



## Nomura APAC New Energy Industrials Small-Mid Cap Opportunities Tour

ASX: EGR FSE: FMK OTCQX: ECGFF

20-21 January 2022

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 HFfree™ BATTERY ANODE MATERIAL BUSINESS**

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



**HFfree™** = Purification process eliminates Hydrofluoric (HF) Acid

# Corporate summary



## Board & Executive Management



**Non-exec Chair**  
Robert Pett



**Managing Director**  
Andrew Spinks



**Non-exec Director**  
John Conidi



**Chief Financial Officer**  
Howard Rae



**Joint Company Secretary**  
Karen Logan



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



**Executive Manager – Product Development**  
Michael Chan



**Commercial Manager**  
Marshall Hestelow

## Business Locations



## 12 Month Share Price



Shares on issue: 450m

Unlisted performance rights: 9.1m

## Major Shareholders

|                                |       |
|--------------------------------|-------|
| BNP Paribas Nominees           | 22.7% |
| First Sentier Investor         | 7.4%  |
| Board & Management             | 6.1%  |
| Paradice Investment Management | 5.1%  |

ASX : EGR  
Börse Frankfurt : FMK  
USA OTCQX : ECGFF

|                       |          |
|-----------------------|----------|
| Share price           | A\$0.70  |
| Market capitalisation | A\$315m  |
| Cash on hand 30 Sep   | A\$51.4m |

# 2021 Achievements.



## KEY HIGHLIGHTS FROM A TRANSFORMATIONAL YEAR

### Australian Battery Anode Material Facility

- + POSCO battery anode material agreement
- + 'Major Project Status' awarded by Australian Government
- + Export Finance Australia support for US\$35m expansion loan
- + Completion of purification pilot plant testing and commercial scale mechanical shaping program
- + GR Engineering undertakes pre-construction works for equipment selection, procurement, site infrastructure and services
- + Preparation of approvals submissions

### European Battery Anode Material Facility

- + Site reviews conducted for second facility in Europe
- + Reservation agreement over industrial site in Sweden

### Tanzanian Graphite Project

- + New Tanzanian President implementing reforms to encourage new mining investment
- + Positive progress on Epanko US\$60m debt financing
- + Financial advisors appointed

### Battery Recycling Business

- + Testwork results of up to 99.98% C
- + MoU with SungEel HiTech
- + EU legislation to require greater battery recycling
- + Engineering completed on US\$4.5m modular pilot plant

### Product Development & Innovation

- + Australian Patent Office accepts EcoGraf™ HF free purification patent
- + Successful completion of product qualification program, outperforming reference material
- + Global product development programs commenced for new SuperBAM, GreenRECARB and hpFINES
- + Evaluation of new downstream coatings opportunities

### Corporate

- + A\$54.6m capital raising
- + US OTCQX listing
- + Recruitment of experienced personnel to lead project and product development programs



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***GROWTH  
PROSPECTS  
ARE GLOBAL***

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# 2022 Outlook.



## CHARGING AHEAD

### EUROPEAN BATTERY ANODE MATERIAL FACILITY

- Site evaluation for second 20,000tpa anode material processing facility

### TANZANIAN GRAPHITE PROJECT

- Epanko project financing for initial stage of 60,000tpa

### PRODUCT DEVELOPMENT & INNOVATION

- Global bi-product development programs
- Innovative anode coatings program
- Patent and trade mark rights

### AUSTRALIAN BATTERY ANODE MATERIAL FACILITY

- Construction of 5,000tpa facility
- Operational readiness
- Partnership and offtake arrangements

### BATTERY RECYCLING

- Partnerships and collaboration
- Construct modular pilot plant
- Product qualification program



LITHIUM-ION ANODE DEMAND TO  
**DRIVE GROWTH**  
ACROSS 5 KEY AREAS



# Lithium-ion Battery Market and EcoGraf Patent.

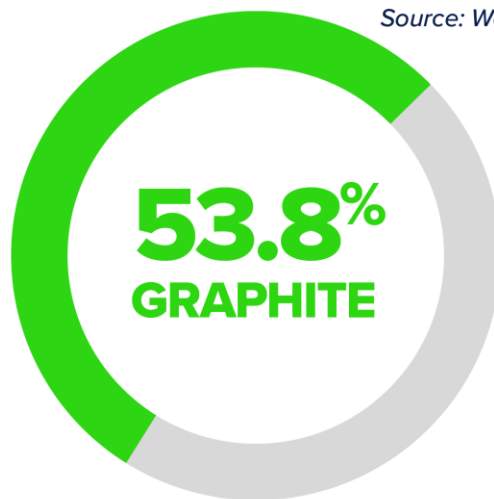


# Compelling market opportunity



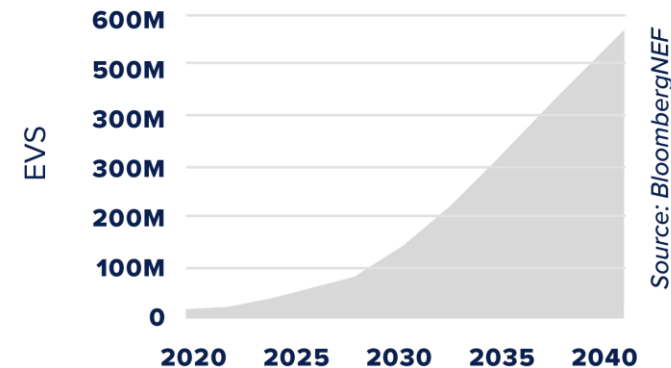
## PURE CARBON (GRAPHITE) IS THE KEY RAW MATERIAL TO DECARBONISE THE ECONOMY

Source: World Bank

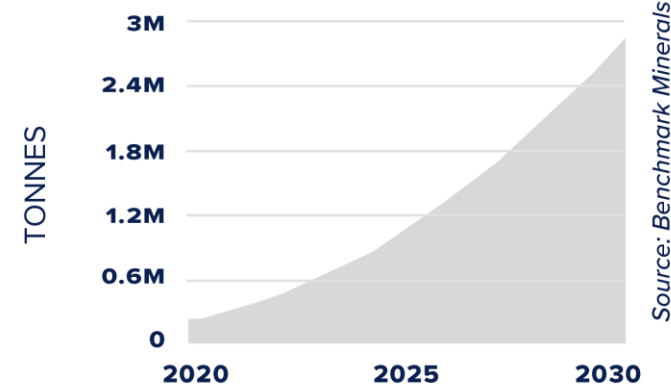


**DEMAND DRIVEN BY THE TRANSITION TO LOW CARBON EMISSION TECHNOLOGIES**

## EV DEMAND



## ANODE DEMAND







# European demand growth in 3 key regions

Over 1,000 GWh/a lithium battery cell production capacity announced through to 2030

