

2 September 2021

Ms Madeleine Green  
Principal Adviser, Listings Compliance  
ASX Ltd,  
Perth WA 6000

## UPDATE TO AFRICA DOWN UNDER PRESENTATION

Dear Maddie

We enclose an update to our presentation made today to the Africa Down Under Conference and also released to the ASX platform today.

The updated Africa Down Under Presentation now does not include a page which highlighted a previously published Equity Research paper prepared independently by Argonaut Securities which, amongst other things, alluded to target price details.

In accordance with ASX Guidelines, the Company wishes to advise that investors should not rely solely on the retracted slide and that the company was not providing de facto earnings guidance by including this slide in its presentation.

Should you have any questions in relation to this, kindly contact the undersigned.

Yours sincerely

David Round  
Finance Director

This announcement is authorised for release by Mr Tom Revy, Managing Director.

### CONTACTS

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BlackEarth encourages investors to update their contact details to stay up to date with Company news and announcements here: <http://www.blackearthminerals.com.au/update-details/>

For more information – [www.blackearthminerals.com.au](http://www.blackearthminerals.com.au)

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**BLACKEARTH**

Specialising in Critical Commodities

**"A clear pathway  
to cash flow"**

**AFRICA  
DOWNUNDER**

September 2021  
Perth, Western Australia



ASX:BEM



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## FORWARD LOOKING STATEMENTS

*Certain statements contained in this presentation, including information as to the future financial or operating performance of BlackEarth Minerals NL ("the Company") and its projects, are forward-looking statements. Such forward-looking statements are necessarily based on a number of estimates and assumptions that, while considered reasonable by the Company, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies, involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements, and may include, among other things, statements regarding targets, estimates and assumptions in respect of commodity prices, operating costs and results, capital expenditures, ore reserves and mineral resources and anticipated grades and recovery rates and are, or may be, based on assumptions and estimates related to future technical, economic, market, political, social and other conditions. The Company disclaims any intent or obligation to update publicly any forward-looking statements, whether as a result of new information, future events or results or otherwise. The words 'believe', 'expect', 'anticipate', 'indicate', 'contemplate', 'target', 'plan', 'intends', 'continue', 'budget', 'estimate', 'may', 'will', 'schedule' and other, similar expressions identify forward-looking statements. All forward-looking statements made in this presentation are qualified by the foregoing cautionary statements. Investors are cautioned that forward-looking statements are not guarantees of future performance and, accordingly, investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein. Many known and unknown factors could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements. Such factors include, but are not limited to: competition; mineral prices; ability to meet additional funding requirements; exploration, development and operating risks; uninsurable risks; uncertainties inherent in ore reserve and resource estimates; dependence on third-party smelting facilities; factors associated with foreign operations and related regulatory risks; environmental regulation and liability; currency risks; effects of inflation on results of operations; factors relating to title to properties; native title and Aboriginal heritage issues; dependence on key personnel, and share-price volatility. They also include unanticipated and unusual events, many of which it is beyond the Company's ability to control or predict. Photographs in this presentation may not depict assets of the Company.*

*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.*

# I. EXECUTIVE SUMMARY

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# VISION: TO BECOME A MATERIAL, VERTICALLY INTEGRATED GLOBAL GRAPHITE BUSINESS

## Maniry Graphite Project

- *Proven location*
- *Quality Resource & large Exploration Target*
- *Product tested and samples qualified by tier 1 users*
- *Plan to complete the DFS by Q2 2022*
- *Plant commissioning planned in CY 2023*

## Stage 1 Downstream

- *Expandable graphite at 2000-3000tpa*
- *Potential significant uplift in revenue / profit*
- *Priority to formalise JV with Metachem*
- *Binding offtake with Tier 1 European buyer in place*
- *Plan to commission plant by mid-2022*

## Graphite Market Conditions

- *End-users becoming increasingly concerned about security of supply*
- *Decline in coarse graphite flake supply has seen prices rise*
- *Increasing EV demand combined with growing ESG thematic provide strong tailwinds*



# CORPORATE SNAPSHOT



## CAPITAL STRUCTURE

Fully Paid Ordinary Shares	215m
Share Price (31 August 2021)	\$0.135
Market Cap (undiluted)	\$29.0m
Cash (30 June 2021)	\$6.56m
Enterprise Value (undiluted)	\$22.4m

## SHARE PRICE ASX:BEM



## SHARE PRICE PERFORMANCE (31/8/21)

1 Month **+28%**      1 Year **221%**

## BOARD OF DIRECTORS & MANAGEMENT

**George Bauk**  
Non-Executive Chairman

- ▶ Over 30 years' experience in the resources industry including 14 years' experience as a listed resources company director
- ▶ Has held global operational and corporate roles with WMC Resources and Western Metals, and most recently was MD of Northern Minerals
- ▶ Strong background in strategic management, business planning, building teams, finance and capital/debt raising, and experience with a variety of commodities in particular industrial minerals

**Tom Revy**  
Managing Director

- ▶ Qualified metallurgist with extensive experience in project development, EPCM services
- ▶ More than 30 years' experience within the resources industry (including 5 years in graphite)
- ▶ Held senior operational and corporate positions at GRD Minproc, WorleyParsons, Ferrum Crescent and Empire Resources

