

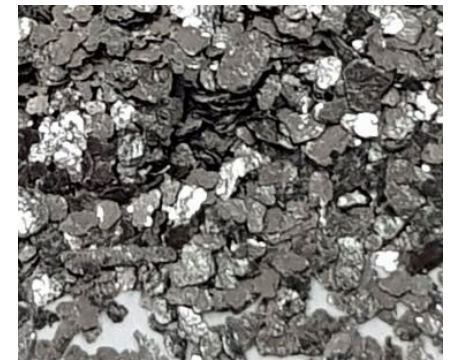


**Battery Minerals Limited**  
**BMI - Seoul Conference Presentation**  
**September 2019**



# Positioned to Rapidly Respond to Clean Energy Growth

1. Two world class, low cost, long life graphite projects
  - a. Montepuez Graphite Project
  - b. Balama Central Graphite Project
2. Montepuez is fully permitted and at an advanced stage of development
3. Potential for phased, market driven expansion to 200ktpa flake concentrate - scalable, low risk production profile<sup>1</sup>
4. Capable team with a track record of project execution



Note 1: Subject to the completion of all necessary feasibility studies, permit applications, construction, financing arrangements, market conditions, port access and execution of infrastructure related agreements

# Well Positioned for Development & Growth

Graphite Market

Our Projects

Community



Further Value

Company

Forward Plan

# Graphite Market



# Energy storage highly reliant on Graphite

## VOLKSWAGEN

- Will require 300 GWh<sup>1</sup> of annual battery cell supply = approximately 220,000tpa Graphite
- To invest €1 billion in battery cell production in Germany<sup>2</sup>
- To release 20 EV models over next 6 years<sup>2</sup>

## VOLVO

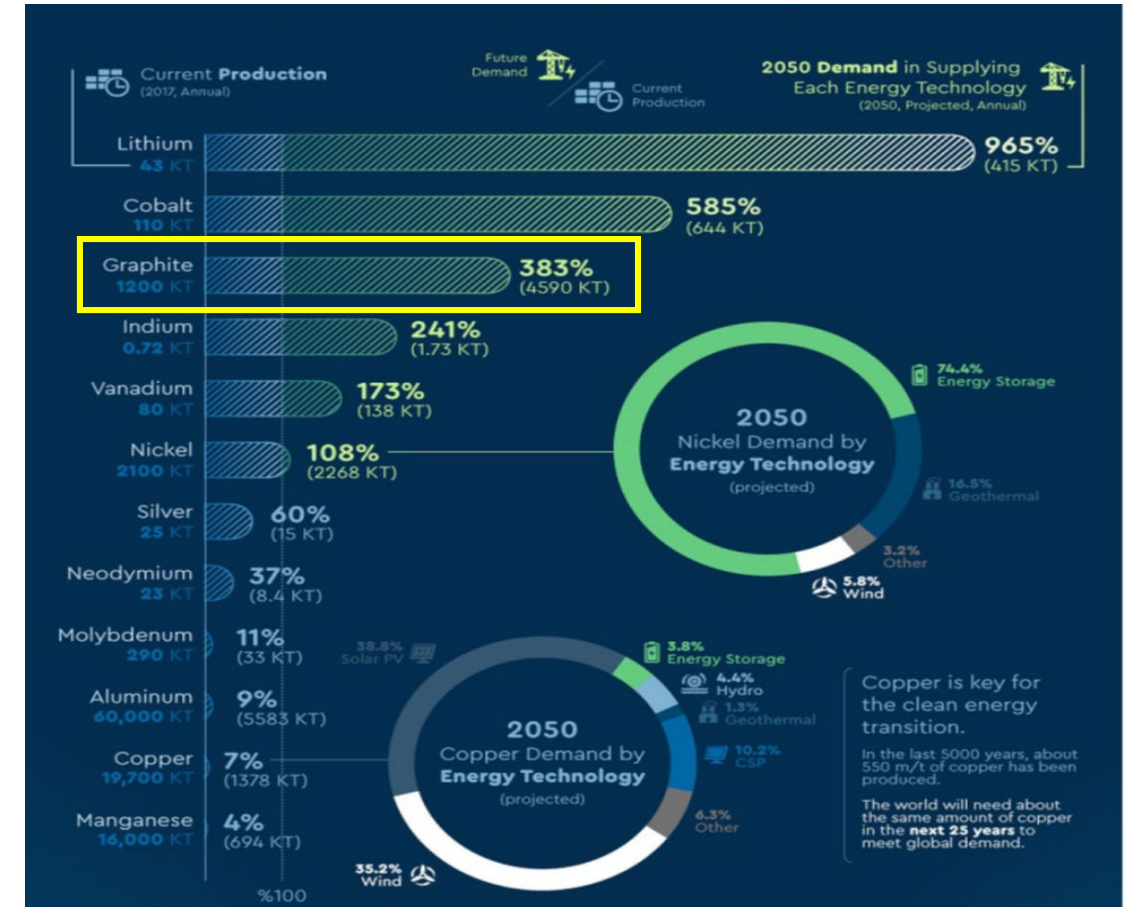
- All new vehicles launched after 2019 to be electrified, 50% sales electric by 2025 = 500,000 EV batteries per annum required<sup>3</sup>
- Battery factory under construction in Ghent, Belgium<sup>4</sup>
- Multi-billion dollar deal signed with LG Chem and CATL to supply batteries to 2028<sup>3</sup>