## WESTERN EUROPE

UK  $\Sigma$  ~55 GWh/a



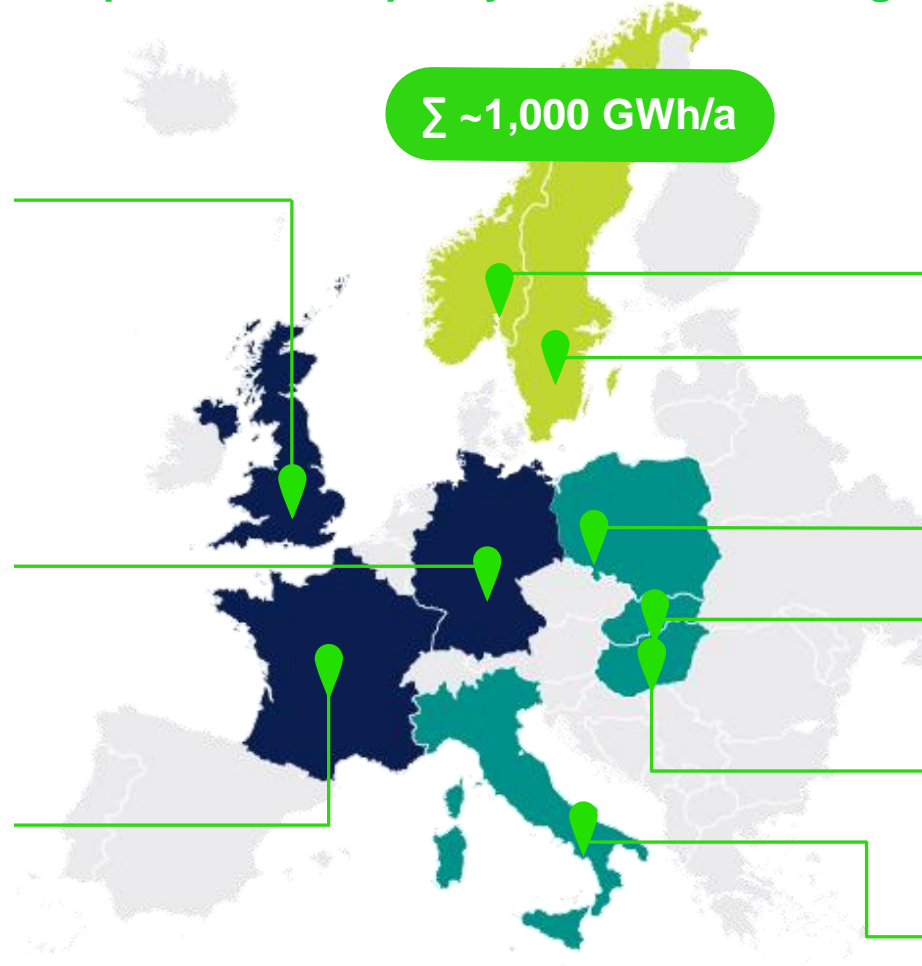
Germany  $\Sigma$  ~270 GWh/a



France  $\Sigma$  ~125 GWh/a



$\Sigma$  ~1,000 GWh/a



## NORTHERN EUROPE

Norway  $\Sigma$  ~70 GWh/a



Sweden  $\Sigma$  ~40 GWh/a



## EASTERN EUROPE

Poland  $\Sigma$  ~65 GWh/a



Slovakia  $\Sigma$  ~10 GWh/a



Hungary  $\Sigma$  ~50 GWh/a



Italy  $\Sigma$  ~110 GWh/a



Location TBA

$\Sigma$  ~240 GWh/a







Source: Roland Berger

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

# EU Commission battery ESG regulations

## New measures announced to promote sustainability

| POLICY   | ECOGRAF'S ESG ADVANTAGES   |
|--|--|
|  <p><b>Responsible sourcing of raw materials</b></p>                          | <ul style="list-style-type: none"> <li>✓ EcoGraf™ HFfree proprietary purification process</li> <li>✓ Epanko developed under Equator Principles</li> </ul>  |
|  <p><b>CO<sub>2</sub> footprint, performance and durability labelling</b></p> | <ul style="list-style-type: none"> <li>✓ EcoGraf™ recycling capability</li> <li>✓ Renewable energy inputs into businesses</li> <li>✓ Implementing low impact mining methods</li> </ul>   |
|  <p><b>Traceability of Raw Materials</b></p>                                  | <ul style="list-style-type: none"> <li>✓ Implementation of Block Chain technology</li> </ul>   |
|  <p><b>Recycling and establishing a circular economy</b></p>                 | <ul style="list-style-type: none"> <li>✓ EcoGraf™ HFfree proprietary purification process eliminates use of toxic hydrofluoric acid</li> <li>✓ EcoGraf™ recycling enables customers to achieve improved production efficiencies</li> </ul> |

