

# CASTLE



Charging Ahead

The Kambale Graphite Project

July 2023



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**Competent Person Statement** - The scientific and technical information in this Report that relates to the geology of the deposits and exploration results is based on information compiled by Mr Stephen Stone, who is an Executive Director of Castle Minerals Limited. Mr Stone is a Member of the Australian Institute of Mining and Metallurgy 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'. Mr Stone is the Qualified Person overseeing Castle's exploration projects and has reviewed and approved the disclosure of all scientific or technical information contained in this announcement that relates to the geology of the deposits and exploration results. Castle Minerals Limited has a firm policy to only utilise the services of external independent consultants to estimate Minerals Resources. The Company also has established practices and procedures to monitor the quality of data applied in Mineral Resource estimation, and to commission and oversee the work undertaken by external independent consultants.

Information in this report that relates to geological interpretation, exploration activities, graphite mineralisation, Mineral Resources and results at the Kambale Graphite Project was reviewed by Dr Allan John Parker who is a Member of the Australian Institute of Geoscientists. Dr Parker is an employee of Palaris Australia Pty Ltd which provides geological consultancy services to Castle. Dr. Parker is also Director of Geosurveys Australia Pty Ltd, a non-Executive Director of Centrex Limited and was formerly Managing Director of Lincoln Minerals Limited. Dr Parker has sufficient experience relevant to the styles of mineralisation and to the activities which are being presented to qualify as a Competent Person as defined by the JORC code, 2012. Dr Parker consents to the release of the information compiled in this announcement in the form and context in which it appears.

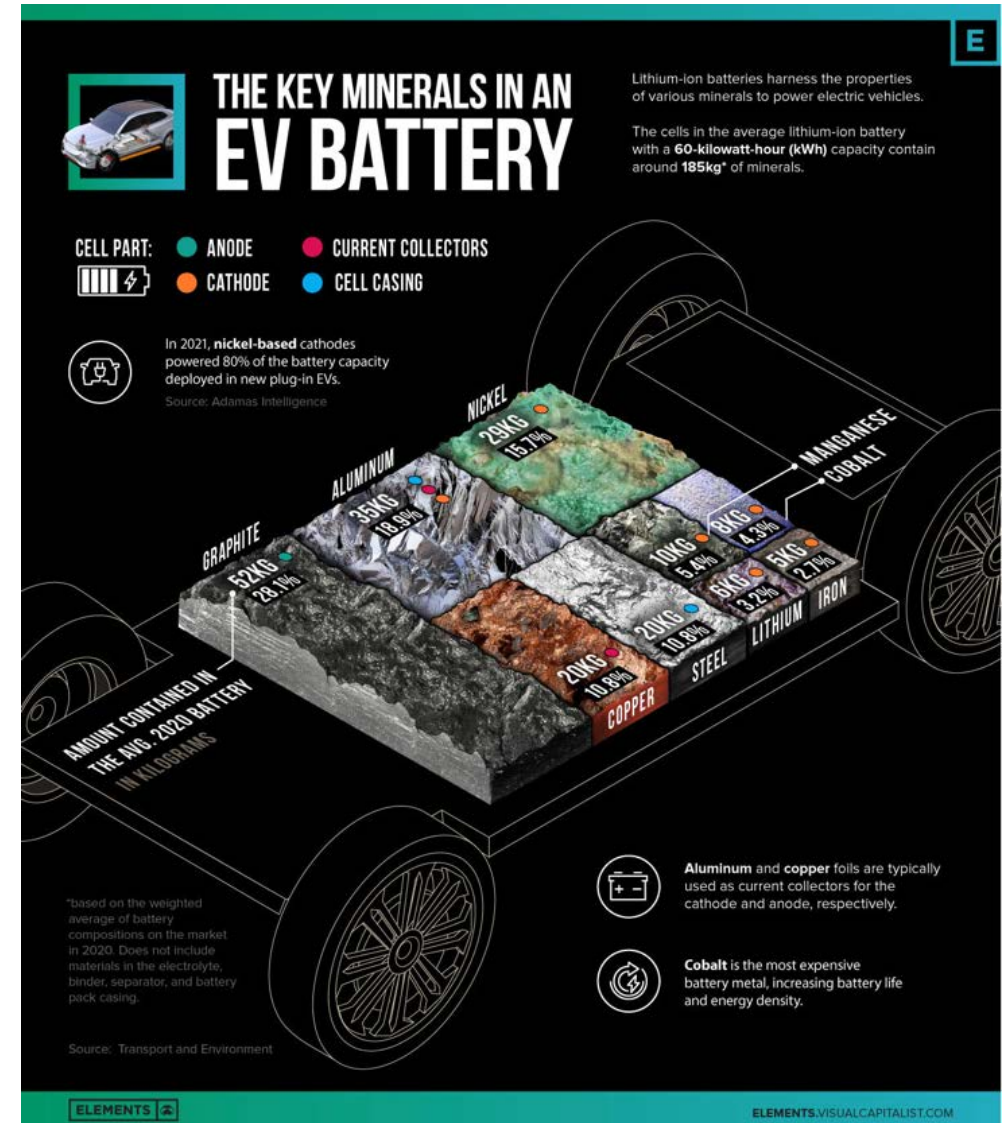
In all cases Mineral Resources are estimated and reported in accordance with the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves" (the JORC Code. Mineral Resources reported in accordance with the 2012 Edition (Kandia 8000 Zone and Kpali) were prepared by Castle Minerals Limited and reviewed by Runge Limited.