## TOYOTA

- Aiming to have half of its global sales come from electrified vehicles by 2025, five years ahead of schedule<sup>6</sup>
- Expects to achieve its goal of selling over 5.5 million electrified vehicles a year including hybrid models by 2025
- Partnering with leading Chinese battery-maker Contemporary Amperex Technology Co. (CATL), as well as Chinese EV-maker BYD Co., for additional battery supplies to meet these targets.

## GIGAFACTORY GROWTH

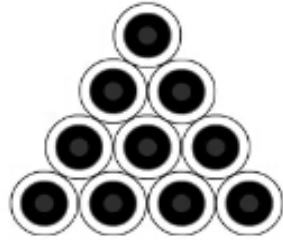
- Top 10 Chinese Gigafactories forecast growth of 110 GWh per annum between 2018 to 2020
- Growth of existing USA and South Korean Gigafactories forecast to expand by an additional 61 GWh per annum from 2018 to 2020
- European Gigafactory expansion from 21.5 GWh in 2020 to 81.5 GWh by 2025
- 76 additional potential Gigafactories forecast to be developed in the next 5 years



**1 GWh requires ~ 750t natural graphite**

### References

- 1 Bloomberg, 29 May 2019
- 2 Road / Show by CNET, [www.cnet.com](http://www.cnet.com)
- 3 Financial Times, 14 May 2019
- 4 Techcrunch, 15 May 2019, [www.techcrunch.com](http://www.techcrunch.com)
- 5 Benchmark Mineral Intelligence
- 6 Toyota Motor Co announcement 7 June 2019