**David Round**  
Finance Director

- ▶ Extensive M&A, Business Development and Corporate Advisory experience
- ▶ Was recently CFO and Head of Sales of an Australian listed Graphite production company with mine in Madagascar – over 5 years commercial experience and international sales networks within the graphite industry

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## II. MANIRY GRAPHITE PROJECT

### MADAGASCAR



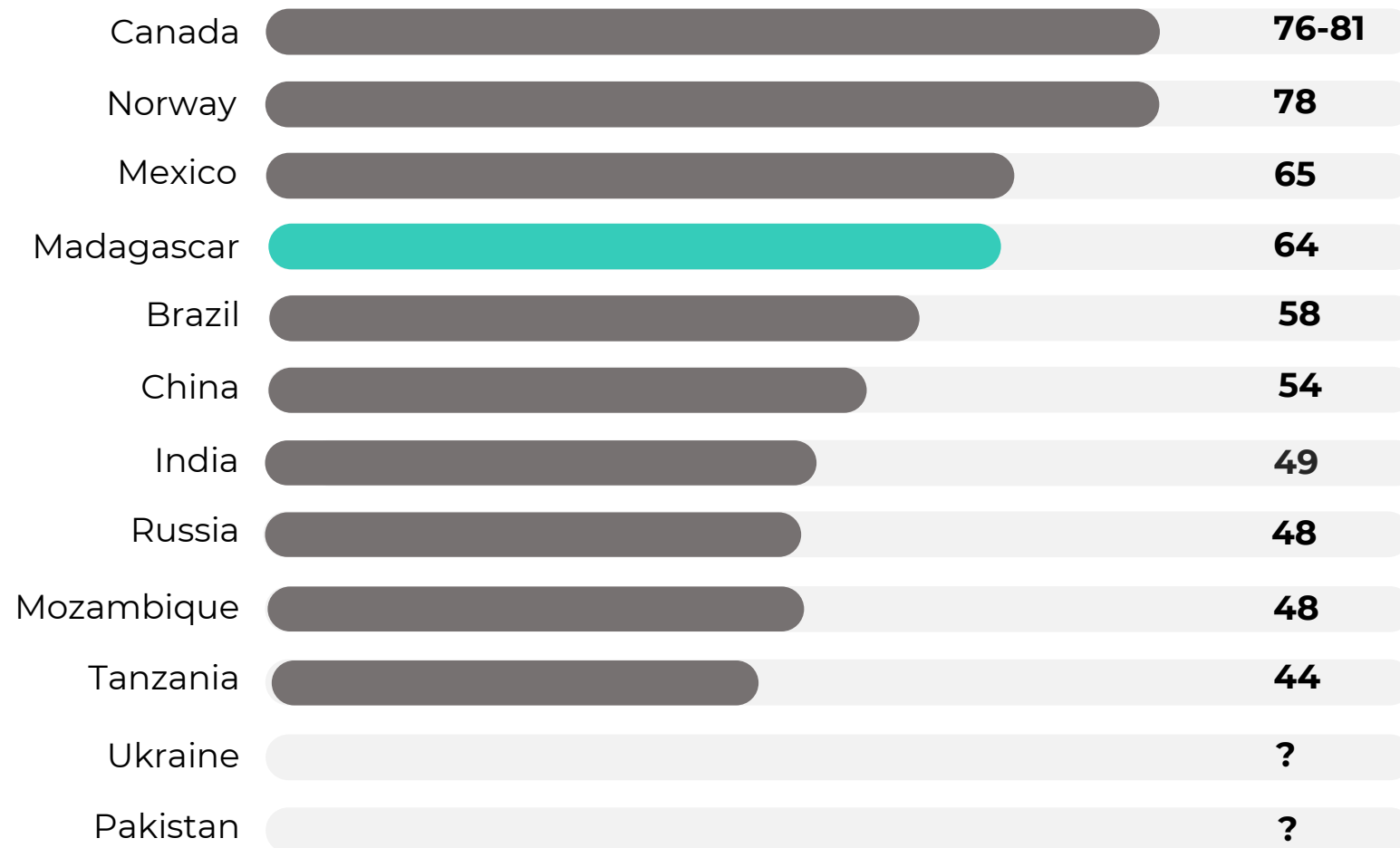


# MADAGASCAR GEOPOLITICS

## MADAGASCAR KEY POINTS

- ▶ *+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 FOR GRAPHITE PRODUCING COUNTRIES<sup>1</sup>



1. Source: World Risk Report 2020

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# MANIRY AREA

## SIGNIFICANT EXPANSION POTENTIAL

- ▶ *Project Area (Maniry); >40 yrs mine life*
- ▶ *Granted 40-year Mining Lease over the Razafy Resource*
- ▶ *Maniry tenements stretch over 20km<sup>2</sup>*
- ▶ *35 large outcropping graphitic areas cover the Maniry tenements*
- ▶ *Only ~10% has been extensively explored*

## MANIRY PROJECT MINERAL RESOURCES<sup>1</sup>

Classification	Tonnage (Mt)	Total Graphitic Carbon (%TGC)	Contained (kt)
Indicated	8.0	7.20%	577.6
Inferred	12.2	6.05%	738.7
<b>TOTAL</b>	<b>20.2</b>	<b>6.51%</b>	<b>1,316.3</b>

