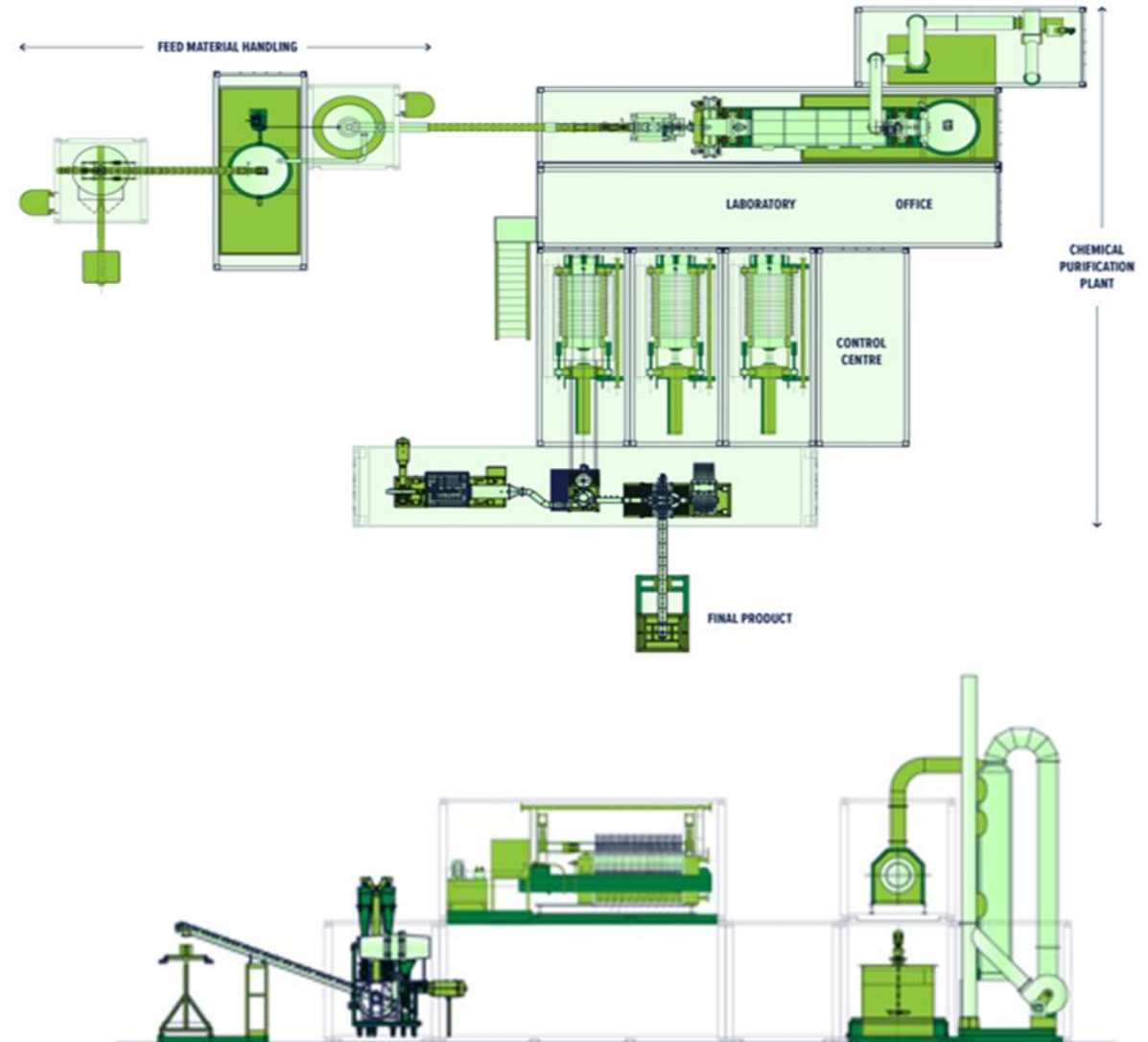


# Modular recycling pilot plant

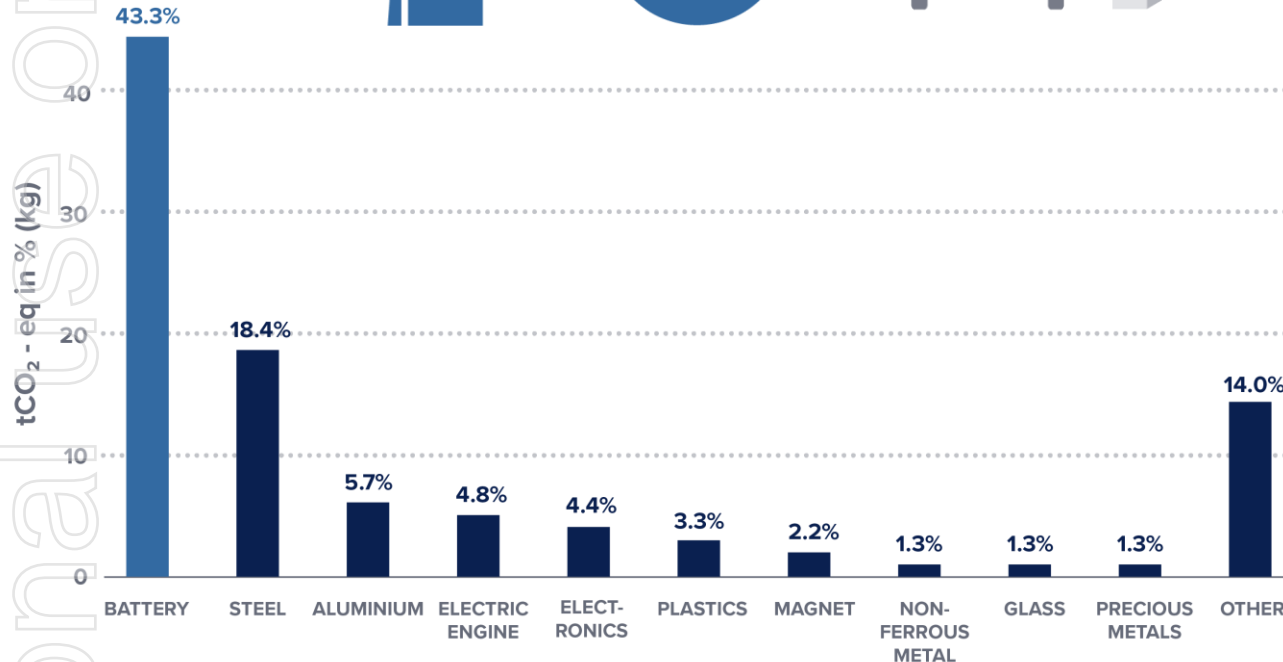
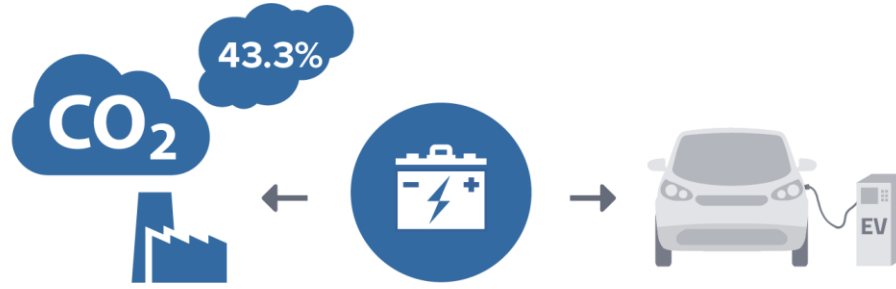
## Key features:

- Capacity of 50-100kg/hr
- Capital cost A\$5.8m
- State-of-the-art-facility utilising EcoGraf™ HF free purification process with design providing location flexibility
- Design criteria based on operating at the highest environmental standards and providing process flowsheet flexibility to evaluate various feedstocks
- Plant to provide tailored customer solutions to support new EU battery legislation for increased recycling
- Recycling of the carbon anode material to lower battery costs and reduce CO<sub>2</sub> footprint

**50-100KG/HR**  
**TREATMENT RATE**



# EcoGraf™ recycling - lowering EV production carbon footprint



Reference (No Canary, Volkswagen)

## PRODUCTION SCRAP

- Estimated 10 - 30% production loss during cell manufacturing and battery testing
- **Solution:** Develop 'In-Process' recovery of production scrap (slurries and coatings waste)
- Reuse would eliminate 13.5kg of CO<sub>2</sub> per kWh

Reference (No Canary)

## BLACK MASS

- **Solution:** Recover and reuse carbon anode material in high purity carbon markets and battery supply chains

**Battery represents over 40% of total CO<sub>2</sub> emissions produced during EV manufacturing**



# Growth Strategy, Value Proposition and Outlook.



## Key advantages



# ***DIVERSIFIED HF<sup>Free</sup>™ BATTERY ANODE MATERIAL BUSINESS SUPPORTING THE GLOBAL TRANSITION TO CLEAN ENERGY AND E-MOBILITY***