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

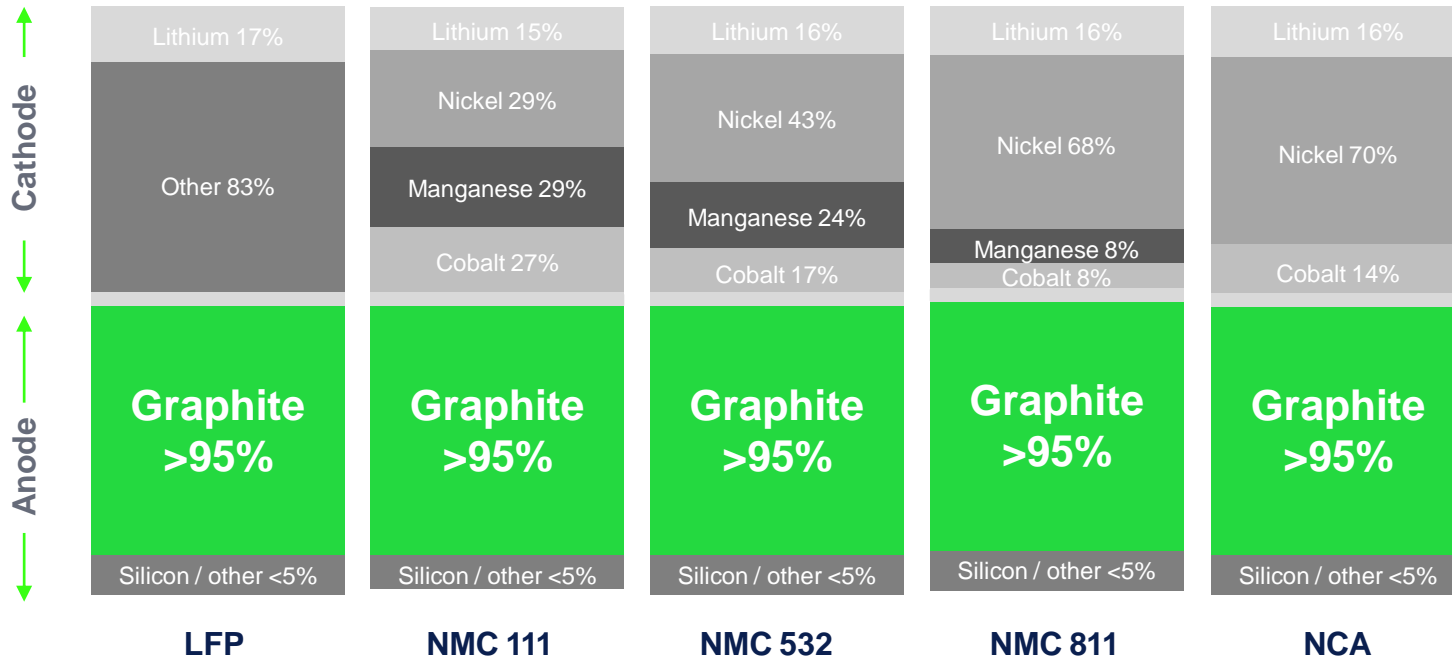


*EIB new energy lending policy supporting projects relating to the supply of critical raw materials*

# Lithium-ion battery chemistry



## Graphite is the major raw material in lithium-ion batteries



**27kg** PURIFIED NATURAL GRAPHITE PER EV WHICH REQUIRES 50KG – 55KG FLAKE GRAPHITE

**BATTERY GRAPHITE = 99.95% HIGH PURITY PRODUCT FOR ANODE MANUFACTURING**

EcoGraf™ provides a high quality, cost competitive alternative to existing battery anode material produced using toxic hydrofluoric (HF) acid

**GRAPHITE DOMINATES LITHIUM-ION BATTERY ANODES**

# POSCO battery anode material agreement



is a major South Korean industrial group and leading battery anode manufacturer

## Highlights:

Intention to enter into a formal offtake agreement for the supply of EcoGraf™ HFfree battery anode material products from:

- Australian battery anode material facility
- Planned European facility



## Cooperation:

- Product development
- Battery anode recycling
- Development of EcoGraf's vertically integrated battery anode material business



## South Korean market:

- Presently the largest EV battery mineral market outside China
- LG Energy Solution, Samsung and SK Innovation plan to invest US\$35 billion in new battery capacity by 2030

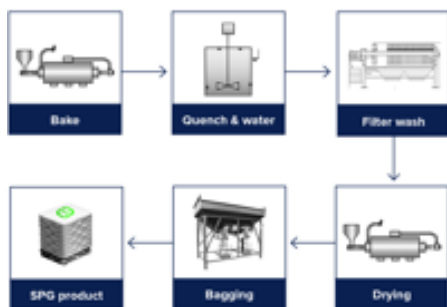
***SUSTAINABLY PRODUCED  
ECOGRAF™ HFFREE PRODUCTS  
TO SUPPORT POSCO'S BATTERY  
MATERIALS EXPANSION PLANS***

# IP Australia accepts HF free patent

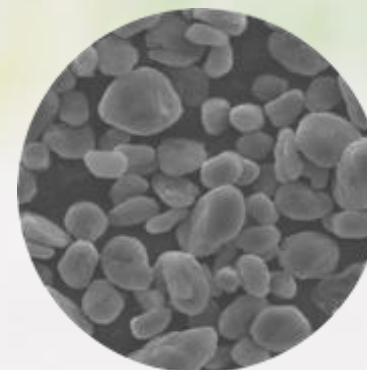


- International Examining Authority deems all 25 patent claims novel and inventive
- Paves the way for grant of the patent
- Covers production of battery anode material and recycling

## PROPRIETARY PURIFICATION PROCESS UNDERPINS PRODUCT DEVELOPMENT PROGRAMS IN BATTERY ANODE MATERIALS



Multi-stage chemical purification, washing and filtration process that eliminates hydrofluoric acid