Refractory  
**+41%**



Friction & Lubricants  
**+26%**



Graphite



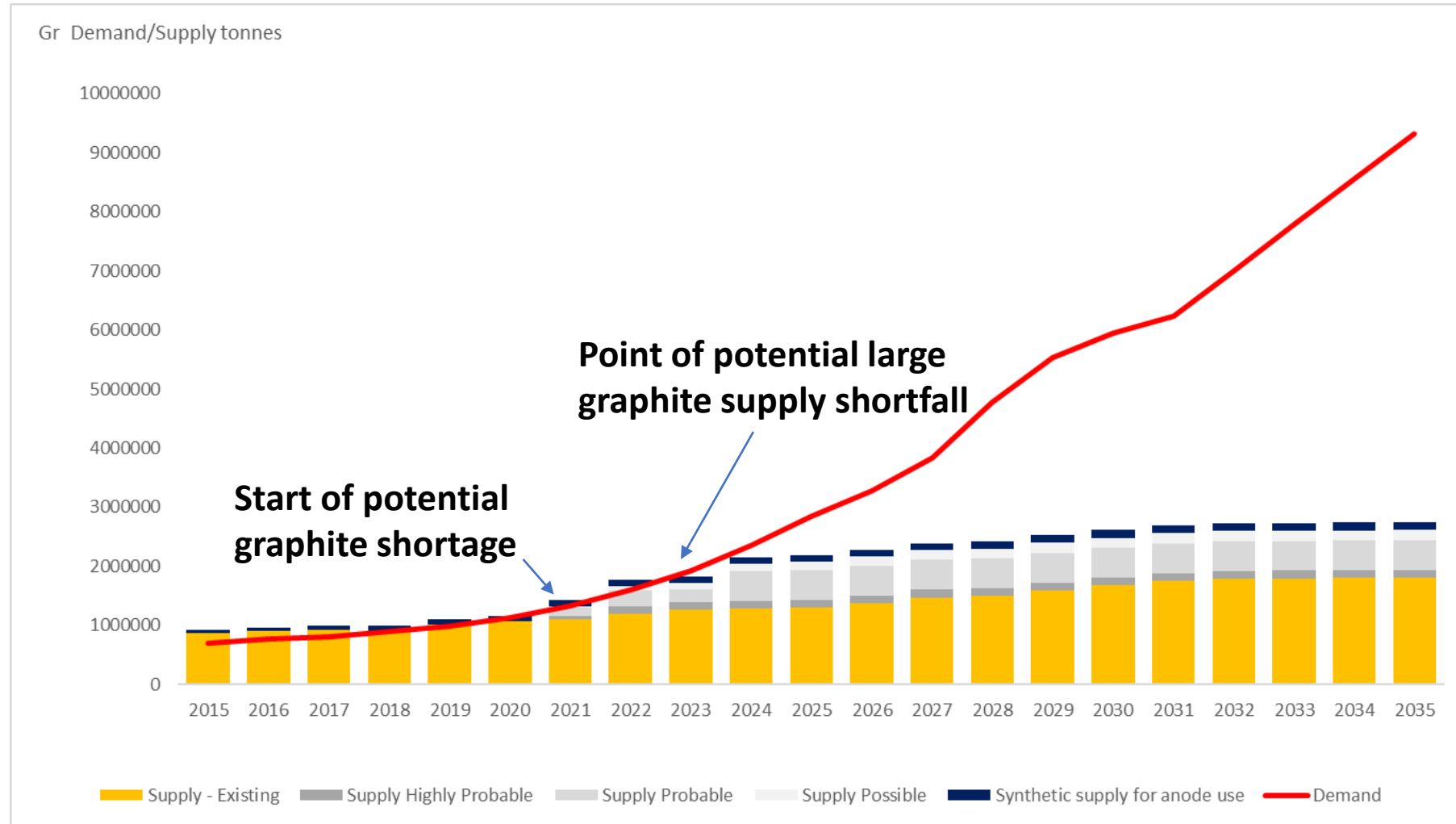
Expandables  
**+49%**

## It's not just about Energy Storage

Even in the short-term to 2023,  
a significant increase in  
demand is forecast in  
traditional graphite sectors<sup>1</sup>.

*1. Benchmark Mineral Intelligence*

# Lack of investment will result in supply uncertainty

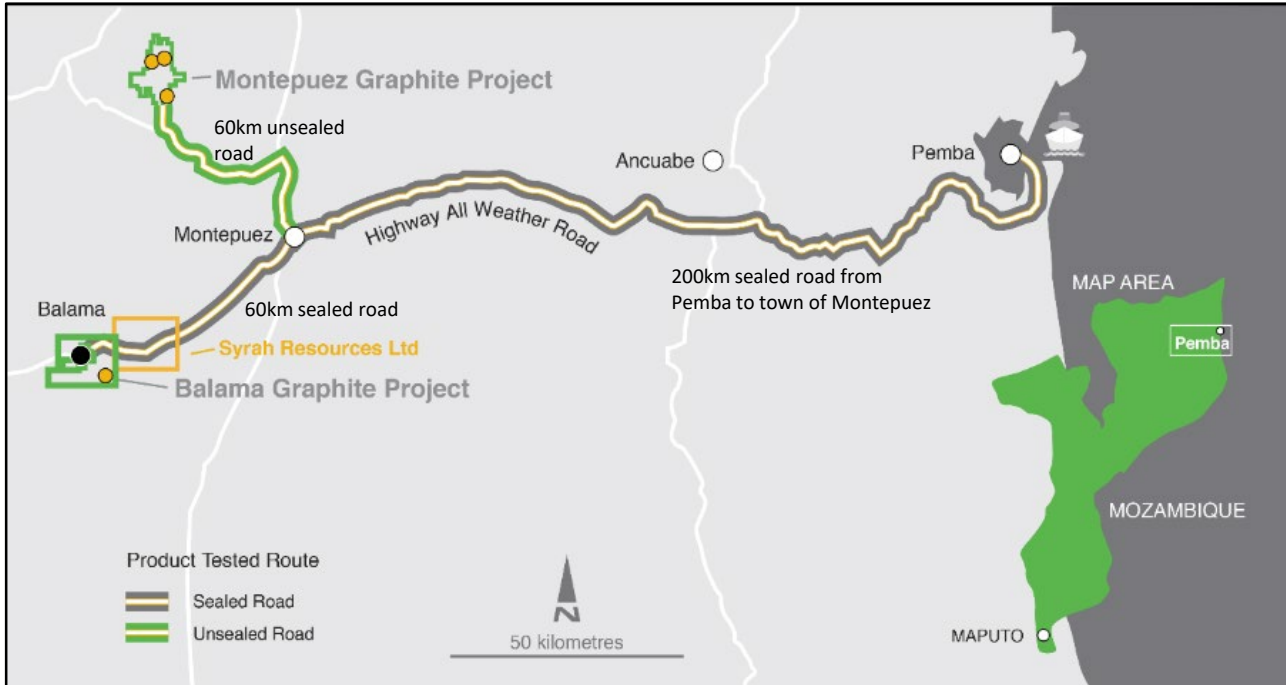


Source: Benchmark Mineral Intelligence and Battery Minerals analysis

# Our Projects



# Our Projects



**Pemba Port:** 8-12m deep berthing draft,  
**Capacity:** 3 – 4Mtpa cargo and goods

**Vessels:** Geared - 30,000dwt to  
40,000dwt vessels,

**Shipping Route:** Coastal shipping route  
between Durban and Dar es Salam

**Port Authorities:** planning expansion of  
loading capacity and facilities for 2020



**Montepuez Graphite Project:** 50,000tpa graphite flake concentrate at 96%TGC (Stage 1)  
growing to 100,000tpa (Stage 2) <sup>1</sup>

