



**BLACKEARTH**

Specialising in Critical Commodities



**Driving BlackEarth  
Into A New Age In  
Graphite**

**INVESTOR  
PRESENTATION**

*February 2021*



**ASX:BEM**

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Some of the information contained in this presentation has been derived from previously released information to the ASX refer: 30/1/19 "Progressing to Full Feasibility", 17/1/20 "Fast Tracking the Maniry Graphite Project", 29/4/20 "Quarterly Activities Report – 31 March 2020", 31/7/20 "Quarterly Activities Report – 30 June 2020"

## Competent Persons Statement

The information in this document that relates to Exploration Results, Exploration Targets and Mineral Resources is based on information compiled by Ms. Annick Manfrino, Principal of Sigma Blue and Manager Geology of Black Earth Minerals a Competent Person who is a member of the Australasian Institute of Mining and Metallurgy and a consultant to the Company. Ms. Manfrino has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken 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. Ms Manfrino consents to the inclusion of the information in this document in the form and context in which it appears.

### Cautionary Statement:

The Exploration Targets reported herein are not JORC compliant Mineral Resources. The potential quantity and grade of the Exploration Targets are conceptual in nature, there has been insufficient exploration to determine a Mineral Resource and there is no certainty that further exploration work will result in the determination of a Mineral Resource.

# INVESTMENT HIGHLIGHTS

## Vertical Integration

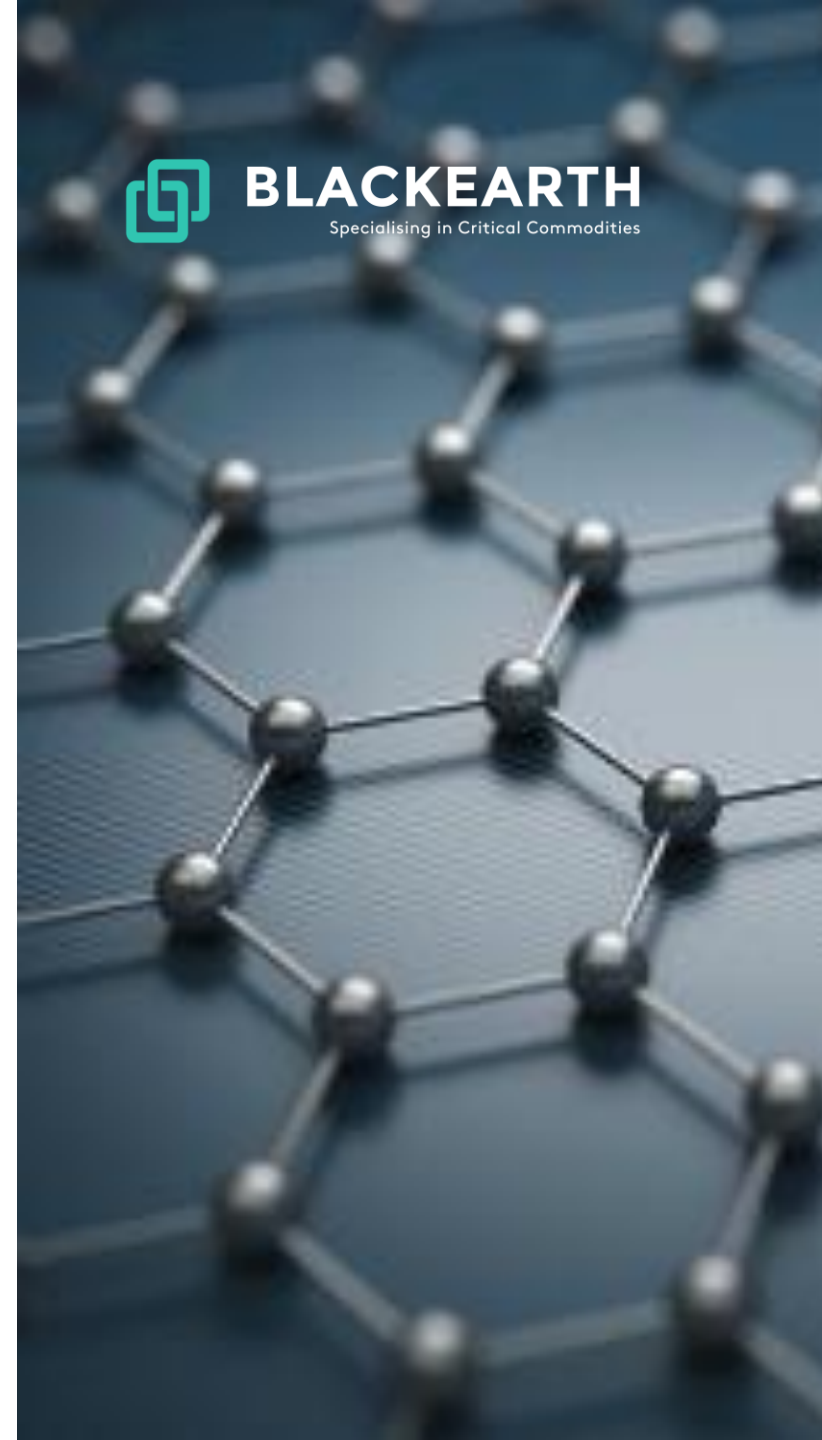
- *Diversified critical commodity explorer and developer.*
- *MOU signed for the downstream processing of mid sized and fine sized flake graphite (Urbix JV MOU)*
- *Currently further investigating downstream value added graphite processing options, particularly for coarse flake graphite.*