## PURIFIED BATTERY ANODE MATERIAL

- ✓ ECO-FRIENDLY
- ✓ COST EFFECTIVE
- ✓ HIGH PURITY





**DEVELOPMENT READY**

# Battery Anode Material Business.



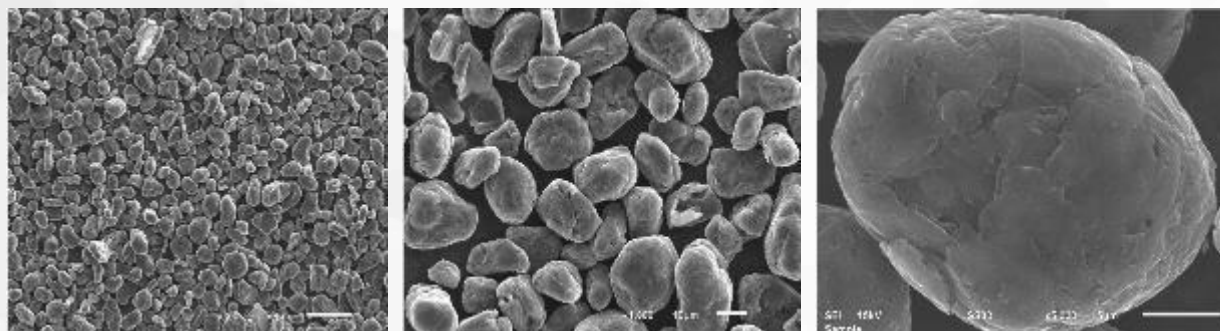
**>60% YIELD**

**MAXIMISE EFFICIENCY  
AND PROFITABILITY**

**75% WATER**

**TO BE REUSED IN OPERATION**

**HFfree™**





# Battery graphite business summary

## STATE-OF-THE-ART FACILITY TO DELIVER HIGH QUALITY, SUSTAINABLY PRODUCED HF-FREE BATTERY ANODE MATERIAL PRODUCTS

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

- EcoGraf™ **HFfree**™ proprietary purification process eliminates the use of toxic hydrofluoric (HF) acid
- Feasibility and engineering studies completed by GR Engineering
- Five 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
  - **POSCO** enters into battery anode material agreement to support its battery materials expansion plans



## ECOGRAF'S FIRST FACILITY TO MEET HIGH GROWTH GLOBAL BATTERY DEMAND

### Financial returns @ 20,000tpa

| Pre-tax project NPV <sub>8</sub> | Pre-tax equity NPV <sub>8</sub> | Annual EBITDA | IRR   |
|----------------------------------|---------------------------------|---------------|-------|
| US\$642m                         | US\$448m                        | US\$35m       | 42.4% |



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



# Western Australia: Kwinana-Rockingham battery minerals developments

Globally recognised location for processing of battery minerals







# Western Australian battery anode materials processing facility

## STATUS UPDATE

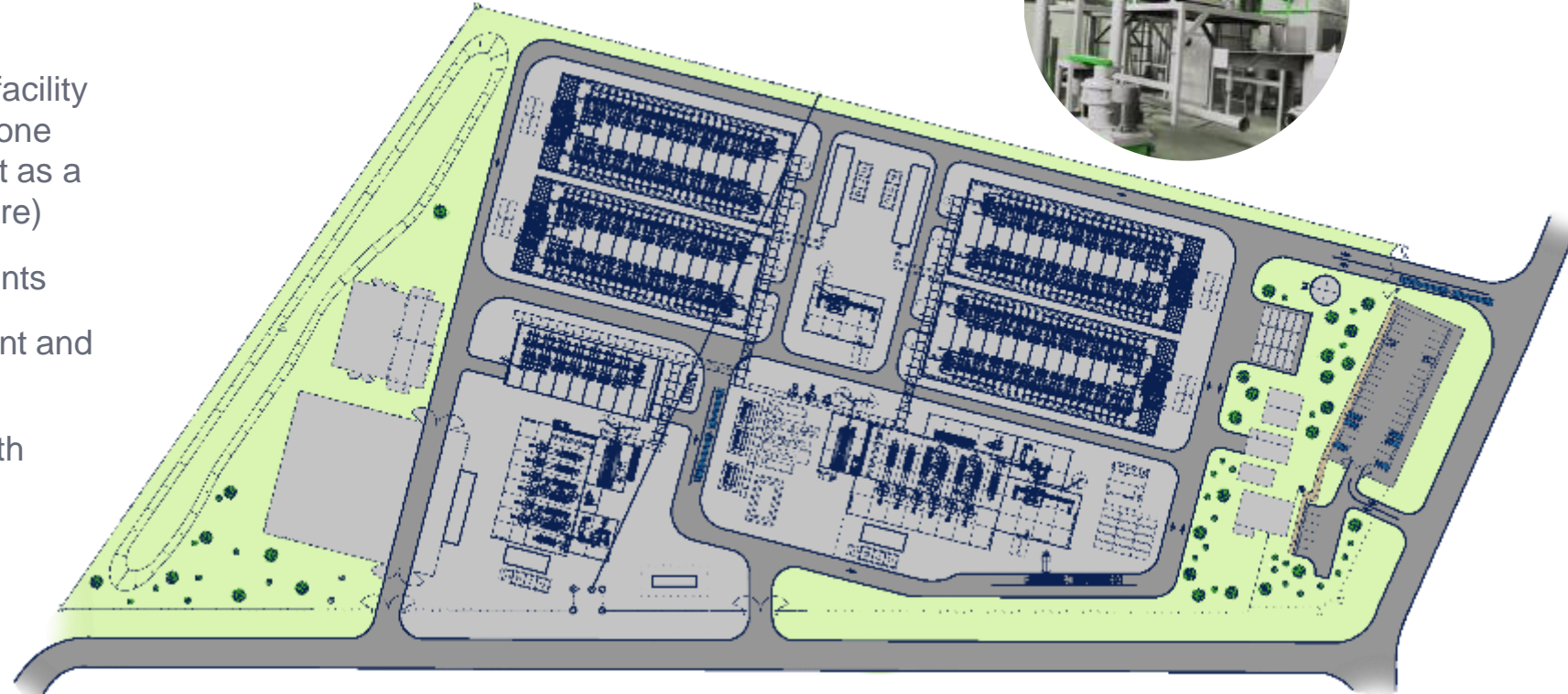
- Granted Australian Government Major Project Status and Lead Agency support from the West Australian Government
- Export Finance Australia support for US\$35m expansion loan
- Pre-construction works completed by GR Engineering to provide data for detailed engineering design and final equipment selection
- Commercial scale mechanical shaping program indicates expected product yield of over 60%
- Noise, air and safety studies completed to support regulatory approval submissions
- Procurement process commenced for key processing equipment