## EXPLORATION TARGET<sup>2</sup>

Maniry Project : 260 – 380Mt at 6-8% TGC

### Razafy NW

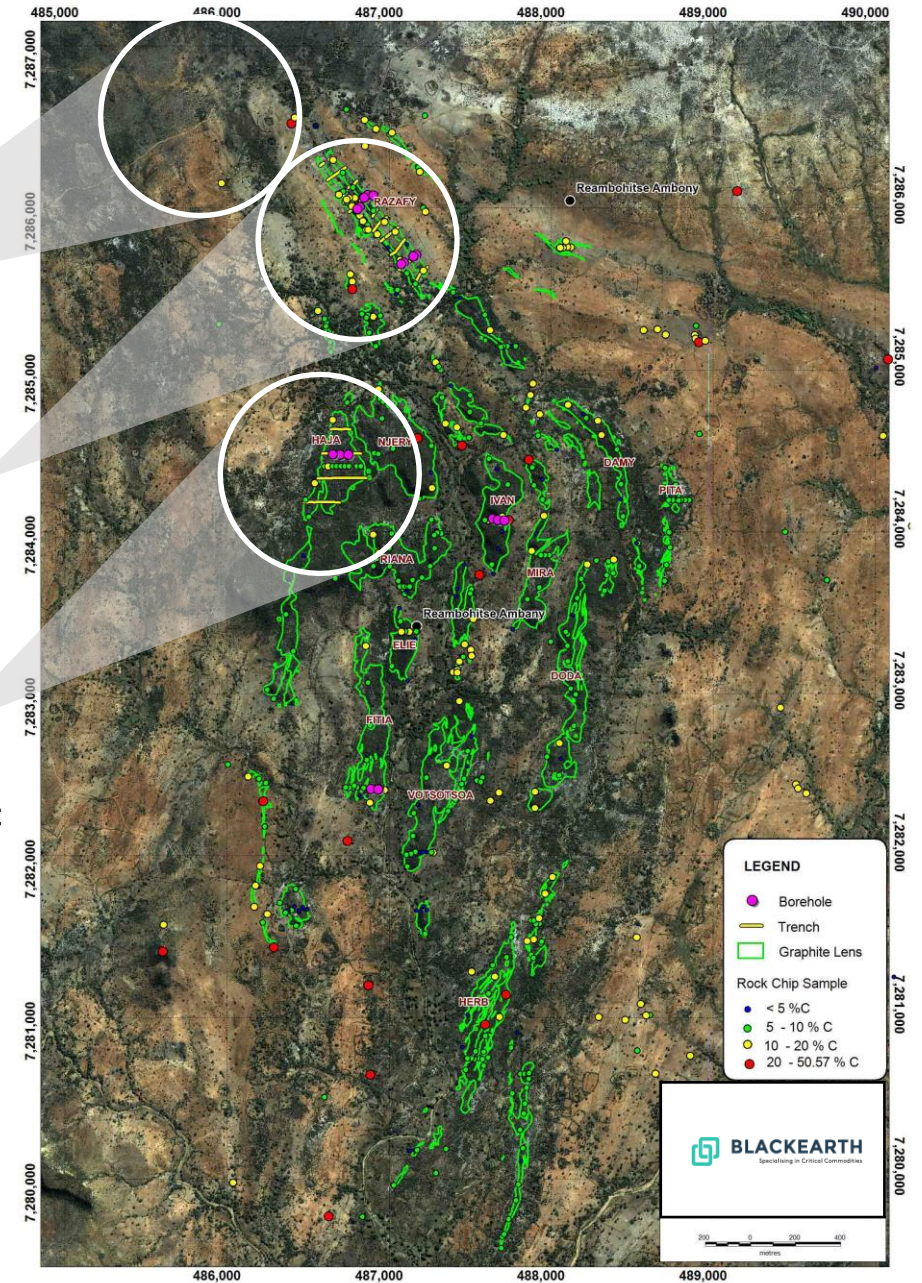
Recent drilling program completed

### Razafy

Indicated and Inferred Resource  
**11.2Mt @ 7.1% TGC**

### Haja

Inferred Resource  
**9Mt @ 5.79% TGC**



1. Reported in accordance with the 2012 Australasian code for reporting of exploration results, Mineral Resources and Ore Reserves ("the JORC Code 2012"). See ASX Announcements dated 14 August 2018 and 27 December 2018  
 2. 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. See ASX announcement date 14 August 2018

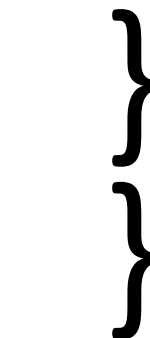
# MANIRY HIGHLIGHTS



- ▶ *Flagship Maniry graphite project in Southern Madagascar – Plan to complete DFS in Q2 2022*

## STUDY OUTCOMES<sup>1</sup>

<b>Project Life</b>	10+ Years
<b>NPV<sub>10</sub> (pre-tax)</b>	US\$103m
<b>IRR (pre-tax)</b>	42%
<b>Project Capex Stage 1</b>	US\$41m (500ktpa ore)
<b>Project Capex Stage 2</b>	US\$29m (1Mtpa ore)
<b>Annual Graphite Production</b>	Av 30ktpa (Stage 1 – years 1-3) Av 60ktpa (Stage 2 – years 4+)
<b>Total LOM EBITDA</b>	US\$209.7m
<b>Operating Cost FOB (Port of Ehoala)</b>	US\$593/t
<b>Payback Period (Stage 1)</b>	2.7 years