## Projects

- *Maniry Graphite Project – financially and technically robust graphite project with a BFS due to be completed in 2021; coarse flake focus with high value products being investigated.*
- *Donnelly River Ni-Cu-PGE Project, strategically / centrally located between CHN/VMS's South West Project – Thor and Odin Prospects.*

## Corporate

- *Only 150M shares on issue and market capitalisation of A\$30.7m.*
- *Cash available for immediate exploration & project development needs.*



# CORPORATE SNAPSHOT



*BlackEarth Minerals (ASX:BEM) is a vertically integrated graphite developer with advanced mining projects in Madagascar and base metal prospects (Ni-Cu-PGE) in Western Australia.*

*The Company holds the flagship Maniry Graphite Project which is located in Southern Madagascar, with the Bankable Feasibility Study (BFS) currently underway and a focus on value added products which are in high demand.*

*In February 2021, BlackEarth announced a MOU with US-based Urbix Inc., and an agreement with German company Luxcarbon GmbH to accelerate the Company's downstream high value graphite product ambitions*

## CAPITAL STRUCTURE

<i>ASX Code</i>	<i>BEM</i>
<i>Fully Paid Shares</i>	<i>150m</i>
<i>Share Price (10/02/21)</i>	<i>\$0.205</i>
<i>Market Cap (@ \$0.205)</i>	<i>\$30.7m</i>

## BOARD OF DIRECTORS & MANAGEMENT

<i>George Bauk</i>	<i>Non-Executive Chairman</i>
<i>Tom Revy</i>	<i>Managing Director</i>
<i>David Round</i>	<i>Finance Director</i>

# URBIX INC MOU



## MOU with Leading U.S. Company to Fast track Downstream Graphite Production

- *In February 2021, BlackEarth signed an MOU with Urbix, Inc (“Urbix”) – a US based Company leading the development of EV related graphite products.*
- *Under the MOU, BlackEarth will source high grade graphite concentrate to supply Urbix’s downstream processing facility in the USA.*
- *Urbix is globally recognised for its graphite purification processes that can develop specialised graphite product for the globally expanding EV market.*
- *The BlackEarth Board and Urbix plan to develop an Operational Joint Venture in the future – the proposed JV combines Urbix’s technical excellence with BlackEarth’s substantial market, commercial and graphite operational experience.*
- *The evolving JV can position BlackEarth as a globally significant supplier of downstream graphite products and forms part of BlackEarth’s strategy to fast track the development of its Maniry Graphite Project in Madagascar.*

# Luxcarbon GmbH AGREEMENT

**BlackEarth signs agreement with German-based Luxcarbon for the procurement, supply and marketing of concentrate and downstream products, into the fast growing European graphite market**

- *Luxcarbon is currently one of Germany's major suppliers of graphite & carbon products to top tier suppliers of Volkswagen, Mercedes, Ford and to major chemical corporations.*
- *BlackEarth, as part of its MOU commitment with Urbix Inc, will use this agreement to secure the supply of up to 25,000tpa of high grade product to assist Urbix in completing their plant development.*
- *The supply arrangement will continue whilst BlackEarth fast tracks the development of its own high grade, large scale graphite properties in Madagascar, which will then form a regular supply to its proposed downstream graphite operations*
- *The Agreement also provides that BlackEarth will sell up to 25,000tpa of downstream products from its operations and JV operations into the European market to meet the growing demand for high quality graphite products.*

# THE MARKET – GRAPHITE NEWS



Share prices for a basket\* of 10 ASX listed graphite companies have risen more than 121% in the last 3 months

“The commodities market is not in a so-called supercycle, rather it is at the start of an unprecedented and revolutionary cycle driven by the rise of green energy and electrification of “everything from a bus, to a skateboard and a Vespa”.....Robert Friedland (Feb 2021)

Canadian listed NextSource Materials completes US\$29.5M financing of its Molo Graphite Project located 50km north of BEM’s Maniry Project and 5km south of BEM’s Ianapera Graphite Project .....(TSX:NEXT Release, 8 Feb 2021)