The Company confirms that all material assumptions underpinning the Mineral Resources and any forecast information continue to apply and have not materially changed. Further information on Castle Minerals Limited and its Ghana projects and Minerals Resources can be found on its website at [www.castleminerals.com](http://www.castleminerals.com) which contains copies of all continuous disclosure documents to ASX, Competent Persons' Statements and Corporate Governance Statement and Policies.

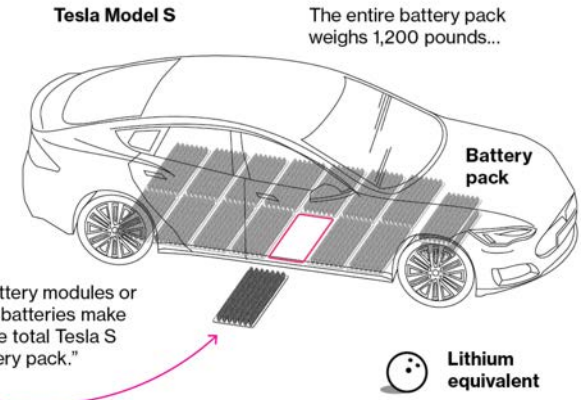
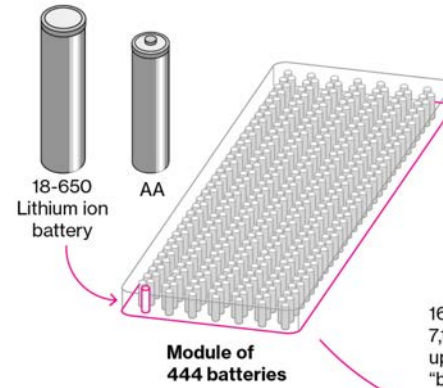
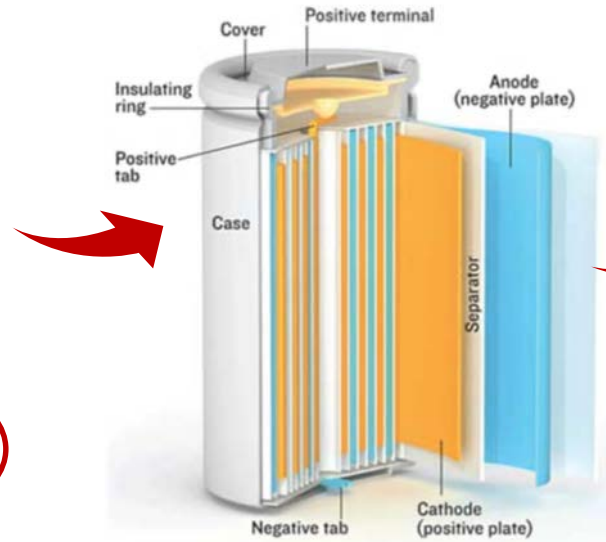
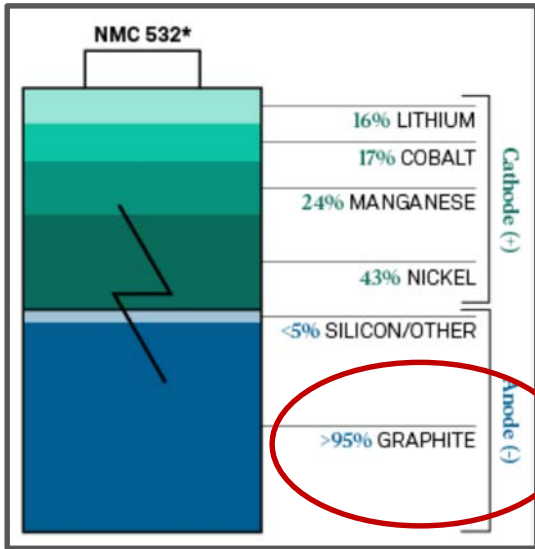
**Market and industry Data** - This presentation includes market share information and industry data and forecasts, which have been obtained from independent industry publications. Although these sources are believed to be reliable, no independent verification of the data has been made nor the underlying economic assumptions relied upon therein ascertained. Third-party sources generally indicate that they have obtained their information from sources believed to be reliable, but do not guarantee the accuracy and completeness of such information. It is believed that the market and industry data presented throughout this presentation is accurate, but no assurance as to the accuracy or completeness thereof is provided. Castle cannot and does not provide any assurance as to the accuracy or completeness of such included information. Market forecasts, in particular, are likely to be inaccurate, especially over long periods of time.