**Balama Central Graphite Project:** 58,000tpa graphite flake concentrate at 96%TGC <sup>1</sup>

**International Airport:** Located at Pemba, 2.5hr flight from OR Tambo Airport, Johannesburg

**Port Allocation Approved:** at Pemba Port for a minimum 100,000tpa of graphite concentrate



<sup>1</sup>. See ASX announcement on 4 December 2018 for "Increase in Montepuez Graphite Reserve" and ASX announcement on 12 December 2018 for "Maiden Reserve for Balama" for detailed disclosure. Ore Reserves prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning these production targets in these two announcements continue to apply and have not materially changed.

# Montepuez Graphite Project - Stage 1

Montepuez Graphite Project	Stage 1
Production Output	+50,000 tpa
Construction Capex <sup>3</sup>	US\$39.0 M
C1 Opex (first 10yrs)	US\$361/t concentrate
EBITDA per annum <sup>1</sup>	>US\$30M
Grade processed	11% TGC (12% for first 18yrs)
Plant Type and Scale	Modular, ~500ktpa plant feed
Metallurgical Recovery weathered	80%
Metallurgical Recovery fresh	85%
Graphite Concentrate purity	>96% TGC
Mine Life	+50 years

- Mining Licence granted, port allocation and offtake agreements in place.
- No regulatory impediments to commencing production and exports
- Modular expandability to increase production in-line with market demand

Montepuez Graphite Project <sup>1</sup> November 2018 Ore Reserve Estimate			
Deposit	Ore type	Ore (Mt)	TGC (%)
Buffalo	Weathered	3.58	8.31
	Fresh	16.80	10.06
	<b>Subtotal</b>	<b>20.38</b>	<b>9.75</b>
Elephant	Weathered	2.41	8.39
	Fresh	19.41	8.87
	<b>Subtotal</b>	<b>21.82</b>	<b>8.82</b>
TOTAL	Weathered	5.98	8.34
	Fresh	36.21	9.42
	<b>TOTAL</b>	<b>42.19</b>	<b>9.27</b>
Montepuez 2018 Mineral Resource Estimate (2.5% TGC Cut-off) <sup>2</sup>			
Total Mineral Resource			
Type	Mt	% TGC	Cont. Graphite (1000 tonnes)
Weathered	10.3	7.7	790
Primary	109.2	8.1	8,870
<b>Total</b>	<b>119.6</b>	<b>8.1</b>	<b>9,660</b>

1. See ASX announcement on 4 December 2018 for "Increase in Montepuez Graphite Reserve" for detailed disclosure. Ore Reserves prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed
2. See ASX announcement on 18<sup>th</sup> October 2018 for "Group Resources Update" for detailed disclosure. Mineral Resources prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed
3. Direct Site Capex to complete construction and commissioning, excludes financing costs, VAT (US\$5.4M), Mine Development and Operational Readiness Costs (USD3.7M), Working Capital (US\$5M), and Contingency (US\$2M).

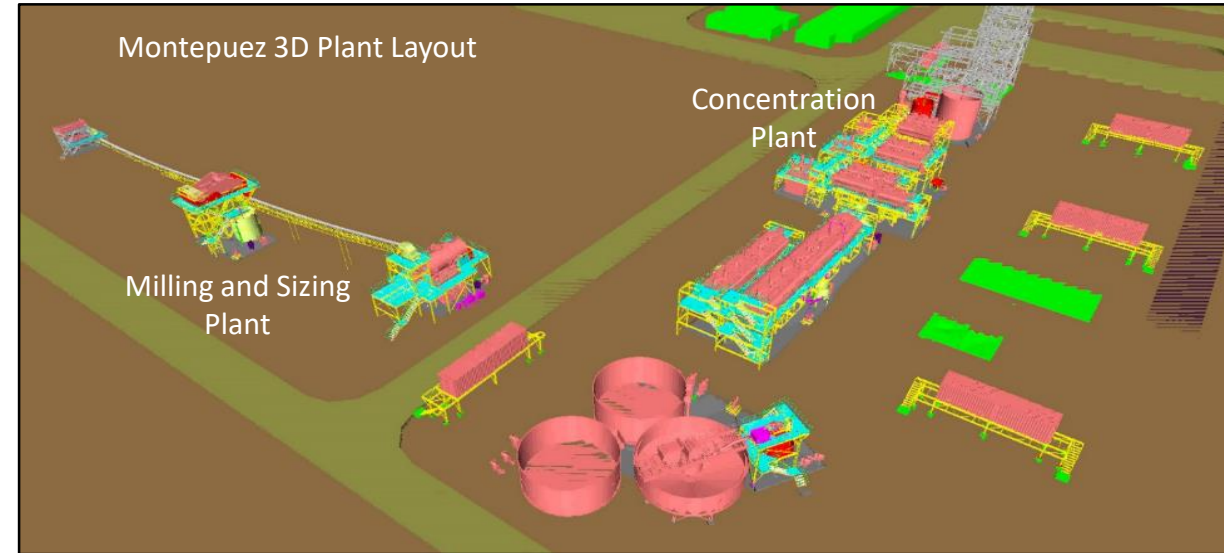


# Montepuez Graphite Project - Status

The project is at an advanced stage of development;