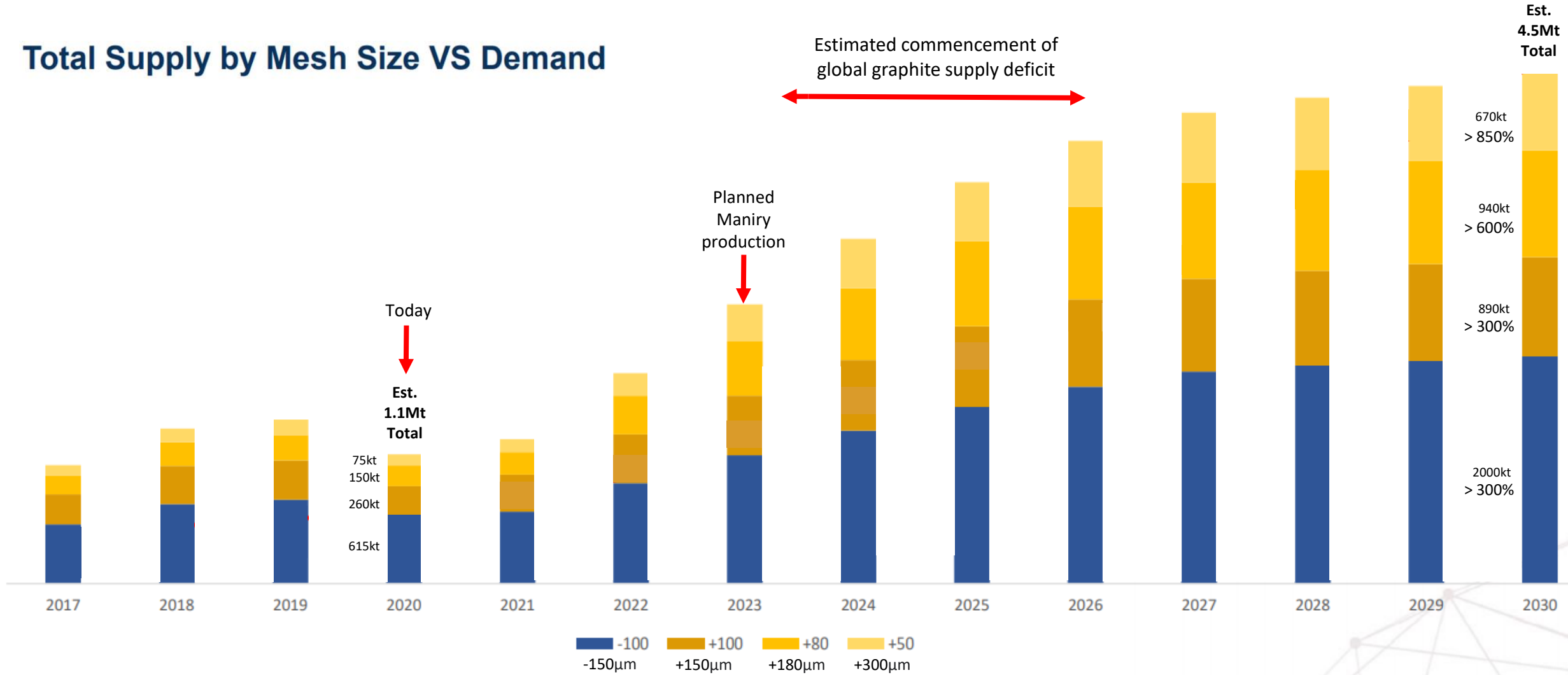
Graphite demand for batteries "is seen aggressively increasing to around 15 times today’s demand by 2030". Goldman proclaims the dawn of a new commodity cycle.....(seeking alpha.com, Jan 2021)

“Environmental, social and governance issues are becoming more incorporated in the graphite supply chain as producers outside China look to develop environmentally friendly purification methods and product lines in increasingly integrated facilities, encompassing more steps of the value chain.” ....(George Miller Benchmark Minerals, Jan 2021)

*\*Basket of ASX graphite companies included: BEM, BKT, BSM, EGR, MNS, RNU, SYR, TLG, TON, WKT*