# Why Graphite?

- A 'Critical Mineral' for achieving 'Net Zero' emissions.
- Lithium-Ion Batteries ("LiB") dominate EV batteries and stationary power storage units.
- LiB anode almost entirely graphite (flake or synthetic)
- Graphite unlikely to be substantially substituted in near-term.
- Graphite 30% - 40% of a LiB / **30kg to 70kg** (lithium 5kg to 10kg).
- 3t of fine-flake battery-grade concentrate reqd. to produce 1t of micronised, spheronised, purified, coated Battery Anode Material (BAM).



# >200 Gigafactories



The entire battery pack weighs 1,200 pounds...

16 battery modules or 7,104 batteries make up the total Tesla S "battery pack."

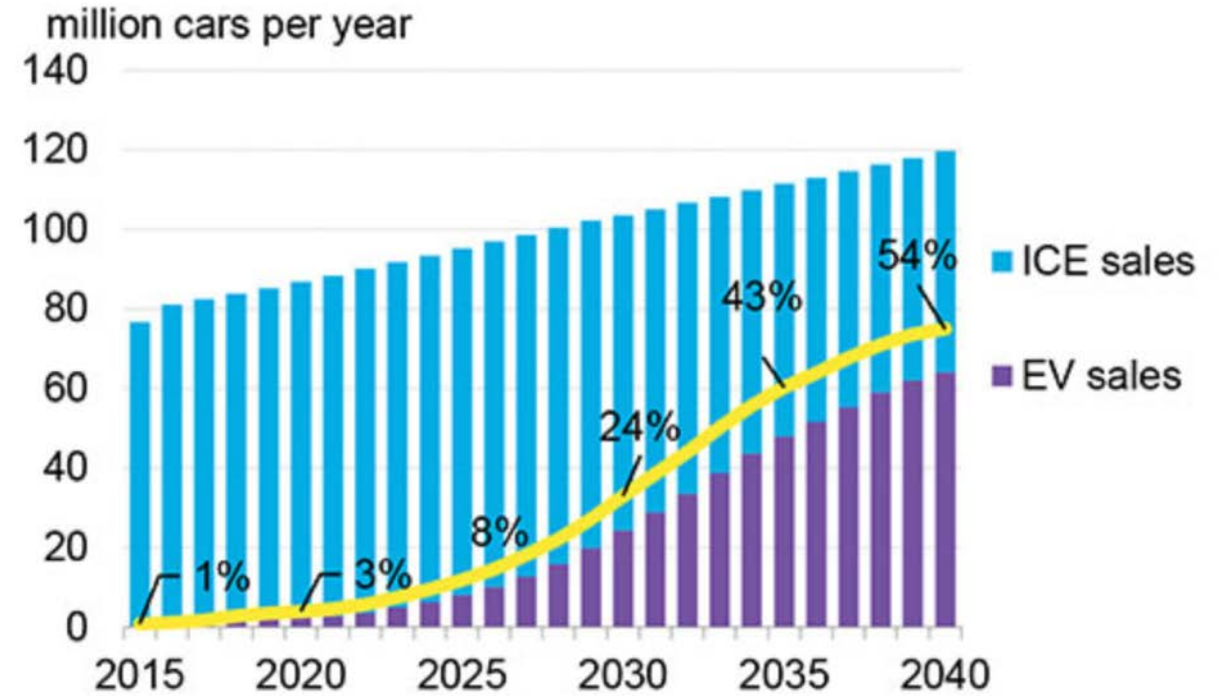
...but only 15 pounds (7kg) is lithium. About the weight of a bowling ball.