# Australian battery anode materials processing facility

## **NEXT STEPS**

- Regulatory approval submissions (the facility is located in an established industrial zone identified by the Australian Government as a future battery minerals processing centre)
- Execution of key construction agreements
- Detailed engineering plans, procurement and fabrication of equipment
- Strategic cooperation arrangements with customers
- International site selection program for additional processing facilities



**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

# Global expansion strategy

Supply of sustainably produced HF<sub>free</sub> 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 high growth battery markets



**UNDER DEVELOPMENT**

# Product Development and Innovation.

# Product development initiatives...with a focus on sustainability advantages



## HFfree™ BATTERY ANODE MATERIAL PRODUCTS

Main Product

Secondary Product

Product Development for Bi-Product Fines

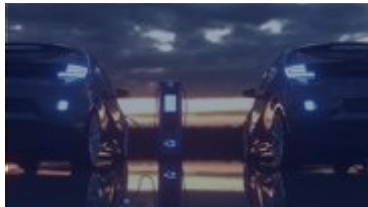
hdBAM

superBAM

greenRECARB

ecoCEM

hpFINEs



END USE

ELECTRIC VEHICLES,  
STORAGE PACK

HYBRID CARS/ POWER TOOLS  
& 3C APPLICATION

CAST & GREY CAST STEEL  
FOUNDRY/EAF FURNACE

AA, AAA, Li-ION CEM  
CATHODE & CAN COATING  
FUEL CELLS

LUBRICANTS, THERMAL  
EFFICIENT AND FIRE  
RESISTIVITY MATERIALS

MARKET SIZE

MEDIUM

MEDIUM

VERY HIGH

LOW

LOW

GROWTH

VERY HIGH

VERY HIGH

LOW

MEDIUM

LOW

VALUE

HIGH

VERY HIGH

LOW

VERY HIGH

HIGH

INDUSTRY  
/CUSTOMERS



ELECTRIC VEHICLES



ELECTRIC VEHICLES



STEEL/ GREEN STEEL



BATTERY , CHEMICAL  
MANUFACTURING



BATTERY AND CHEMICAL  
MANUFACTURING

# Western Australia: Kwinana-Rockingham hydrogen developments

Planning commenced for new hydrogen clean energy developments





# Green hydrogen fuel cell requires ecoCEM

## Hydrogen fuel cell – bipolar plates

- Bipolar plates that distribute fuel inside the cell require graphite
- Graphite is applied as an ultra-thin coating on the bipolar plates of the hydrogen cell to improve charge/discharge efficiency



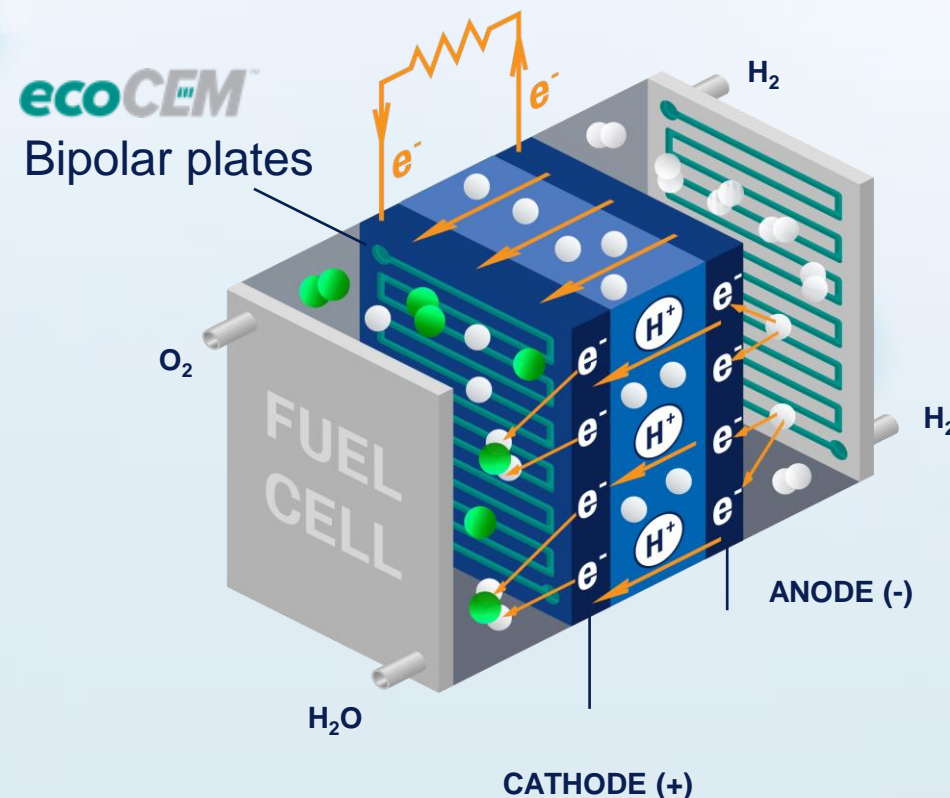
**RAW MATERIAL FOR GREEN ENERGY**

Targeting large transportation equipment and high efficiency stationary energy plants



## **HYDROGEN FUEL-CELLS**

High value market and significant opportunity to participate in the **Green Hydrogen** sector