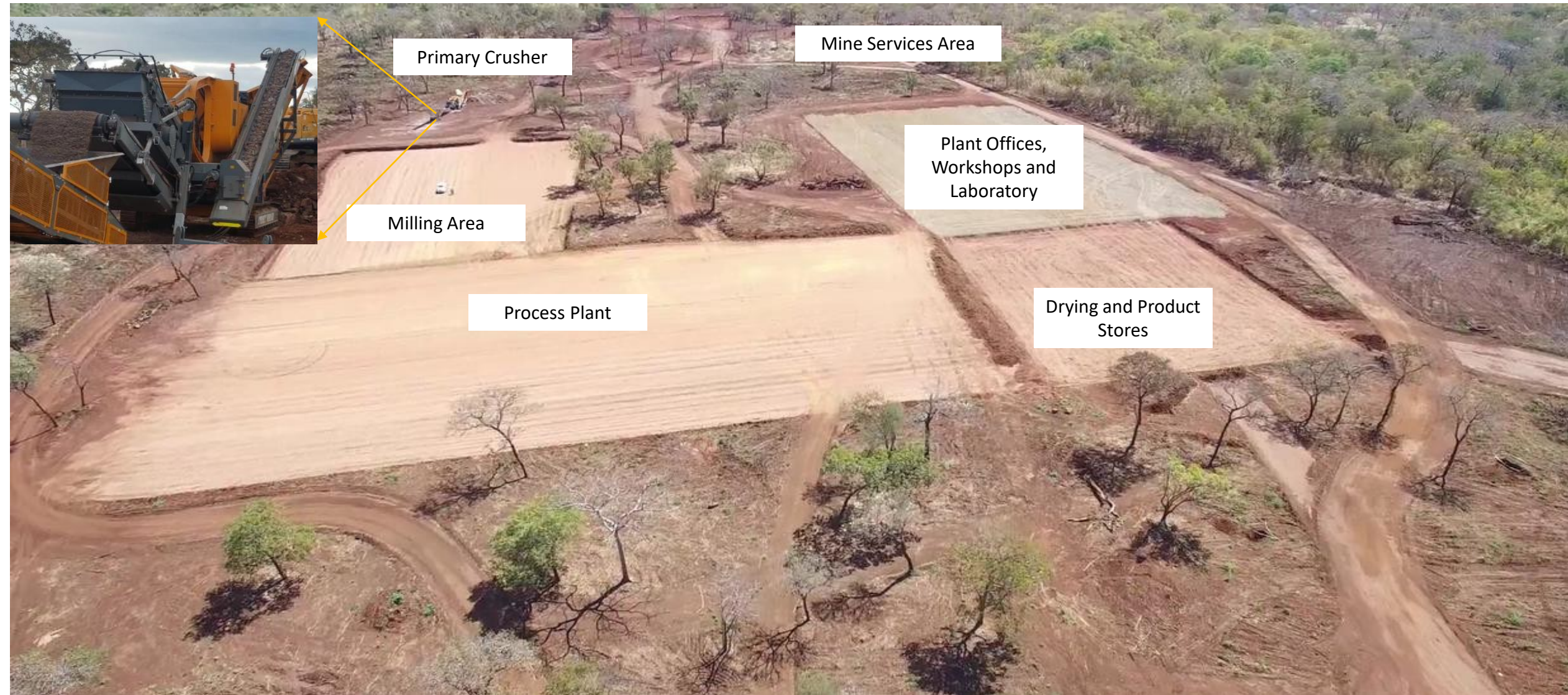
- Mining and environmental licences approved
- Detailed engineering 70% complete
- Key service vendors identified
- Key long lead items procured and some fabricated
- 100 man operations camp completed
- Plant earthworks and roads completed
- Tailings Storage Facility phase 1 wall completed