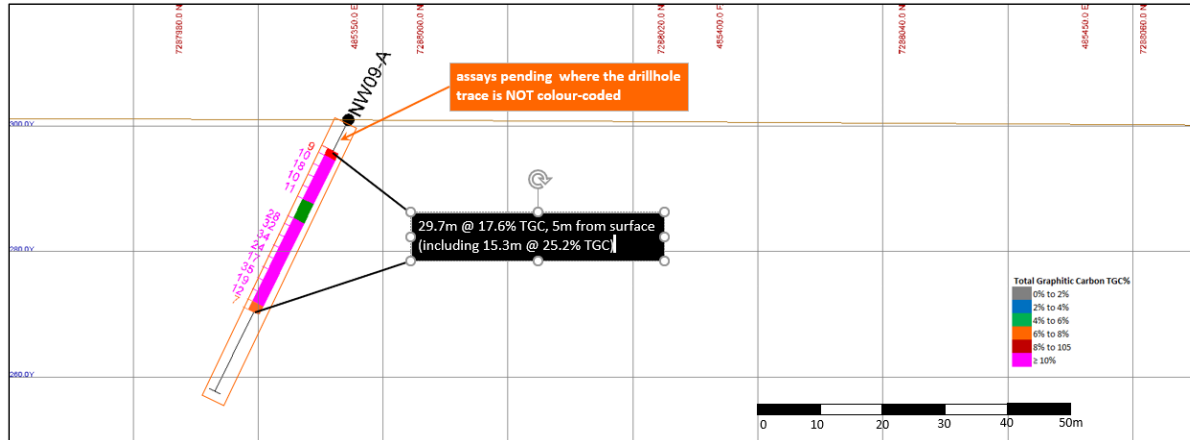


## ENHANCEMENT ACTIVITIES

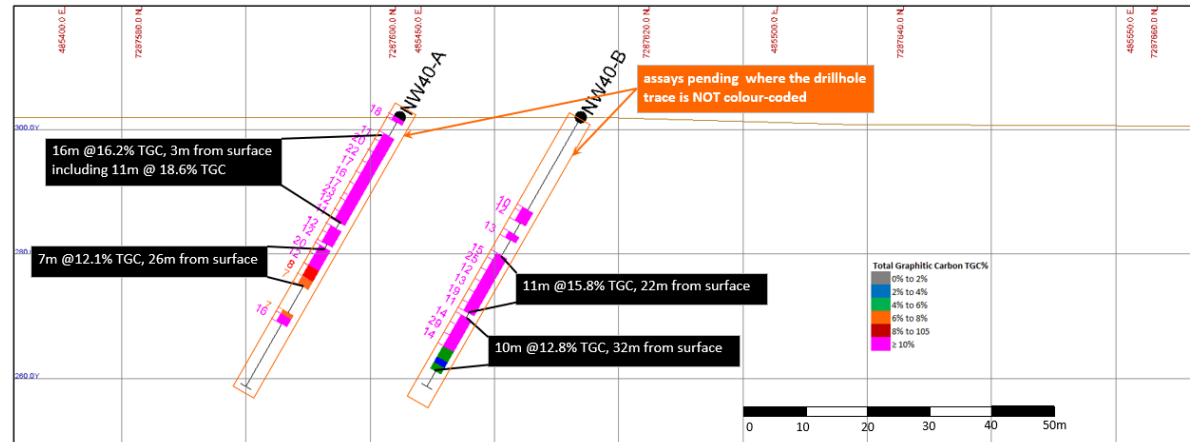
- *Current Razafy NW drilling program*
- *Identifying higher grade material at Razafy NW*
- *Higher grade concentrate – pilot program*
- *Including expandable graphite project*
- *Part of the current DFS – lowering CAPEX*
- *Improving graphite recovery – pilot program*
- *Identifying higher grade material at Razafy NW*
- *Seeking competitive pricing as part of the DFS*
- *Outcomes of higher feed grade and improved recoveries*

1. Refer ASX Announcement dated 30 January 2019

# MANIRY RAZAFY NW DRILL HOLE HIGHLIGHTS



*Cross section based on drill hole NW09-A; some assays still pending*



*Cross section based on drill holes NW40-A & NW40-B; some assays still pending*

- Best intersections include:
  - 29.7m at 17.6% TGC (from 5m)
  - 16.1m at 16.2% TGC (from 3m)
  - 10.7m at 15.8% TGC (from 22m)
  - 5.1m at 18.9% TGC (from 22m)
- The Razafy Northwest zone remains highly prospective to the north, south, east and at depth and will be subject to further exploration
- Resource model being prepared to be finalised as soon as possible after final results are received.