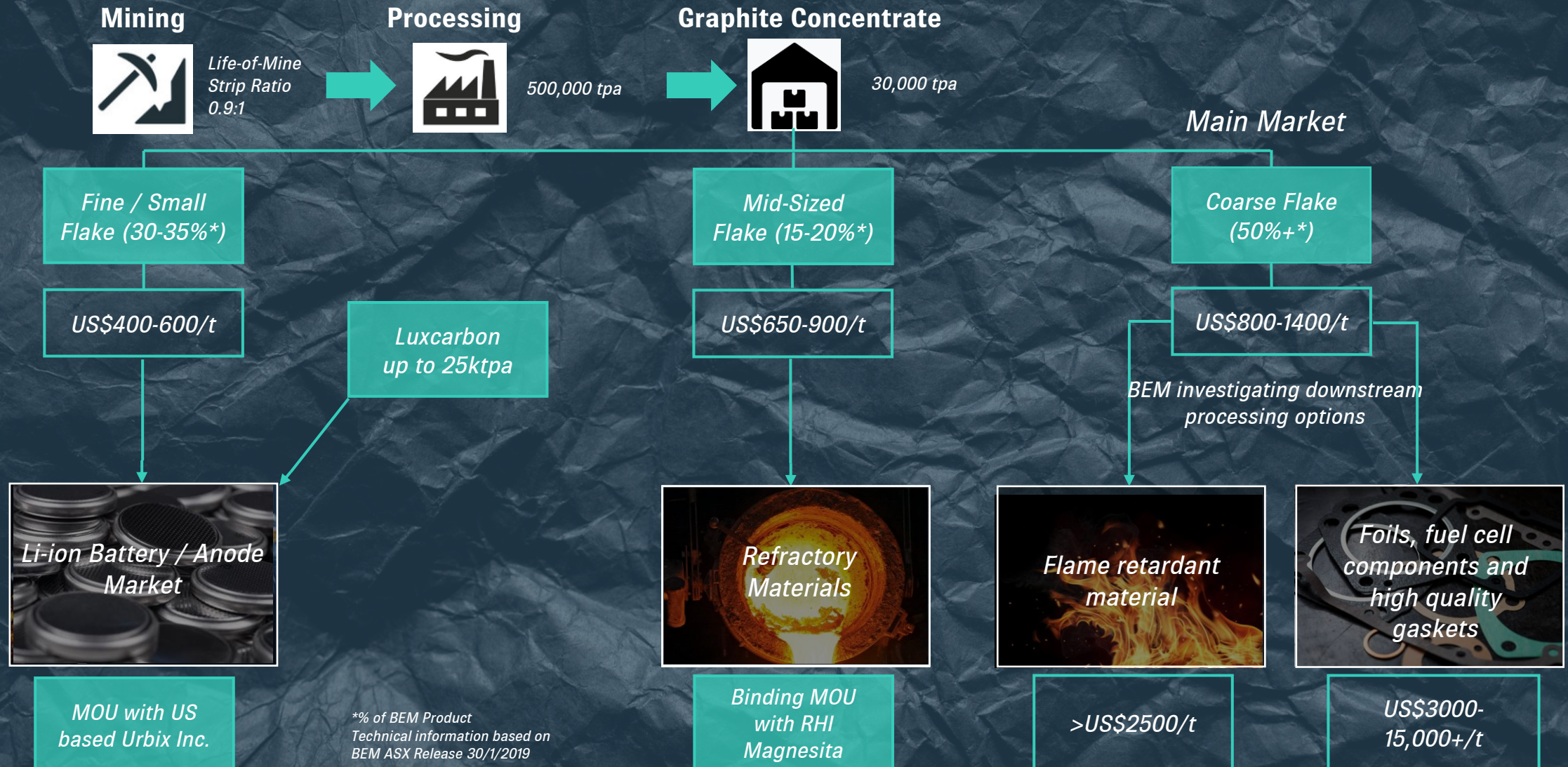
# THE MARKET - GRAPHITE

## Total Supply by Mesh Size VS Demand





# MANIRY GRAPHITE PROJECT



# BEM GRAPHITE SPECS



*Graphite from BlackEarth's Maniry project meets the specifications required for applications in the expandables, refractory and lithium-ion battery industries.*



## Expandables

- *NGS (Germany) achieved results of 400 cm<sup>3</sup>/g which exceeded the industry benchmark rate of 250 cm<sup>3</sup>/g. (Refer ASX: BEM Announcement 13/6/19)*
- *Positive test results and quality approval from Yichang Xincheng Graphite – the largest expandable graphite producer in the world.*



## Refractory

- *Following successful testing, BlackEarth entered binding MOU with the world's largest refractory group, RHI Magnesita ("RHIM"), the leading global supplier of high-grade refractory products, systems and solutions, and a large consumer of natural flake graphite for various refractory products and materials.*



## Li-Batteries

- *In February 2021, BlackEarth signed an MOU with Urbix, Inc – a US based Company leading the development of EV related graphite products.*
- *Spherical graphite from Maniry meets all specifications required by lithium-ion anode material manufacturers.*

# MANIRY HIGHLIGHTS



- *The Company has successfully fast tracked its flagship Maniry graphite project in Southern Madagascar, to the Bankable Feasibility Study (BFS) Stage, in under 2 years, for a total cost of less than \$6m (including full overheads).*
- *Graphite from the Maniry Project has met specifications consistent with those required by Tier 1 end-users:*
  - *Expandable graphite markets*
  - *Refractory industry participants*
  - *Lithium-ion anode material manufacturers*
- *Significant upside potential – the focus of current BFS activities (grade, optimising flake size distribution, recovery, resource size, power costs etc)*

## Maniry Project Resources

Classification	Tonnage (Mt)	Total Graphitic Carbon	Tonnage Percentage
Indicated	8.0	7.20%	40%
Inferred	12.2	6.05%	60%
<b>TOTAL</b>	<b>20.2</b>	<b>6.51%</b>	<b>100%</b>

## Exploration Targets

**Maniry Project : 260 – 380Mt at 6-8% TGC**  
**Ianapera Project: 20 – 34Mt at 10-20% TGC**



# PROJECT FINANCIAL RETURN\*

<i>Project Life</i>	<i>10+ Years</i>
<i>NPV @ 10% pre-tax</i>	<i>US\$ 103M</i>
<i>IRR pre-tax</i>	<i>42%</i>
<i>Project CAPEX Stage 1</i>	<i>US\$ 41M (500ktpa ore)</i>
<i>Project CAPEX Stage 2</i>	<i>US\$ 29M (1Mtpa ore)</i>
<i>Payback for Stages 1 &amp; 2</i>	<i>3.7 years (Stage 1 - Only 2.7 years)</i>
<i>Annual graphite production</i>	<i>Av 30ktpa (Stage 1 – Years 1-3) Av 60ktpa (Stage 2 – Years 4+)</i>