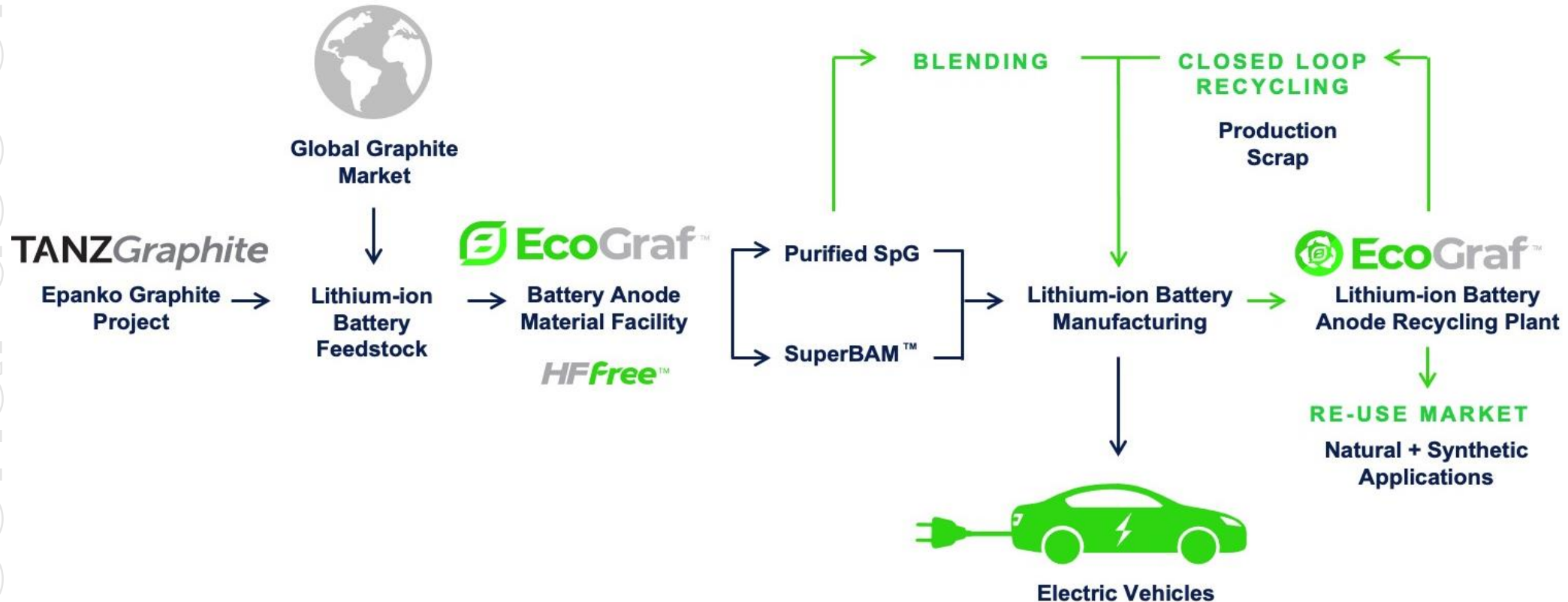
- ✓ Over 8 years of technical work programs and extensive product qualification with a range of potential customers
- ✓ Bank due diligence processes undertaken with rigorous reviews of technical and engineering studies
- ✓ Product sales and collaboration with market leading counterparties
- ✓ Production levels matched to market demand with engineering designs to allow rapid expansion
- ✓ Sector leading ESG Credentials
- ✓ Downstream processing strategy centered on producing purified spherical graphite for a market forecast to grow 15x over the next decade
- ✓ Diversified battery anode materials business positioned to support recent EU legislative changes on sustainability
- ✓ Lithium-ion battery recycling business provides the opportunity to lower battery production costs and reduce carbon emissions from EV manufacturing
- ✓ Blended battery anode material provides a unique eco-friendly product
- ✓ Strategy to expand production and regionalise additional facilities in Europe, Asia and the US to support increasing demand
- ✓ Planning initiated on 2<sup>nd</sup> plant in Europe
- ✓ On-going research and innovation to identify further value adding opportunities using the EcoGraf™ purification process