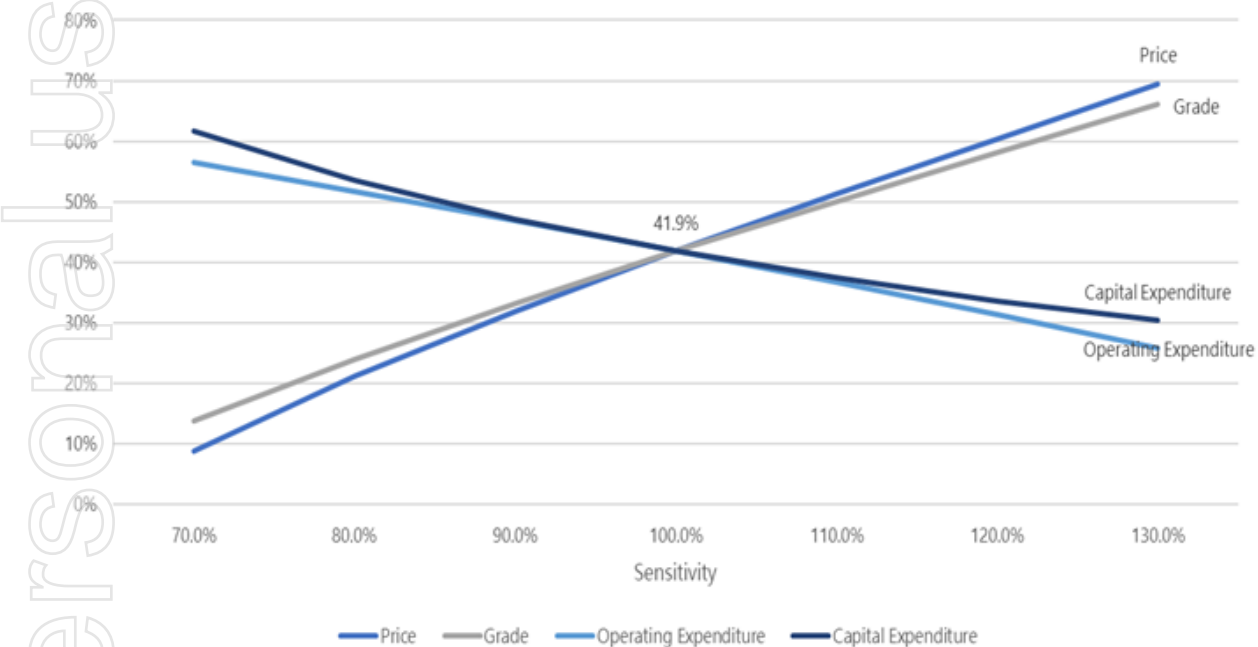
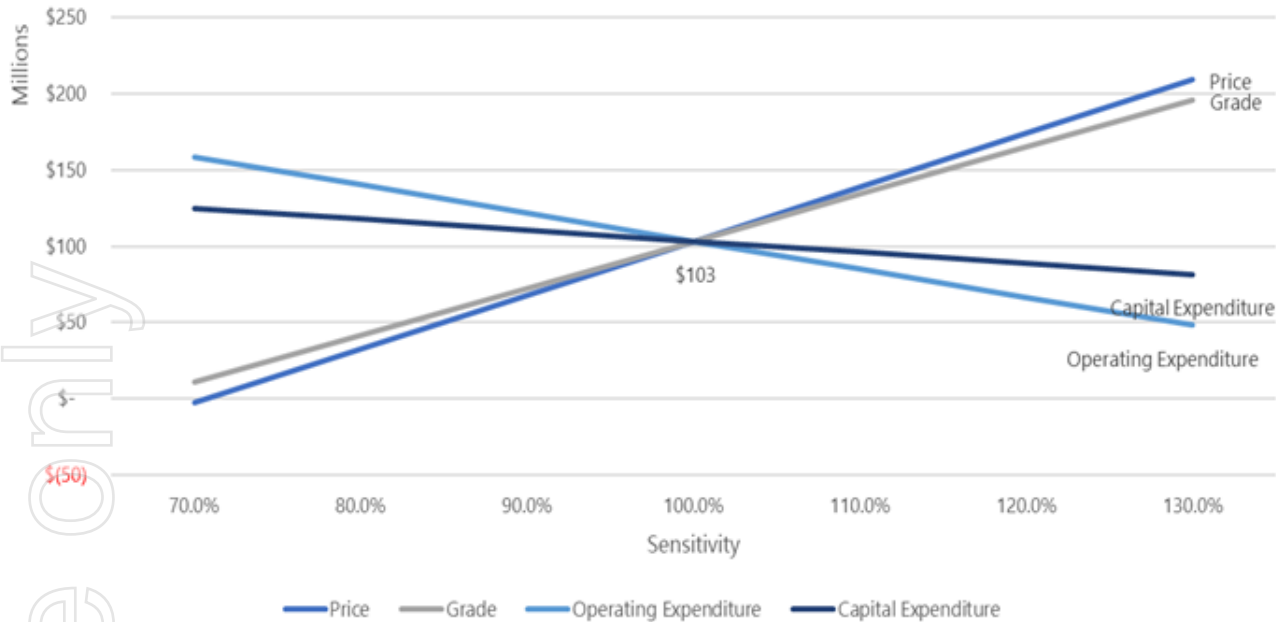
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# MANIRY SENSITIVITIES

	NPV	IRR
<i>Avg Feed Grade 6.2%</i>	<i>USD103M</i>	<i>42%</i>
<i>7.2%</i>	<i>USD152M</i>	<i>55%</i>
<i>8.2%</i>	<i>USD201M</i>	<i>68%</i>
<i>9.2%</i>	<i>USD250M</i>	<i>81%</i>
<i>10.2%</i>	<i>USD299M</i>	<i>94%</i>

Data derived from sensitivity graphs released to ASX 30 Jan 2019



# BEM DOWNSTREAM SPECS



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



- 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.