# A Lot of Graphite Will Be Needed !

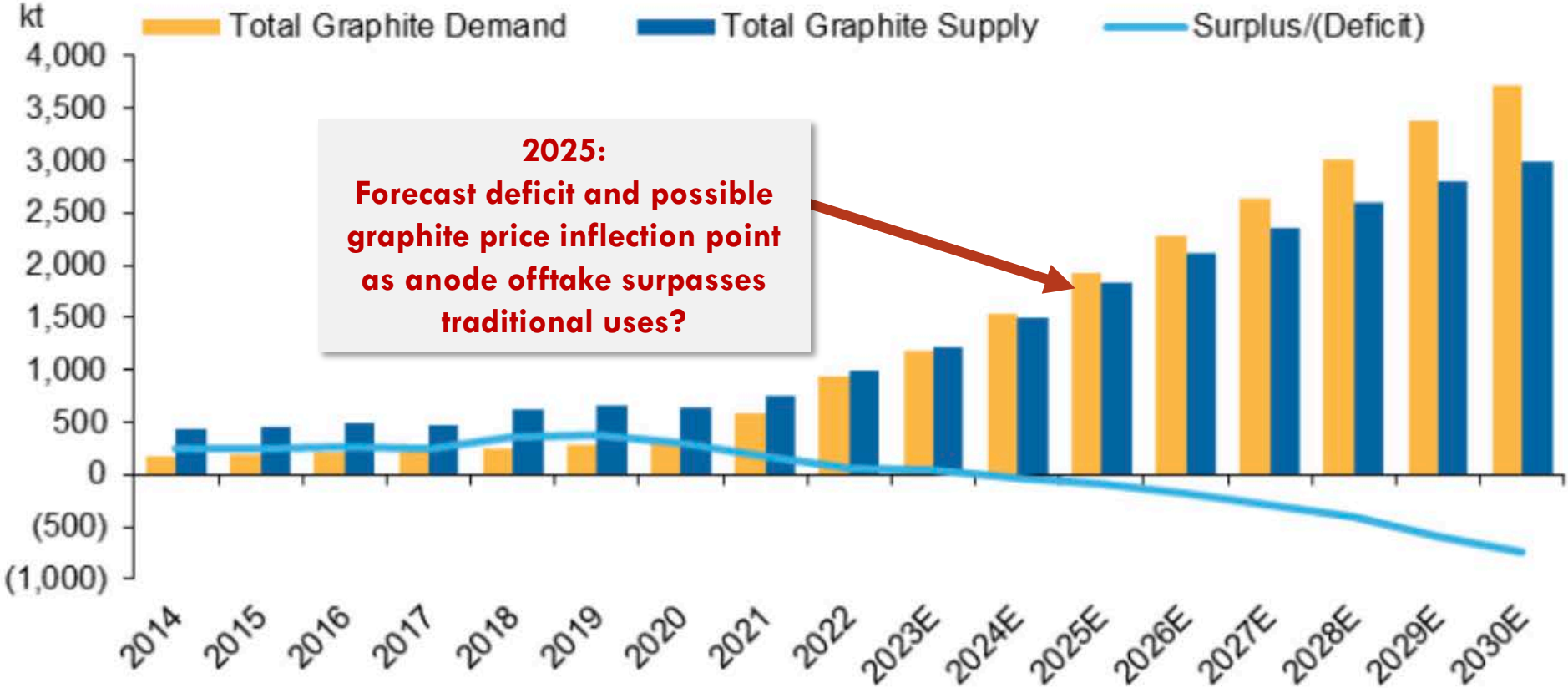
- >200 ‘gigafactories’ (LiB manufacturing plants) built, being built or planned.
- Gigafactories much faster to build than mines are to find, develop and ‘qualify’.
- Many more new mines needed.
- Over reliance on China (60% graphite concs. ~90% BAM production).
- USA / EU racing to secure strategic, non-China concentrates and to produce BAM.
- Battery and car producers stepping down supply chains.
- **“Greenflation”**. Firming fine flake concentrate and BAM pre-cursor prices forecast post-2025
- Price spikes possible.

**Annual global light duty vehicle sales forecast**



Source: Bloomberg New Energy Finance

# Looming Graphite Supply Deficit



Graphite market supply chart (Source: Macquarie Research 2023)