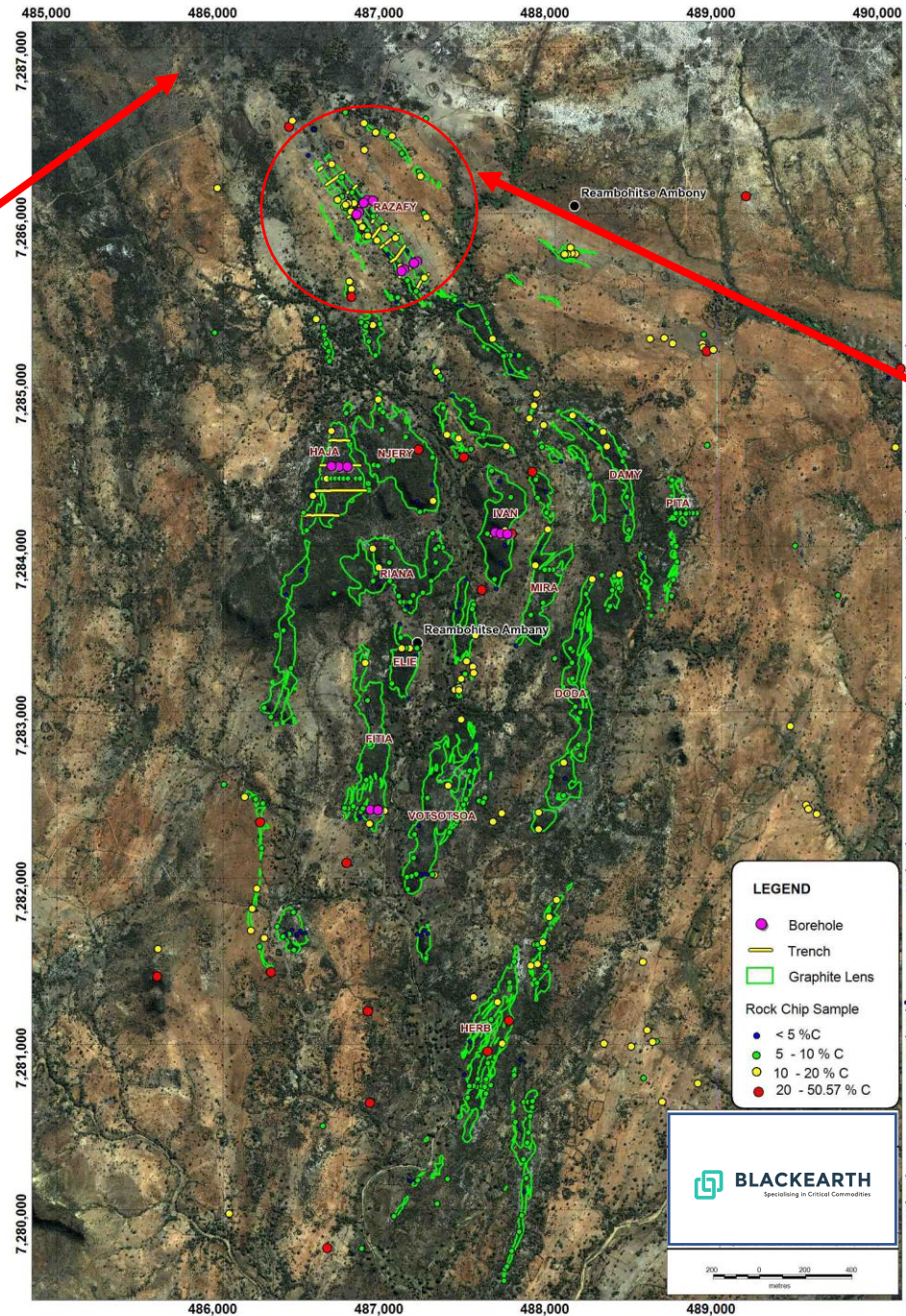
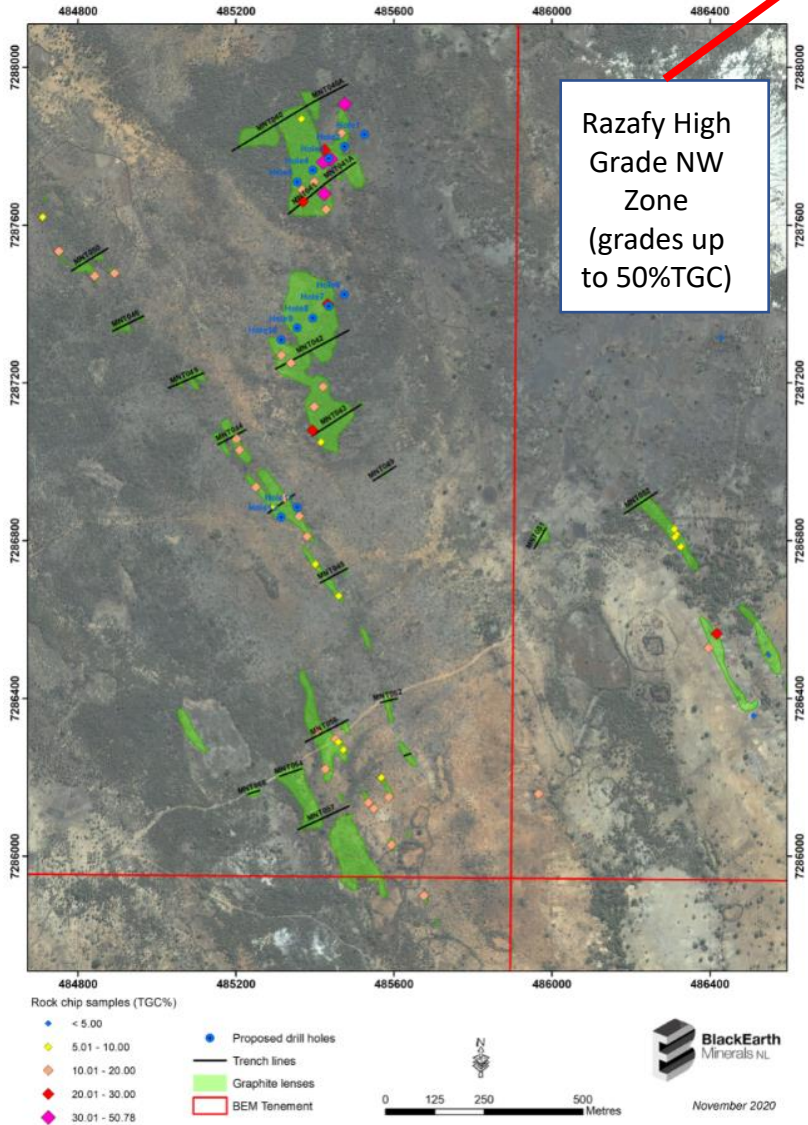
#### **Focus during Feasibility Study:**