- 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.



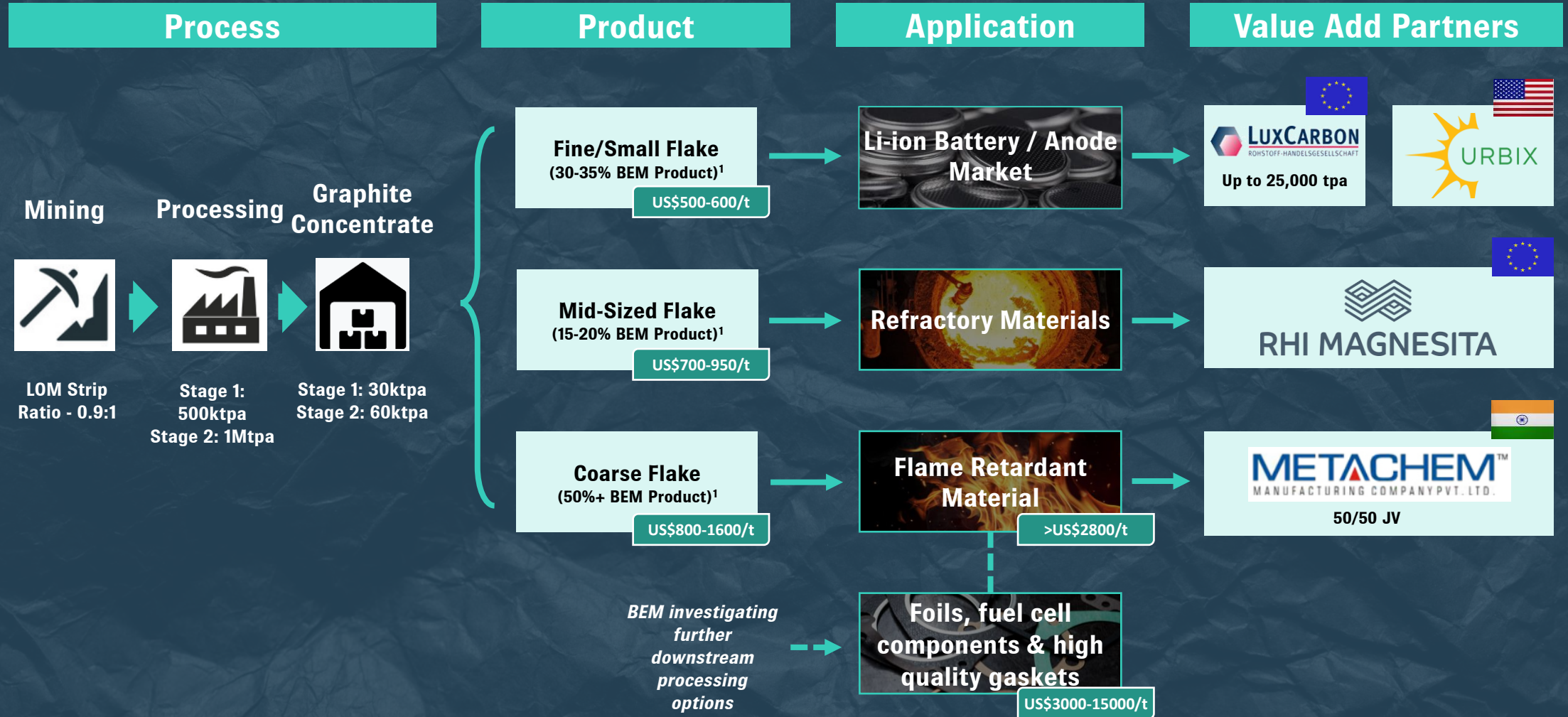
- Spherical graphite from Maniry meets specifications required by lithium-ion anode material manufacturers.
- Spherical graphite production yields of up to 52% achieved vs industry average 40%.
- Positive feedback received from tier-1 spherical graphite producers and anode material manufacturers.
- Urbix Inc JV announcement to produce CSPG



# MANIRY GRAPHITE PROJECT



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<sup>1</sup> Technical information based on BEM ASX Release 30/1/2019



## III. EXPANDABLE GRAPHITE STRATEGY

# EXPANDABLE GRAPHITE STRATEGY

*Low risk / CAPEX entry into the downstream market, providing shareholders with a higher revenue stream and Company cash flow expeditiously*

*Coarse Flake Maniry Graphite*



Sample # 5

$\text{KMnO}_4 + \text{H}_2\text{SO}_4 + \text{ZnSO}_4 \cdot 7 \text{H}_2\text{O}$