# WHY CASTLE?



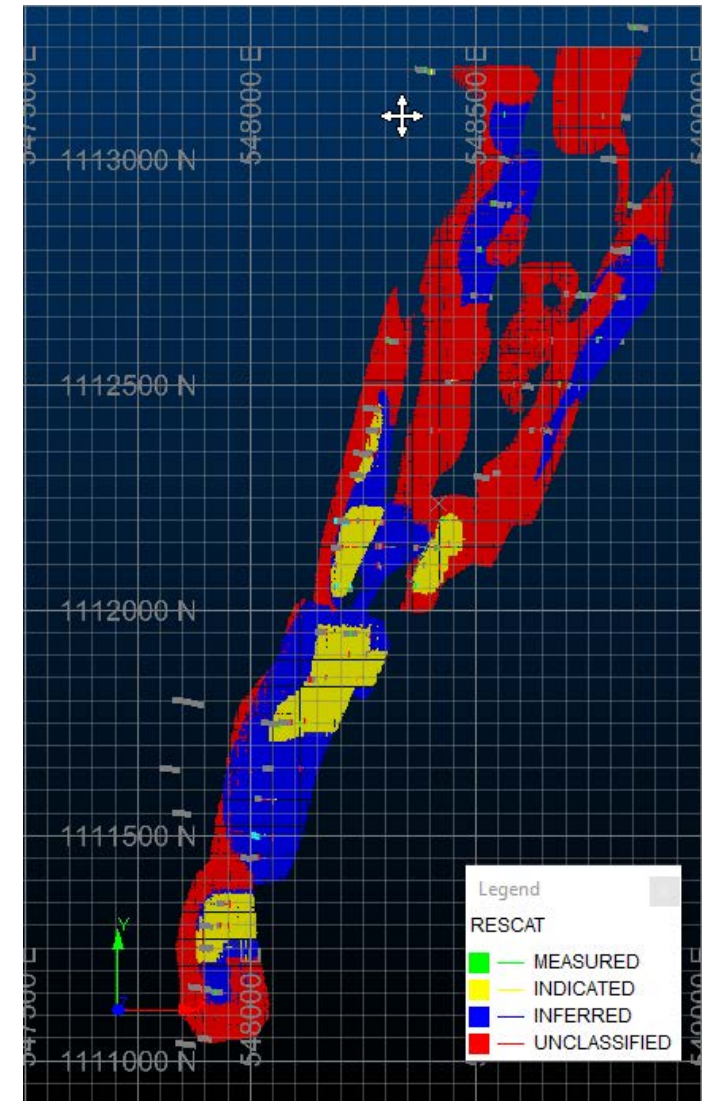
# Maiden MRE: 1.41Mt Contained Graphite

Classification (5% TGC Cut-Off)	Tonnes (kt)	Contained TGC (kt)	TGC (%)
Indicated	5,979	542	9.1%
Inferred	9,632	863	9.0%
<b>Total</b>	<b>15,611</b>	<b>1,405</b>	<b>9.0%</b>

## Independent JORC Code 2012 Mineral Resource Estimate (Refer ASX release 12 April 2023)

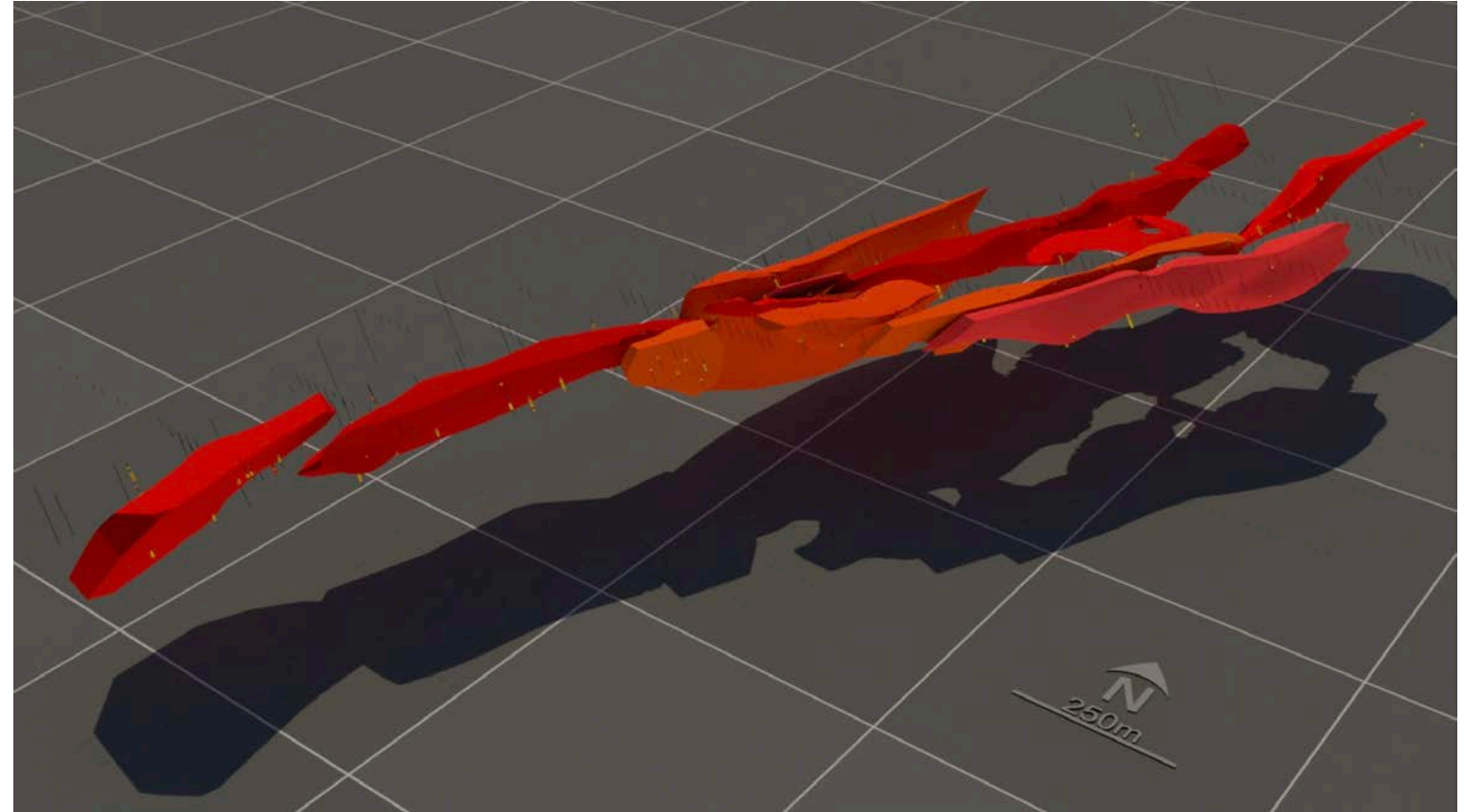
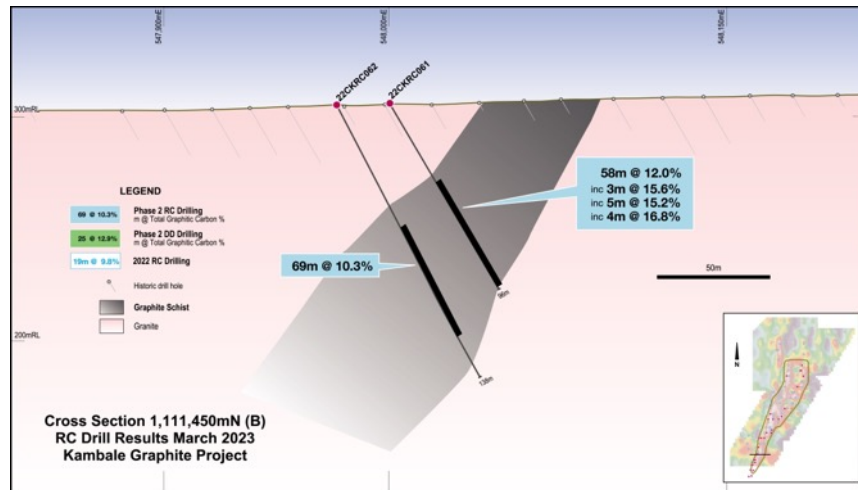