*Maximising basket price and feed grade*

*E.g. an increase in feed grade from 6.3% to 7.3%TGC results in a project NPV of US\$152M and an IRR of 55%*

*\*Refer BEM ASX Release 30 January 2019*

**MANIRY PROJECT AREA**



**SIGNIFICANT EXPANSION POTENTIAL**

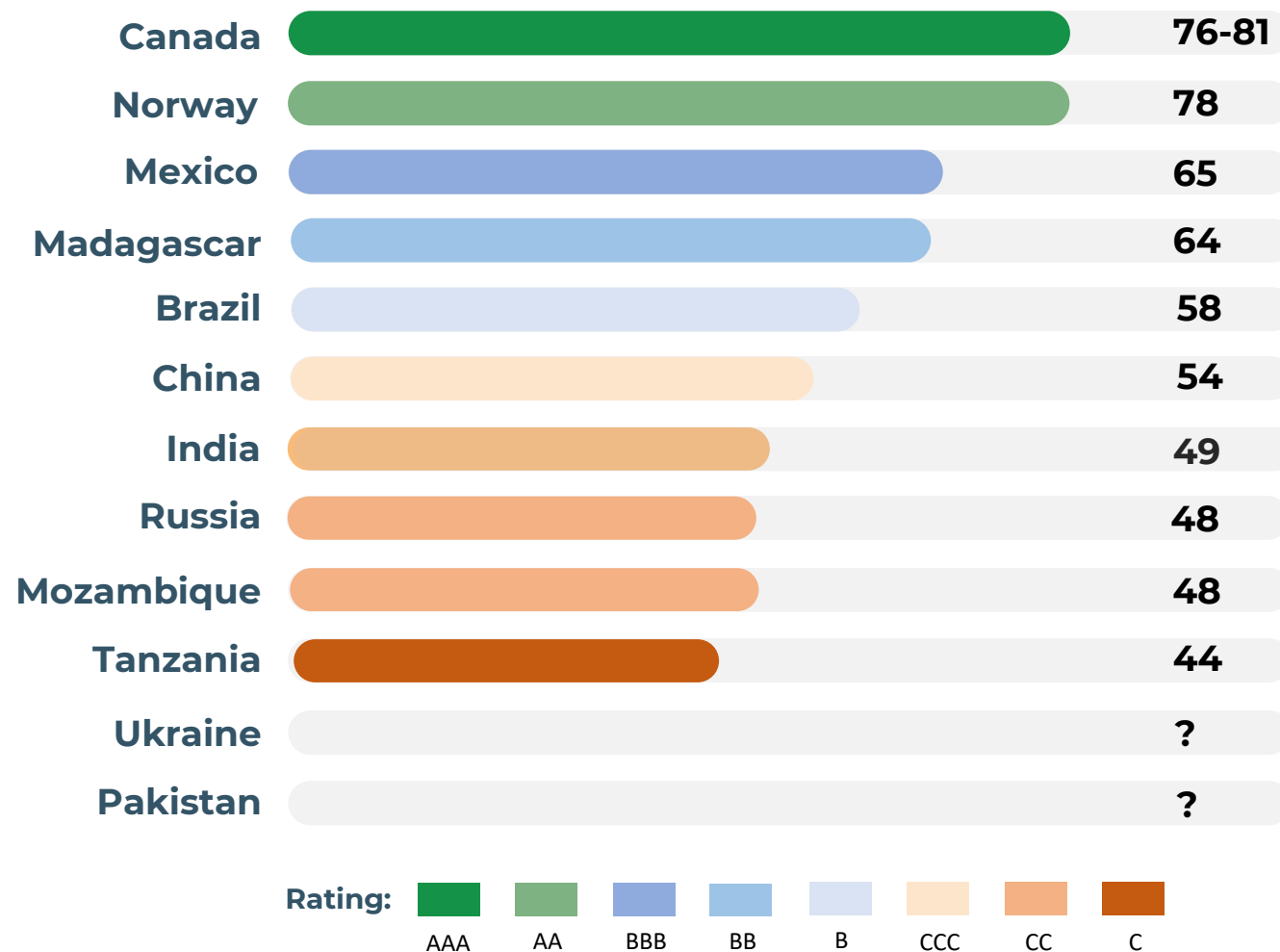
- Project Area (Razafy); based on Total Resources, >40 yrs mine life
- Located on a granted 40 year Mining Lease
- Maniry Tenements stretch over 20km<sup>2</sup>
- Approximately only 10% has been extensively explored
- 35 large outcropping graphitic areas cover the Maniry tenements