> 500  $\mu\text{m}$

> 300  $\mu\text{m}$

> 180  $\mu\text{m}$

> 106  $\mu\text{m}$

> 75  $\mu\text{m}$

< 75  $\mu\text{m}$

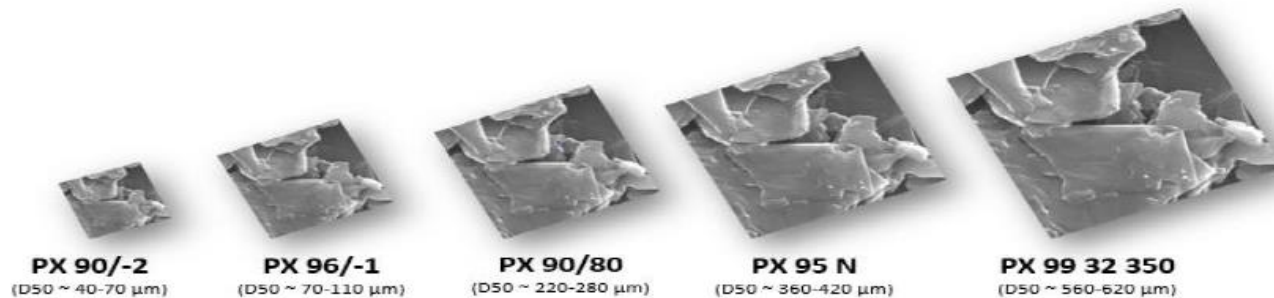
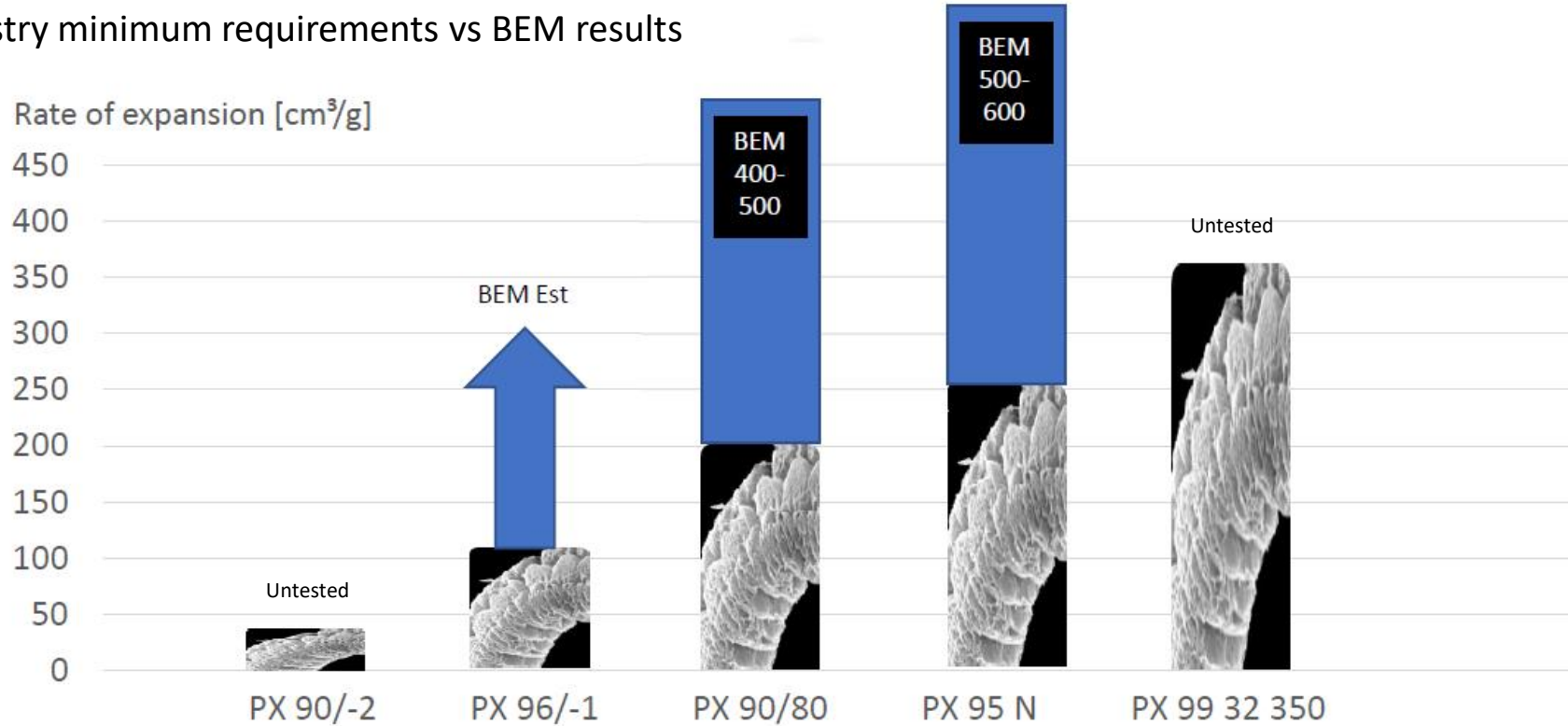
*Photos of BEM product from NGS following expandability test work*

*"The (Maniry) flake graphite flotation concentrate ALS 19212 is well suitable for the preparation of expandable graphite. We could not find any restriction which would limit the application of this kind of flake graphite."*