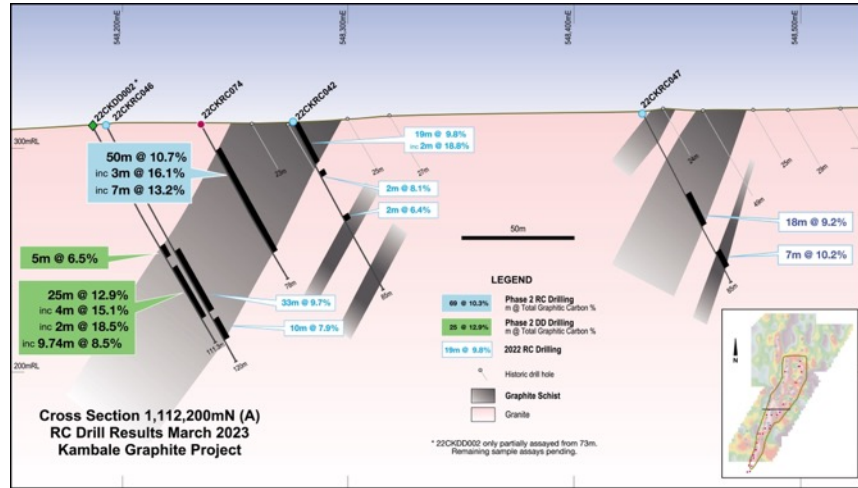
- Extensive drilling has confirmed multiple, sub-parallel, thick, consistently mineralised graphitic schist zones. 2.5km N-S and <0.5km E-W.
- Mineralisation remains open to north, south and depth.
- Drilling just completed to bring additional mineralisation into an updated MRE (red shaded area) and to test for extensions.
- Shallow depth and good widths conducive to lower-cost open-cut mining.