# Innovative battery anode coatings program

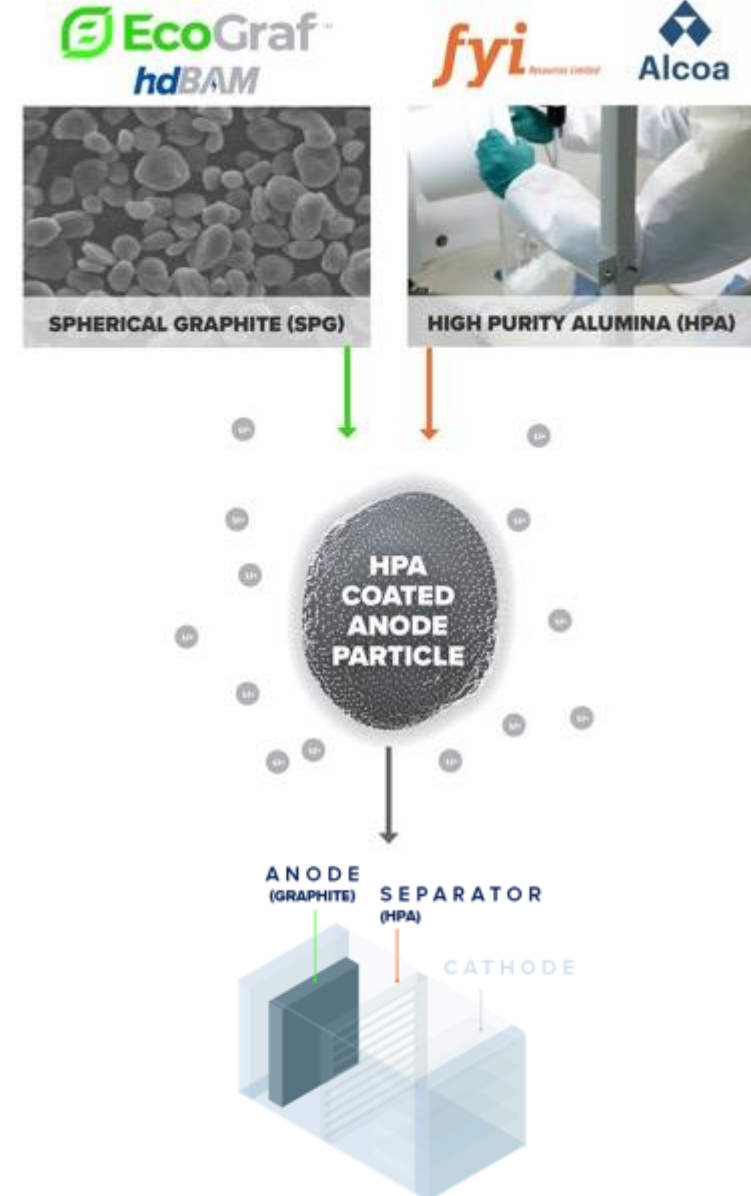
Development of an enhanced coating technology to improve battery performance using high purity alumina and EcoGraf™ battery anode material

- Testwork being undertaken with a leading US commercial battery material development facility
- Program includes evaluation of electrochemical performance of industry standard coated SPG, EcoGraf™ coated SPG and enhanced HPA coated SPG in CR2016 coin cells



CR2016 Coin Cell

Coated anode pricing ranges up to US\$10,000 per tonne

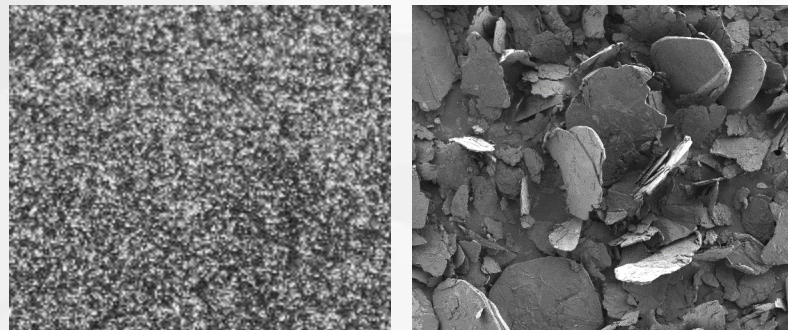






**DEVELOPMENT READY**

# Natural Flake Graphite Business.



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***US\$44.5M***

***ANNUAL EBITDA***

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***60,000TPA***

***NATURAL FLAKE GRAPHITE***

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# Natural graphite business summary

## Defined, De-risked and Ready For Construction

- Bankable Feasibility Study completed by GR Engineering
- 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



## LONG LIFE EPANKO GRAPHITE MINE TO SUPPLY INDUSTRIAL AND BATTERY MARKETS

### Capital investment

60,000tpa

US\$89m

### Financial returns @ 60,000tpa

| Pre-tax project NPV <sub>10</sub> | Annual EBITDA | IRR   |
|-----------------------------------|---------------|-------|
| 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 and dividends*

## **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

## **EPANKO STANDARDS**

*to operate under International Finance Corporation - Equator Principles*

*opportunity to support further manufacturing industries*

## **RENEWABLE ENERGY**

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

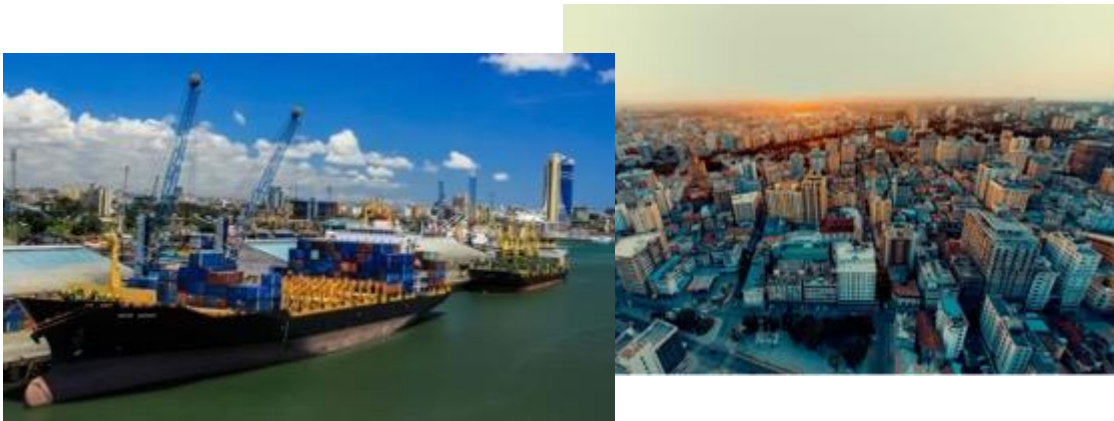
*opportunity for graphite in solar panel batteries to power remote villages*



# 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
- US\$60m debt funding proposal developed in conjunction with Germany's KfW IPEX-Bank
- Recent initiatives by the Government of Tanzania to encourage greater foreign investment will support the project development program
- Financial advisors appointed to manage debt financing arrangements