Production start - 15 months from Construction Start





# Plant Site Earthworks - Complete





# Tailings Storage Facility (TSF) Wall - Complete





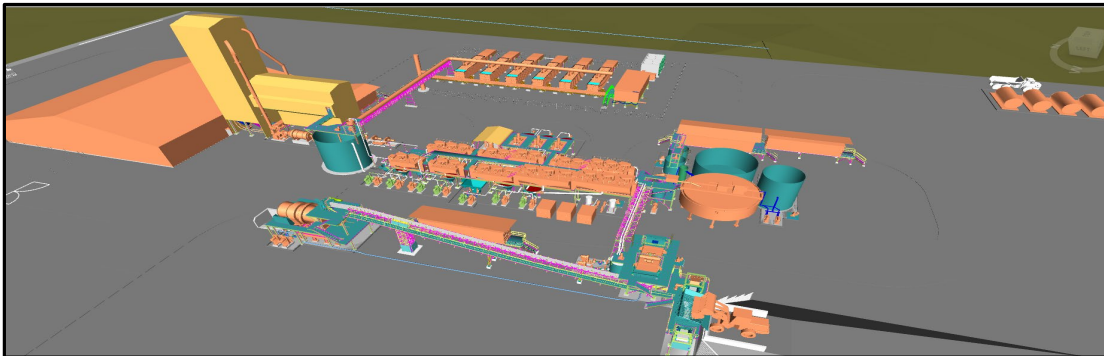
# 100 Man Camp - Complete



# Balama Central Graphite Project

Balama Central Graphite Project	Feasibility Study Dec 2018
Production Output	58,000 tpa
Capex (pre-production)	US\$69.4 M
Opex (first 8 yrs)	US\$363/t concentrate
Net Operating Cashflow <sup>3</sup>	>US\$30M per annum
Grade Processed	12.5% TGC
Plant Type and Scale	Modular, ~ 500ktpa plant feed
Metallurgical Recovery	~93%
Mine Life	+35 years
Graphite Concentrate purity	+96% TGC

**Mining License Application:** Submitted in June 2019



Total Mineral Resource <sup>2</sup>				
Domain	Type	Tonnage	TGC	Cont. Graphite
		Mt	%	kt
High Grade GS1 (>10% TGC)	Weathered	3.2	15.7	498
	Primary	9.1	15.7	1,429
	Sub-Total	12.3	15.7	1,927
Medium Grade (6 to 10% TGC)	Weathered	4.2	6.9	288
	Primary	16.4	6.9	1,142
	Sub-Total	20.6	6.9	1,430
	<b>Total</b>	<b>32.9</b>	<b>10.2</b>	<b>3,357</b>

Ore Reserve Estimate (6% TGC cut-off grade) <sup>1</sup>			
Pit	Ore type	Ore (Mt)	TGC (%)
Lennox	Weathered	3.36	11.09
	Fresh	8.19	11.70
	Total	11.55	11.52
Byron	Weathered	2.08	10.18
	Fresh	6.02	10.49
	Total	8.11	10.41
Total	Weathered	5.44	10.74
	Fresh	14.21	11.19
	<b>Total</b>	<b>19.66</b>	<b>11.06</b>

1. See ASX announcement on 12 December 2018 for "Maiden Reserve for Balama" for detailed disclosure. Ore Reserves prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed
2. See ASX announcement on 29 March 2018 for "Mineral Resource Doubles at Balama" for detailed disclosure, Mineral Resources prepared by a competent person in accordance with the JORC Code. All material assumptions underpinning the production target in that announcement continue to apply and have not materially changed
3. Based on the Benchmark Mineral Intelligence (BMI) CIF China forecast graphite prices (as at October 2018) for 2022 as disclosed in ASX announcement on 12 December 2018 for "Maiden Reserve for Balama".

# Community Engagement



# Building Sustainable Outcomes



**Collaborating with Our Community  
in Medical and Educational Support  
to Help Build a Sustainable Future**



Supporting Local Clinic



Supporting Education



**Training,  
Safety and  
Health are a  
Primary Focus**



Fresh Water Boreholes



**Our People are Our  
Greatest Asset**



Our Local Elders and Leaders on Site



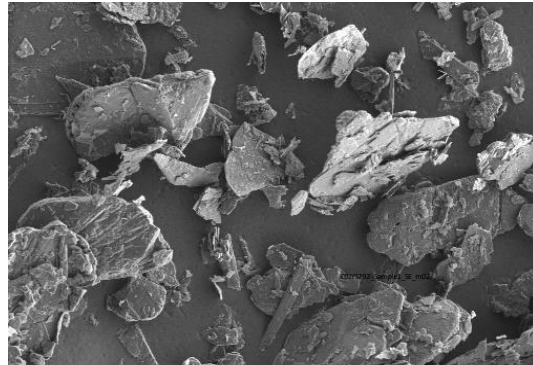
Our Community School

# Further Value Potential



# High Purity Flake and Anode Material Testwork

- Testwork programme undertaken by Urbix in the USA
- Purification success with Urbix environmentally friendly, low temp <80°C, non-HF process **with no impact on flake morphology**
- Grades of +99.95%TGC achieved across all flake size ranges
- Low cost / low capital purification process
- Urbix pilot scale purification facility in construction – completion in November 2019
- Results of pilot work – feasibility study
- Preliminary spheroidization results;
- >75% recovery – typical industry recoveries 40% – 45%
- Tap densities >1
- Further optimisation work planned post Urbix pilot plant completion