**NGS Trading & Consulting GmbH**

# EXPANDABLE GRAPHITE PRODUCT CHARACTERISTICS

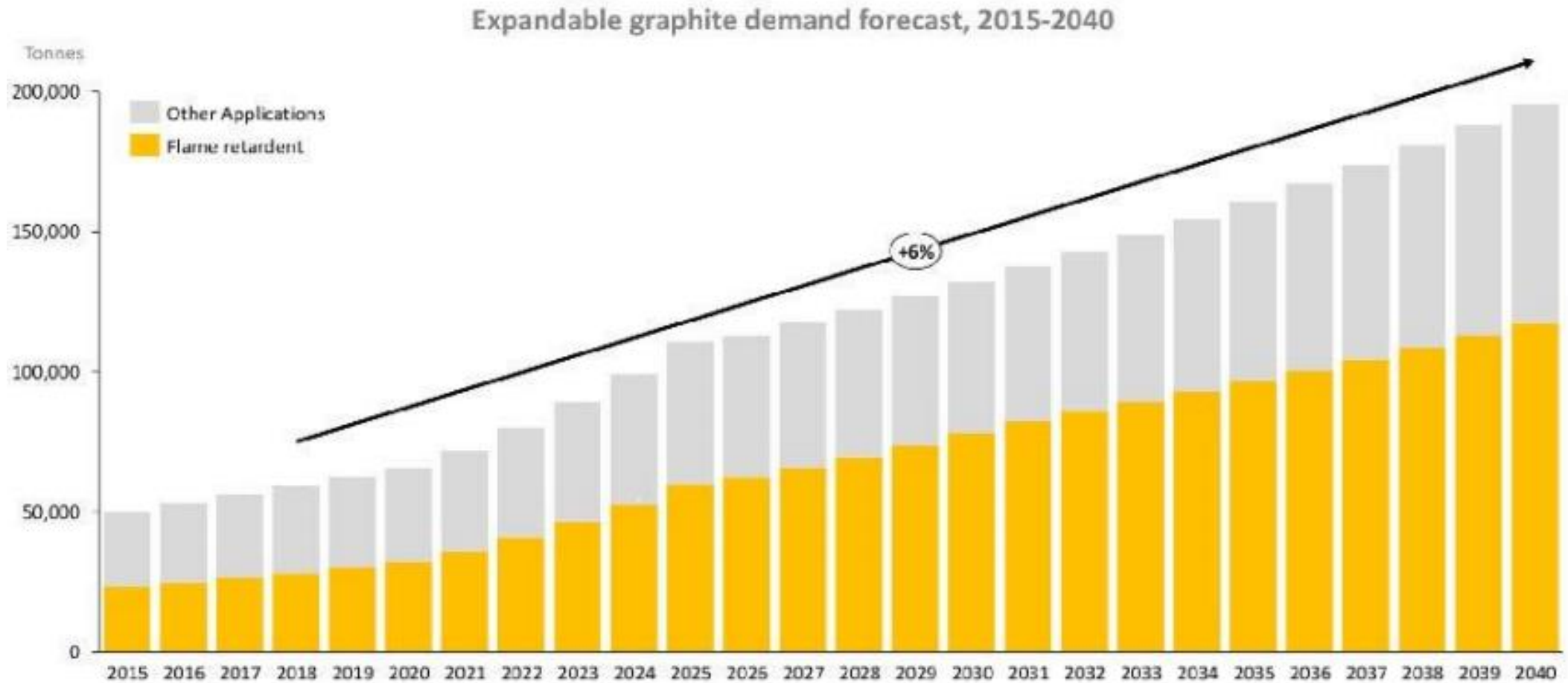
Outline of industry minimum requirements vs BEM results



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# EXPANDABLE GRAPHITE GROWTH PROJECTIONS



Fire Retardant use as a portion of Expandable Graphite demand and growth – Source:- Benchmark Mineral Intelligence



# NEWSFLOW CATALYSTS

## NEXT 3-4 MONTHS



- 1 Progressive updates on DFS activities including the appointment of an independent engineering company**
- 2 Further exploration results at Razafy NW high grade area**
- 3 Expandable graphite plan – conclude JV agreement & undertake engineering and costing (DFS) study**
- 4 Upgraded Resource based on recently completed drilling at Razafy Northwest**
- 5 Commencement of construction of the Company's JV expandable graphite facility**
- 6 Various ESG related activities**





# BLACKEARTH

Specialising in Critical Commodities

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# APPENDIX 1 COMPANY HISTORY

## 2018

- *Company IPO*
- *Commence drilling – defined Indicated and Inferred Resource*
- *Defined large Exploration Target*
- *Preliminary & small scale pilot met test work completed*
- *Commencement of Advanced Scoping Study for Maniry*

## 2019

- *Completed Advanced Scoping Study for Maniry*
- *Coarse product proven suitable for expandable graphite*
- *Fine product returns positive results – spheronised & purified graphite – SPG (pre-cursor to Li-Ion Batteries)*
- *Commencement of Maniry DFS*
- *Trial mining commences at Maniry*
- *Exploration Target defined at lanapera*

## 2020

- *Maniry graphite proves suitable for Li-Ion Batteries*
- *Stage 1 Pilot Plant test work completed*
- *Maniry graphite sample qualifies with Tier 1 Anode producer*
- *MOU offtake signed with RHI Magnesita for refractory material*
- *Commencement of Environ & Social (DFS) works at Maniry*
- *High level Ni-Cu-PGE targets identified at Donnelly River (WA)*

## 2021 - YTD

- *Stage 2 large scale Pilot Plant test work completed*
- *MOU signed with URBIX (US) for collaboration to produce SPG*
- *Collaboration Agreement signed with German based LuxCarbon*
- *Joined European Battery Alliance*
- *MOU for 50/50 JV with Metachem for development of expandable graphite facility in India*
- *Offtake signed with Grafitbergbau for expandable graphite*
- *Surface sampling & VTEM completed at Donnelly River*