January 10, 2022  
5:24 PM GMT+8  
Last Updated 9 days ago

**Deals**

## BHP re-enters Africa with Tanzania nickel investment

Reuters

**>40 YEARS**  
**OF MINE OPERATION**

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

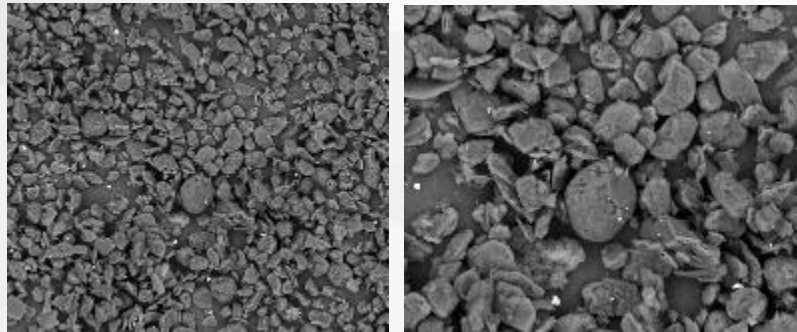


**PILOT SCALE READY**

# Lithium-ion Battery Recycling Business.




**HFfree™**

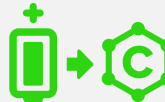




# Opportunity to reduce battery costs and improve supply chain sustainability


## Current market practice


 Recycling efforts focused on cathode metals

 Carbon anode materials are not recovered

|                              |  |
|------------------------------|--|
| <b>PRODUCTION FEEDSTOCK</b>  | Carbon material from battery anode manufacturing, cell manufacturing and battery testing       |
| <b>END OF LIFE BATTERIES</b> | Carbon material remaining after hydrometallurgical processes have recovered the cathode metals |

## Anode recycling opportunity

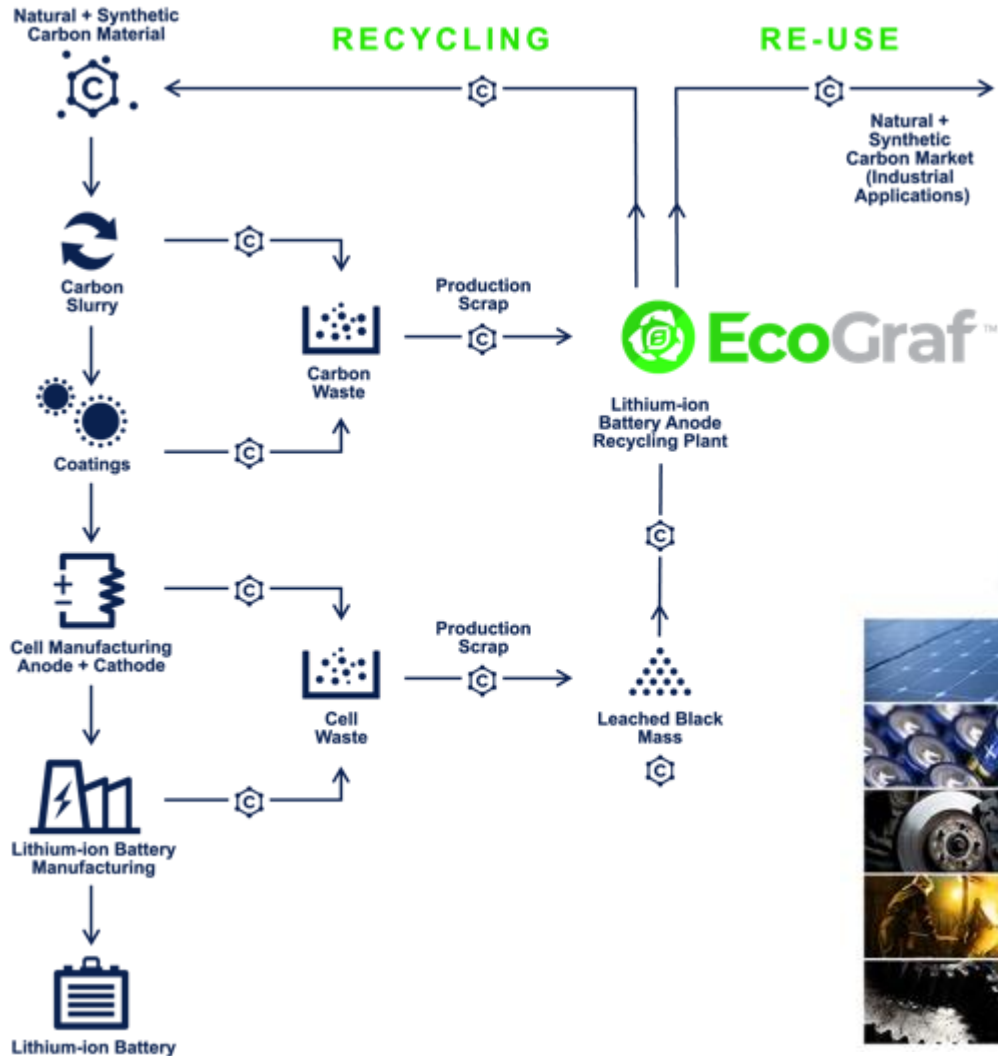
 Reducing battery production costs

 Lowering EV CO<sub>2</sub> footprint

## EU legislation to require more battery recycling and greater transparency in the raw materials supply chain



# EcoGraf anode material recycling strategy



**SungEel HiTech**

Cooperation agreement signed with South Korea's largest lithium-ion battery recycling group SungEel HiTech