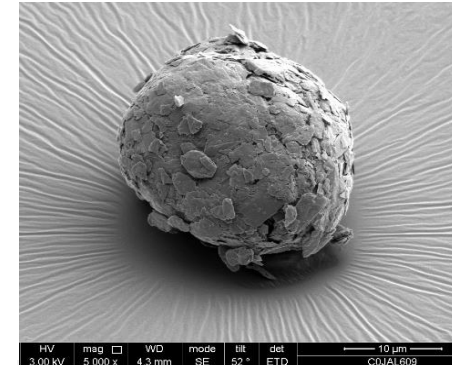
Flake Concentrate



Graphite Concentrate @  $\pm$  96%TGC

Urbix proprietary innovative purification and spheroidisation technology

Purified Spherical Graphite @ +99.95% TGC



Spherical Graphite

# Our Company



# Board and Executive Management



**David Flanagan**  
Chairman



**Jeremy Sinclair**  
Managing Director



**Jeff Dowling**  
Lead Independent  
Director



**Ben Vanroon**  
Chief Operating Officer



**Nick Day**  
Chief Financial Officer



**Daniel Taylor**  
Head of Marketing



**Naomi Scott**  
General Counsel



**Tony Walsh**  
Company Secretary  
& GM Corporate

## Share Price for last 12 months



## Capital Structure

Shares on Issue (ASX Code: BAT)	1,318M
Board and Management	>10% fully diluted
Share price (as at 2 Sept, 2019)	0.9cps
Market Capitalisation (as at 2 Sept, 2019)	\$11.9 million
Cash at bank (as at 26 August 2019)	\$5.7 million
Enterprise Value	\$6.2 million
Top 20 Shareholders	~38%
Listed Options (ASX Code: BATO 10 cents exp 23/7/23)	274.5 million
Option price (ASX Code BATO)	0.2 cps
Unlisted Options	212.1 million

# Forward Plan

# Positioned to Respond to Growing Diversified Graphite Market

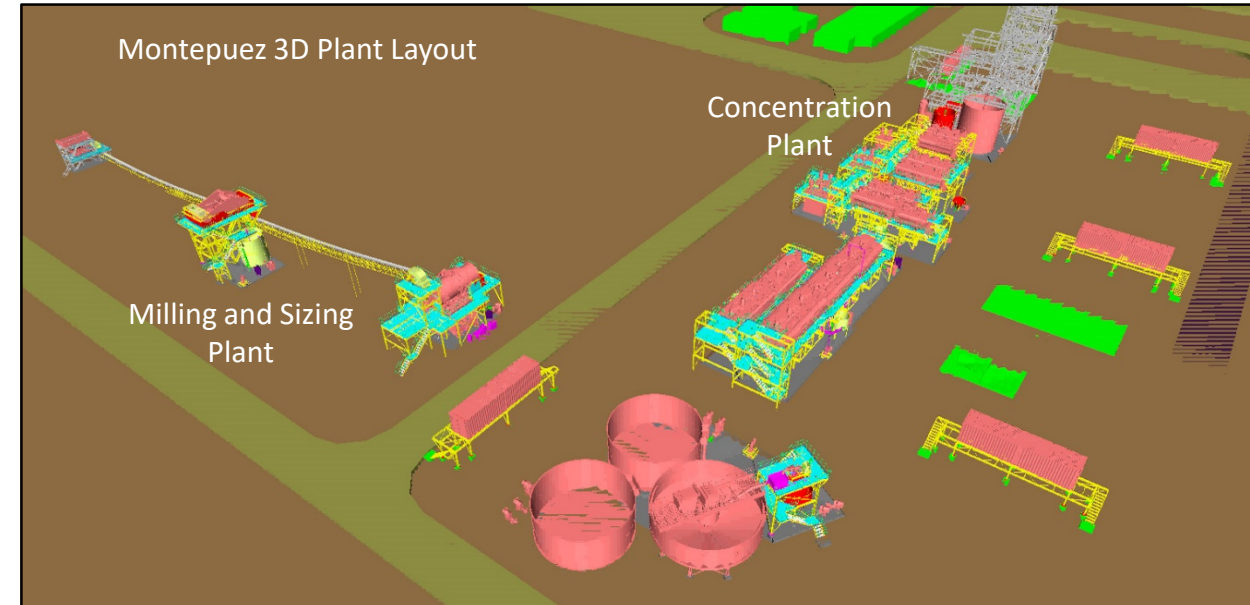
## Forward Plan

### 1. Montepuez Graphite Project

- Finance the project
- Complete Engineering, Procurement and Award of Contracts
- Construct and Commission (15 months from construction start)
- Ramp up and Sales