# GEOPOLITICS

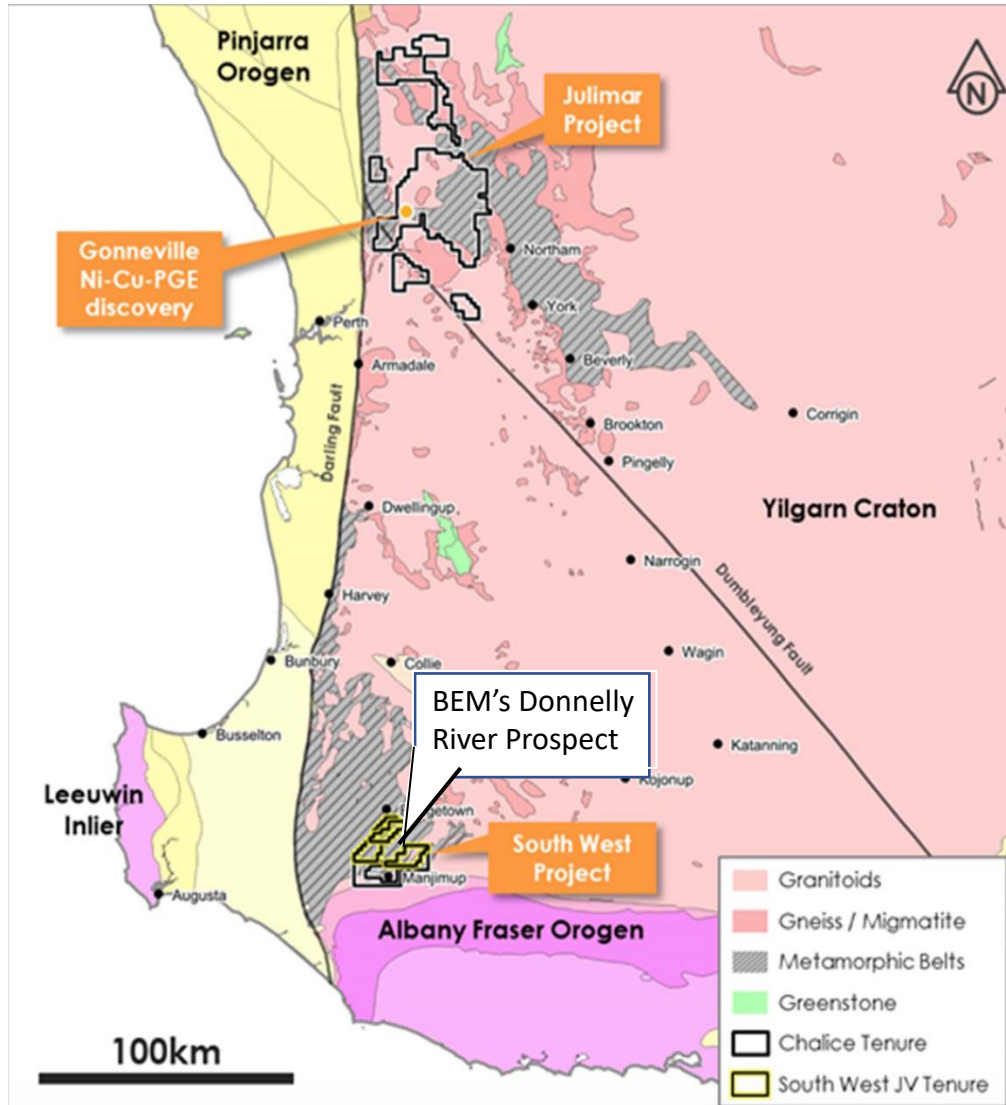
## Madagascar

- > 100 years graphite production history
- Largest supplier of graphite into China
- Second largest supplier of graphite into India
- Top 5 supplier of graphite into the USA