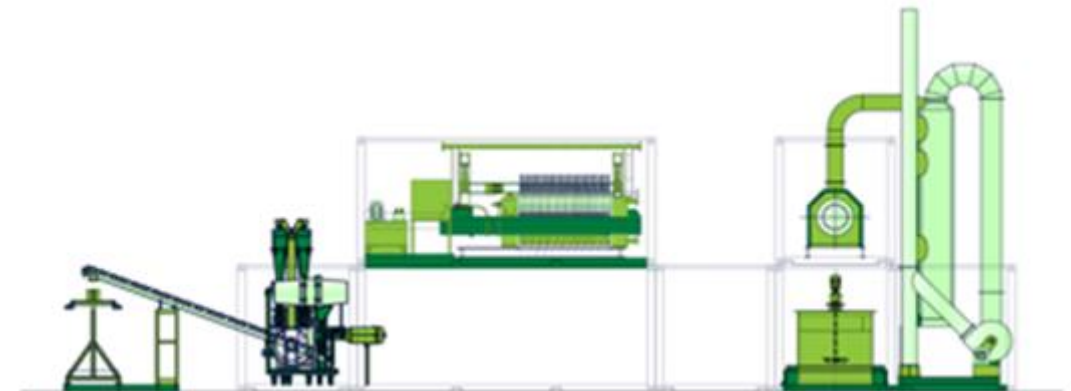
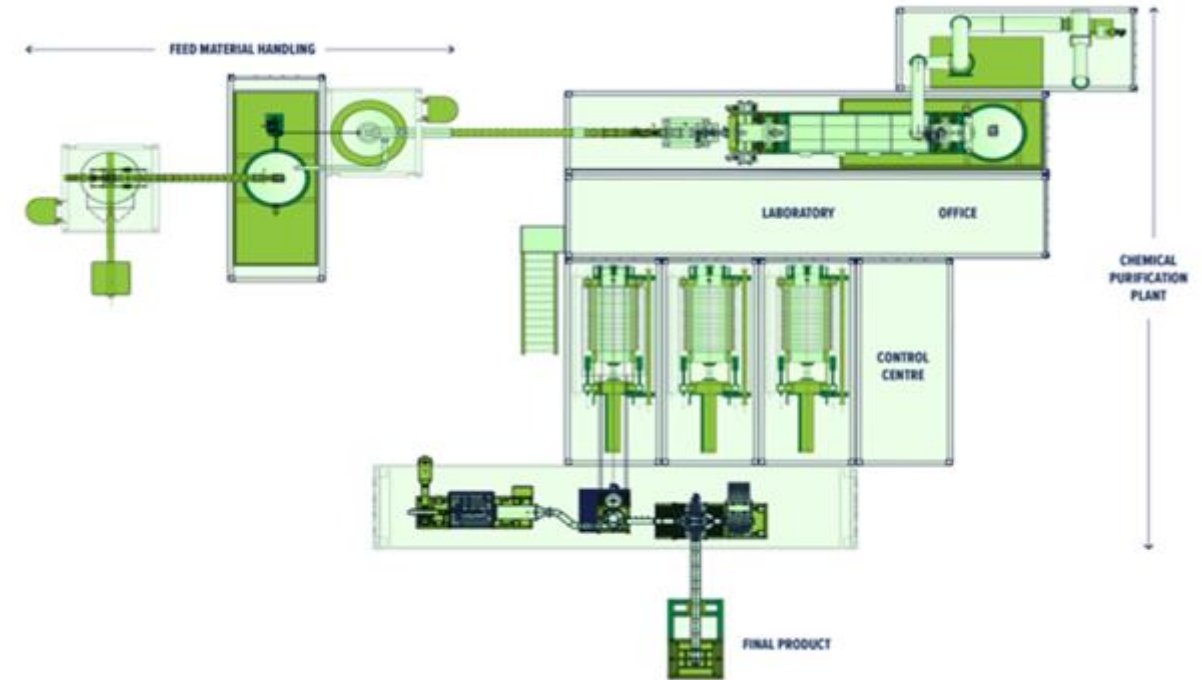
|  | INDUSTRIAL MARKET OPPORTUNITIES FOR RECOVERED CARBON ANODE MATERIAL | NATURAL   | SYNTHETIC |
|--|---|-----------|-----------|
|    | Lithium-ion batteries   | RECYCLING | ✓         |
|   | Alkaline and zinc carbon batteries                                  | RE-USE    | ✓         |
|  | Friction materials  | RE-USE    | ✓         |
|  | Refractories  | RE-USE    | ✓         |
|  | Carbon additives  | RE-USE    | ✓         |

# Next steps - modular recycling pilot plant



## Key features:

- Capacity of 50-100kg/hr
- Capital cost US\$4.5m
- 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**





# Summary.



## Key advantages



# **DIVERSIFIED HFfree™ BATTERY ANODE MATERIAL BUSINESS SUPPORTING THE GLOBAL TRANSITION TO CLEAN ENERGY AND E-MOBILITY**

- ✓ +8 years of technical work programs and extensive product qualification with 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 for a market forecast to grow 15x over the next decade
- ✓ Diversified battery anode materials business positioned to support EU legislation 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 battery mineral demand
- ✓ Planning initiated on 2<sup>nd</sup> EcoGraf™ facility in Europe
- ✓ On-going research and innovation to identify further value adding opportunities using the EcoGraf™ purification process
- ✓ Proprietary HFfree process secured through patents and trademarks

# EcoGraf's vertically integrated product flow



HFfree™



Global Graphite Feedstock

TANZGraphite  
Epanko Graphite Project



EcoGraf™

Battery Anode  
Material Facility



hdBAM



superBAM



Lithium-ion Battery  
Manufacturing

CLOSED LOOP  
RECYCLING  
Production Scrap

EcoGraf™

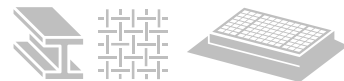
Lithium-ion Battery  
Anode Recycling Plant



RE-USE MARKET  
Natural + Synthetic  
Applications

greenRECARB  
ecoCEM  
hpFINES

Industrial Applications  
and Alkaline Batteries



Electric Vehicles

# Value proposition



## **BATTERY ANODE MATERIAL FACILITY**

- + 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 equity NPV<sub>8</sub> and payback of ~3.3yrs

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



## **TANZGraphite**

### **EPANKO NATURAL GRAPHITE PROJECT**

- + 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 ANODE MATERIAL**

- + 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**

# **THE FUTURE IS ELECTRIC**



**NATURAL  
GRAPHITE**

**BATTERY  
ANODE  
MATERIAL**

**LITHIUM-ION  
BATTERY  
RECYCLING**

**PRODUCT  
DEVELOPMENT &  
INNOVATION**



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**ENGINEERING CLEAN ENERGY**