- April 2023 MRE based on 386-hole, 16,018m database. 4x DDH, 85x RC, 92x aircore and 208x RAB)
- Undertaken by Palaris (Australia) Pty Ltd





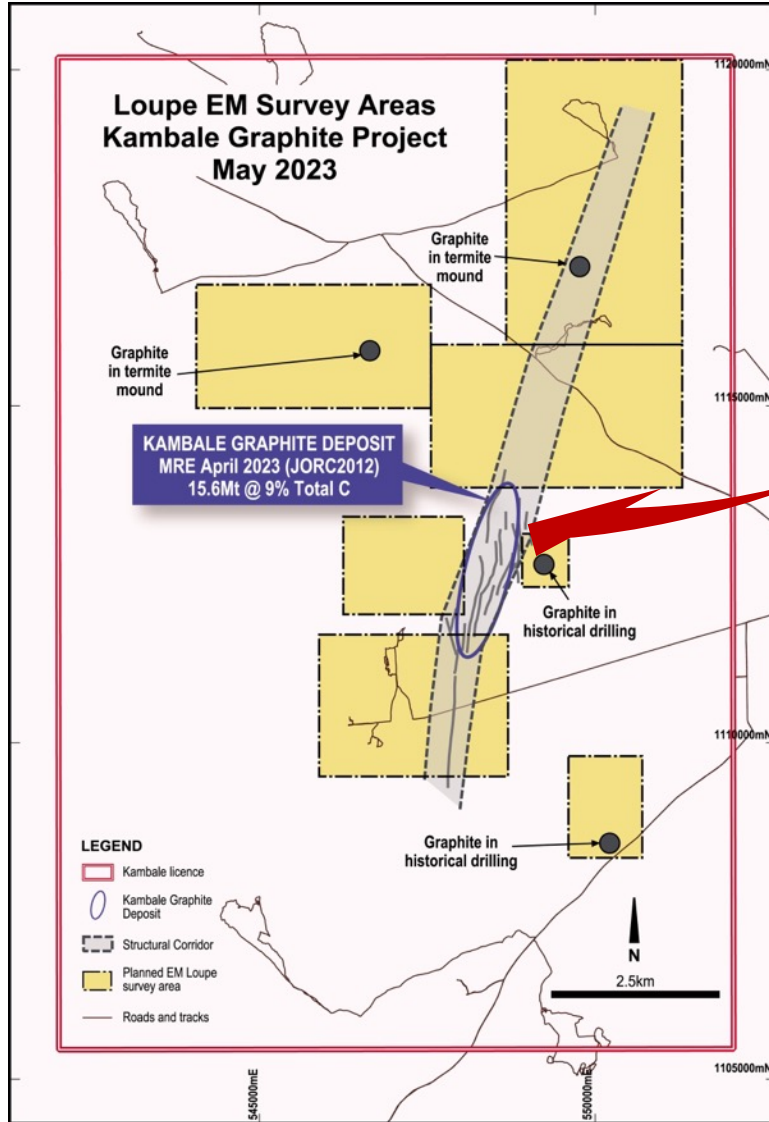
# Stacking Up Nicely



**Kambale Graphitic Schist Zones and Mineral Resource Estimate Model**  
(Refer ASX release 12 April 2023)

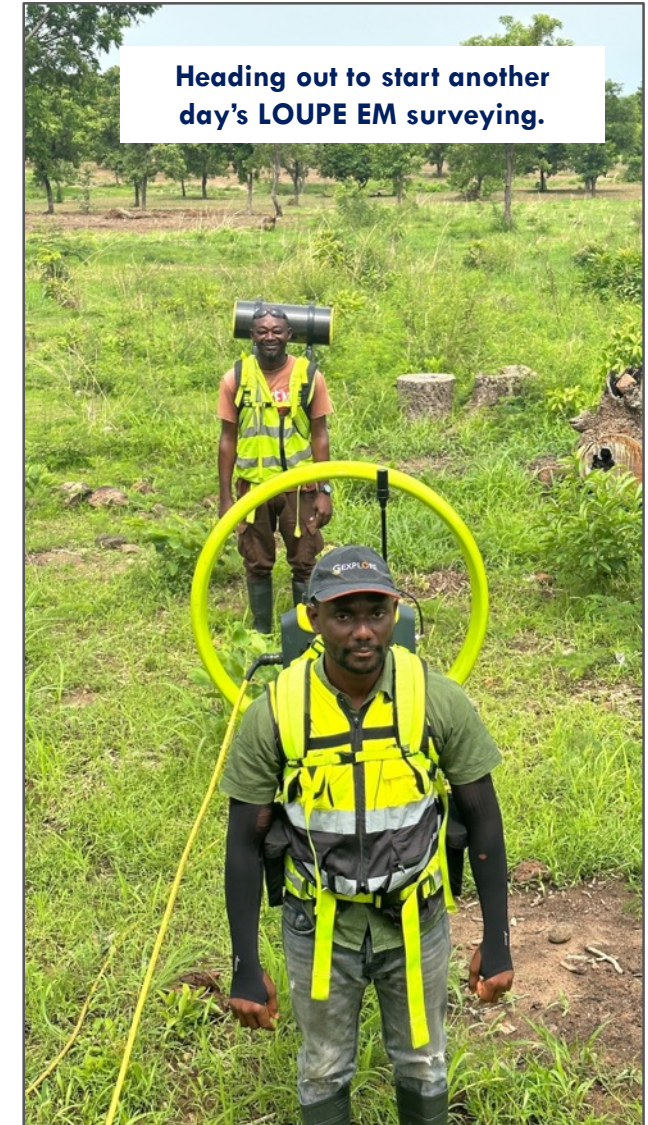
**Mineralisation from surface.**  
**Open at depth. Robust, thick intercepts**

# Searching For The Next Graphite Deposit....



**Reconnaissance mapping and state-of-the-art Loupe EM geophysics campaign just completed to identify any obscured graphite occurrences within broader 149km<sup>2</sup> tenure.**

**Outline of April 2023 maiden 15.6Mt @ 9% TGC MRE.**

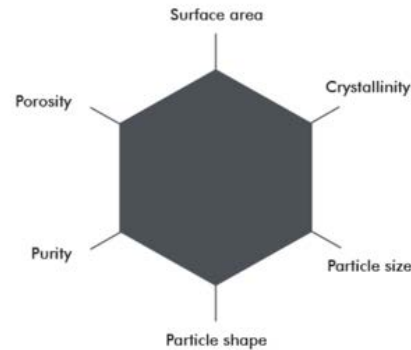


# Test Work Progressing Well

## Phase 1 - Completed

- Achieved dominantly fine flake (<75um) concentrate grade of up to 96.4%TC (approx. commercial grade) and recovery of <88%.
- Used conventional crush, grind and flotation cycles.
- 3x composited trench samples - 12.56%, 16.09% and 17.16% TGC.