## INVESTMENT RISK INDEX\*



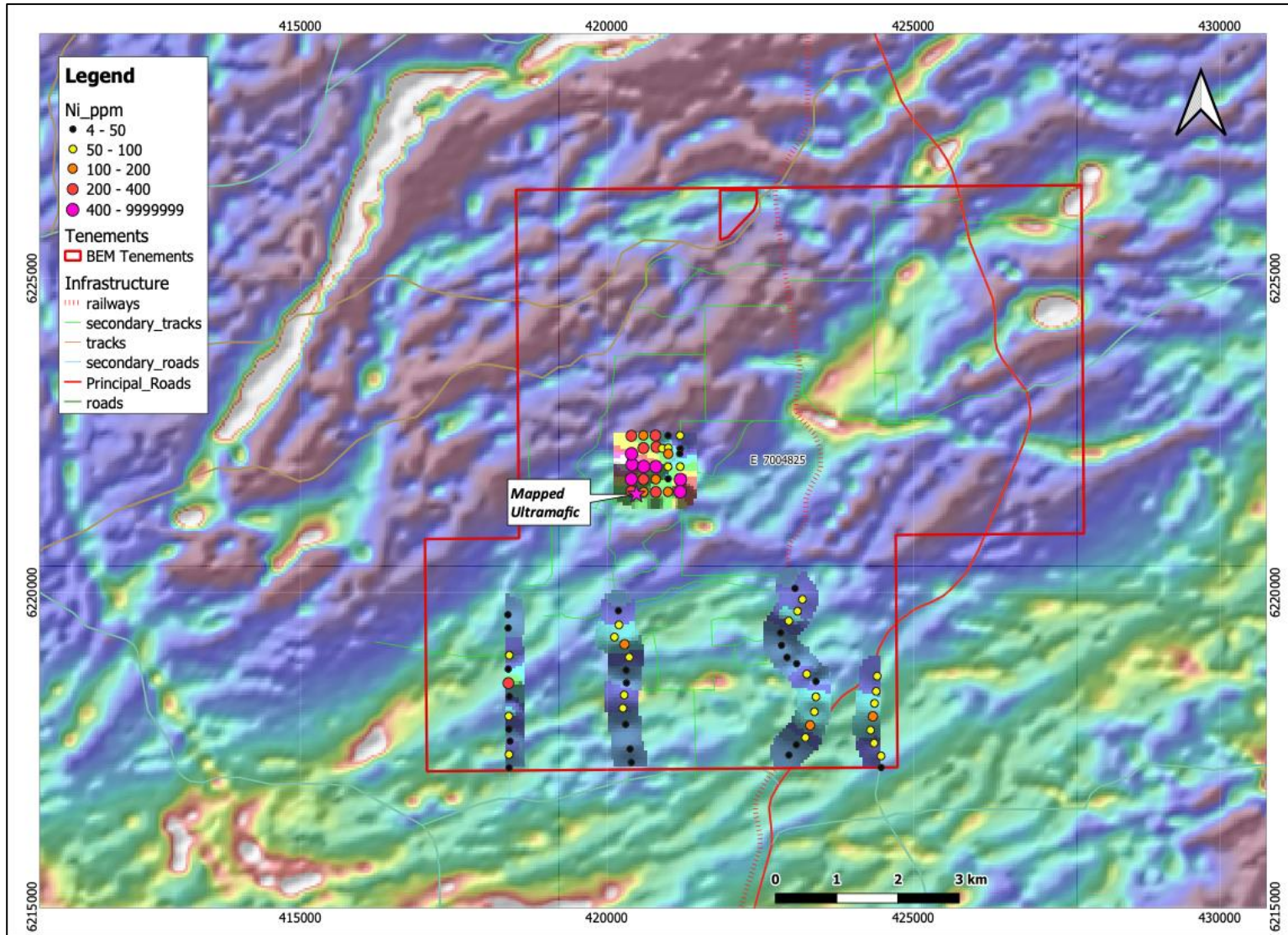
# DONNELLY RIVER LOCATION



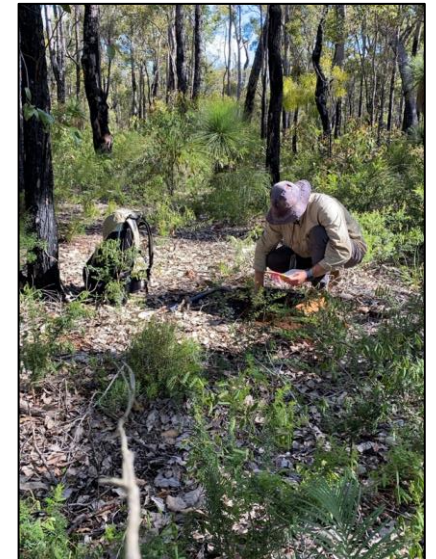
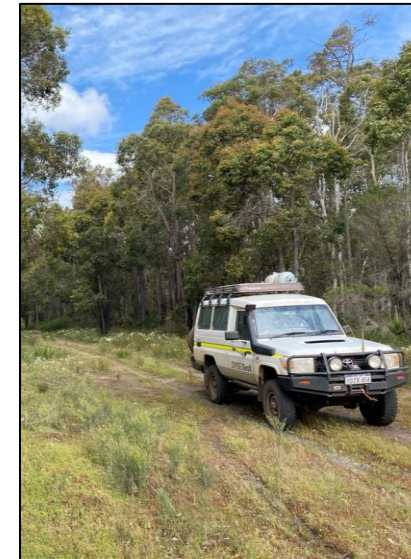
- The Donnelly River Prospect is located approx. 240km south of Perth, Western Australia.
- BEM's prospects are situated immediately adjoining the Thor and Odin Ni-Cu-PGE prospects (JV: Chalice Gold Mines "CHN" and Venture Minerals "VMS") – "South West Project".
- A drill program at CHN/VMS JV's Thor prospect intersected massive sulphide averaging 0.5%Cu with 0.05% Ni, 0.04% Co and anomalous Au & Pd\*.
- Drilling at CHN/VMS JV's Odin prospect intersected Ni and Cu sulphides within a highly prospective mafic-ultramafic unit that extends over a 10km strike\*.

\*Sourced from: ASX:VMS release dated 16/9/20

# DONNELLY RIVER Ni-Cu-PGE POTENTIAL



Summary map of geochemistry over airborne magnetic image





# DONNELLY RIVER EXPLORATION PROGRAM



- Complete review and consolidation of all available open file technical data.
  - a) Open file Airborne magnetic data processing and interpretation **Complete**
  - b) Geological logging of all relevant GSWA Core Library drill holes **Complete**
- Regional geochemical sampling and geological mapping
  - a) Phase (1): sampling along public road and rail easements – LAG and rock chip sampling **Complete**
  - b) Phase (2): following negotiated access to all of the project area undertake grid based LAG sampling program **Planning in progress**
- Detailed airborne magnetic and electromagnetic data surveys **Priced – planned for Mar 21**
- Landowner access agreements **In progress**
- Systematic geochemical sampling **Planned for Feb/Mar 21**
- Ground based detailed gravity survey **Planned for Feb/Mar 21**
- Ground geophysical surveys and drilling on specific (identified) targets. **Planned to commence Mar/Apr 21**

# NEWSFLOW CATALYSTS NEXT 3 MONTHS



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- *Finalise arrangements with Urbix Inc (up to 180 days)*
- *Maniry pilot plant update (graphite)*
- *Exploration activities at Donnelly River (Ni-Cu-PGE)*
- *Exploration results at Razafy NW high grade area (Maniry Graphite Project)*
- *Downstream value add product development works (graphite – coarse flake)*
- *Continue BFS activities (graphite)*
- *Continue offtake arrangements / discussions (graphite)*



# BLACKEARTH

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## **Tom Revy**

*Managing Director*

*677 Murray St*

*West Perth, WA, Australia*

*[tom.revy@blackearthminerals.com.au](mailto:tom.revy@blackearthminerals.com.au)*

*Phone: + 61 (0) 411 475 376*