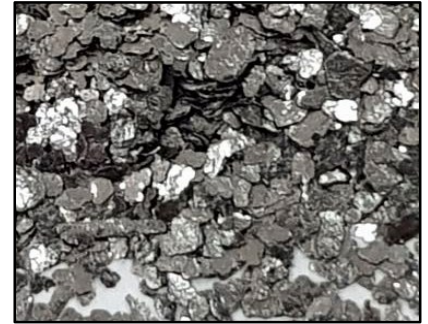
### 2. Balama Central Project - keep progressing Mining Licence

### 3. Progress work on downstream processing potential



# Clean Energy will Drive Battery Mineral Growth

1. Two world class, low cost, long life graphite projects; ideally located to existing infrastructure
2. Montepuez Graphite Mine fully licensed and at an advanced stage of development
3. Montepuez' flake concentrate suitable for growing traditional graphite markets and unprecedented forecast demand driven by global transition to clean energy
4. Scalable low risk production profile; commencing at 50ktpa flake concentrate, potential for 200ktpa<sup>1</sup>
5. Capable team, diverse skill set with a track record of project execution



Note 1: Subject to the completion of all necessary feasibility studies, permit applications, construction, financing arrangements, market conditions, port access and execution of infrastructure related agreements





[www.batteryminerals.com](http://www.batteryminerals.com)

## Forward Looking Statements

- Statements and material contained in this Presentation, particularly those regarding possible or assumed future performance, resources or potential growth of Battery Minerals Limited, industry growth or other trend projections are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Such forecasts and information are not a guarantee of future performance and involve unknown risk and uncertainties, as well as other factors, many of which are beyond the control of Battery Minerals Limited. Information in this presentation has already been reported to the ASX.
- Battery Minerals confirms that all the material assumptions underpinning the production targets for its Montepuez and Balama Central graphite projects and any of the forecast financial information derived from these production targets, in the 4 and 12 December 2018 ASX announcements, on these projects continue to apply at the date of release of this presentation and have not materially changed. Battery Minerals confirms that it is not aware of any new information or data that all material assumptions and technical parameters underpinning the estimates in the 4 and 12 December 2018 announcements continue to apply and have not materially changed.

## Competent Persons Statement

- All references to future production and production & shipping targets and port access made in relation to Battery Minerals are subject to the completion of all necessary feasibility studies, permit applications, construction, financing arrangements, port access and execution of infrastructure-related agreements. Where such a reference is made, it should be read subject to this paragraph and in conjunction with further information about the Mineral Resources and Ore Reserves, as well as the relevant competent persons' statements.
- Any references to Exploration Results, Ore Reserve and Mineral Resource estimations should be read in conjunction with the competent person statements included in the ASX announcements referenced in this presentation as well as Battery Minerals' other periodic and continuous disclosure announcements lodged with the ASX, which are available on the Battery Minerals' website.

- The information in this report that relates to Battery Minerals' Mineral Resources or Ore Reserves is a compilation of previously published data for which Competent Persons consents were obtained. Their consents remain in place for subsequent releases by Battery Minerals of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent.
- The information in this Presentation that relates to Montepuez Mineral Resources and Ore Reserves is extracted from the ASX Announcements dated 18 October 2018 and 4 December 2018 respectively, both of which are available at Battery Minerals website in the ASX announcement page.
- See ASX announcements on the Balama Central Feasibility Study dated 12 December 2018 for details, Table 1 and Competent Person Statement
- Any references to Mineral Resource estimates on the Balama Central Project should be read in conjunction with the competent person statements included in the ASX announcements referenced in this report (See ASX announcement dated 29 March 2018 entitled "Resources double at Balama Central graphite project in Mozambique" for full details and Competent Persons Statement) as well as Battery Minerals' other periodic and continuous disclosure announcements lodged with the ASX, which are available on the Battery Minerals' website.
- The information in this presentation that relates to Battery Minerals' Balama Central Mineral Resources is a compilation of previously published data for which Competent Persons consents were obtained. Their consents remain in place for subsequent releases by Battery Minerals of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent.
- The information in this presentation that relates to Mineral Resources in the ASX announcement dated 29 March 2018 and entitled "Resources double at Balama Central Graphite Project in Mozambique" which is available at Battery Minerals Limited website [www.batteryminerals.com.au](http://www.batteryminerals.com.au) in the ASX announcements page.

- Battery Minerals confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the market announcements continue to apply and have not materially changed. Battery Minerals confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.
- Battery Minerals Limited released the results of a DFS on its Montepuez Project on 15 February 2017 & its Value Engineering Study (VES) results for Montepuez on 18 October 2017. These releases are available on Battery Minerals' website & ASX.
- Battery Minerals Limited released a vanadium mineral resource on 29 April, 2019. All material assumption underpinning this mineral resource continue to apply at the date of this release and have not materially changed.

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