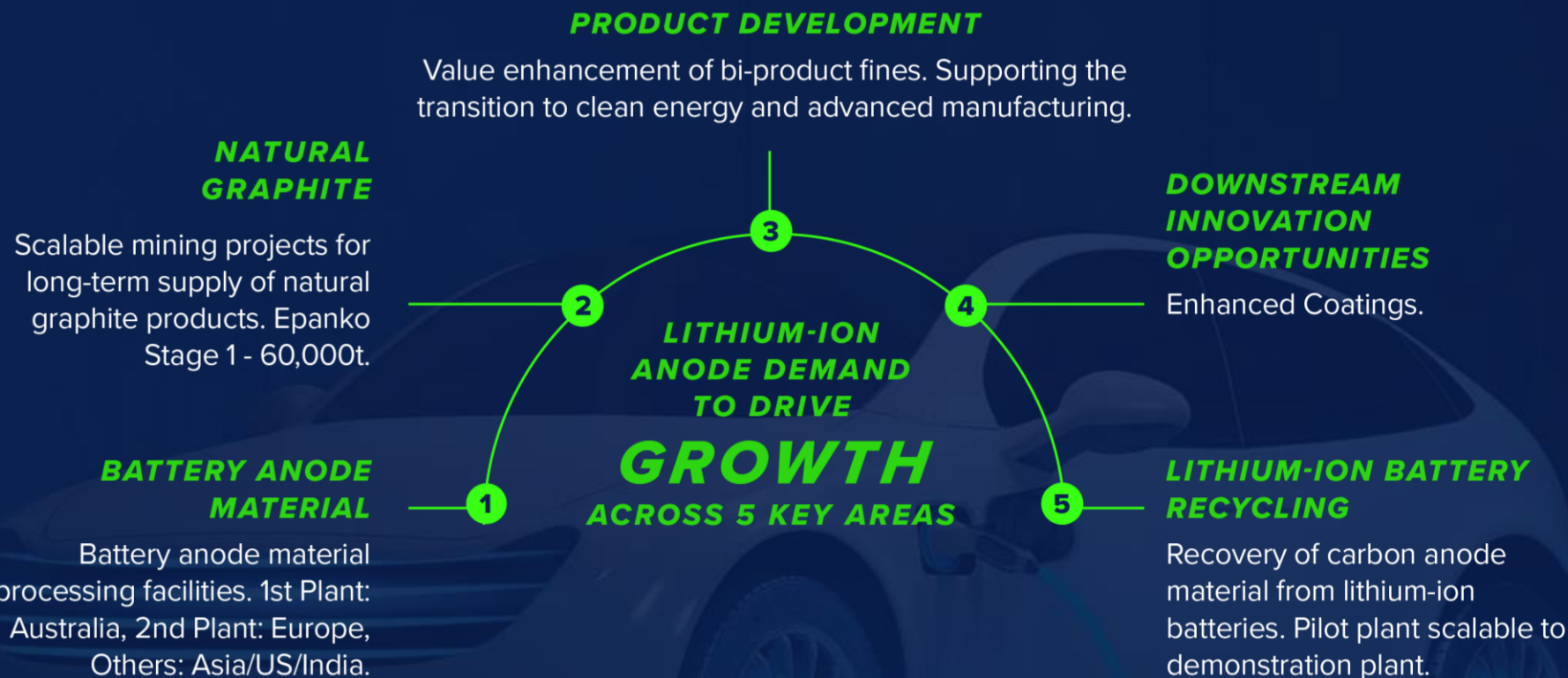
# EcoGraf's vertically integrated product flow



HFfree™



# Positioned for growth across the battery supply chain



# Value proposition



## Battery Anode Material Facility Australia

- ✓ 20,000tpa battery graphite
- ✓ US\$35m annual EBITDA
- ✓ 42.4% internal rate of return
- ✓ US\$642m pre-tax project NPV<sub>8</sub>
- ✓ US\$448m pre-tax<sup>1</sup> equity NPV<sub>8</sub> and payback of ~3.3yrs

**Diversified battery anode material business positioned for the global transition to clean energy**



## Epanko Graphite Project Tanzania

- ✓ 60,000tpa natural flake graphite
- ✓ US\$44.5m annual EBITDA
- ✓ 38.9% internal rate of return
- ✓ US\$211m pre-tax equity NPV<sub>10</sub>
- ✓ US\$3bn forecast contribution to Tanzania

**Development ready businesses forecast to generate US\$80m EBITDA per annum**



## Recycling of Carbon Battery Anode Materials

- ✓ Significant results 99.98%C
- ✓ Production scrap – large market
- ✓ Lower battery costs and emissions
- ✓ Blended anode material opportunity
- ✓ Modular recycling pilot plant

**Proprietary EcoGraf™ purification technology provides sector leading ESG credentials with application to battery recycling industry**

#1: Post-tax equity NPV<sub>8</sub> is US\$317m (refer ASX Announcement *Completion of EcoGraf™ Processing Facility Development Report* 5 November 2020)

# ***THE FUTURE IS ELECTRIC***



**BATTERY  
ANODE  
MATERIAL**



**LITHIUM-ION  
BATTERY  
RECYCLING**



**NATURAL  
GRAPHITE**



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