**What are graphite's important characteristics?**



## Phase 2 – Well advanced

- Conventional crush, grind and flotation cycles on unweathered, fresh composited diamond core.
- Targeting a benchmark ~95%/96%TC bulk concentrate.
- Concentrate will then be evaluated for ability to be micronised, spheronised, purified and coated into BAM.



# Strong Development Credentials

- **Minimal infrastructure capital requirements:**

- ‘Clean Green Energy’ grid power from 400MW Bui hydro dam.
- Quality sealed and unsealed roads. Plentiful water.
- Daily commercial flights from Accra to Wa.

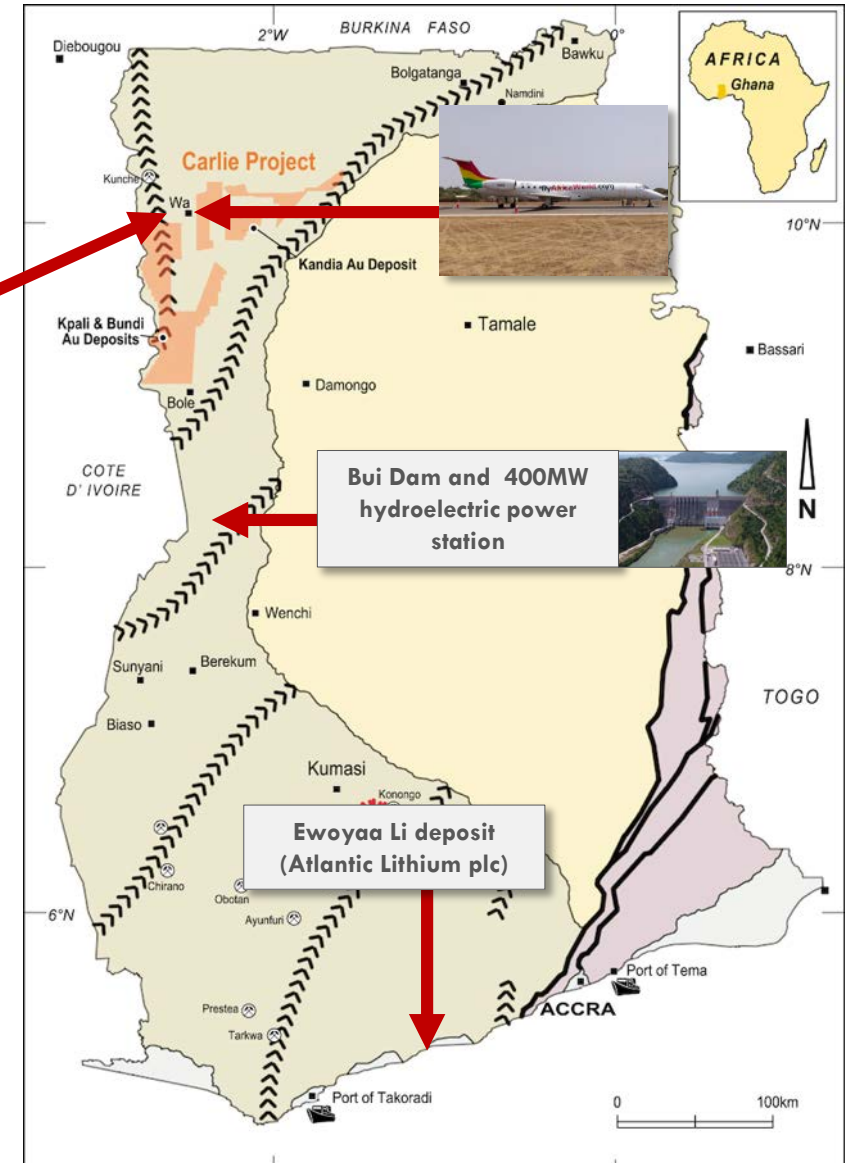
- **Favourable mining environment:**

- Long established mining industry (Africa’s no.1 gold producer).
- Skilled, highly trained labour and full range of support services.
- Strong endorsement from local communities and national government.

- **Strategic importance:**

- Only sizable graphite project in Ghana and one of just a few in West Africa.
- Excellent roads to two international port options (Tema, Takoradi) providing easy access to US, European and other markets.

**Kambale Graphite Project**



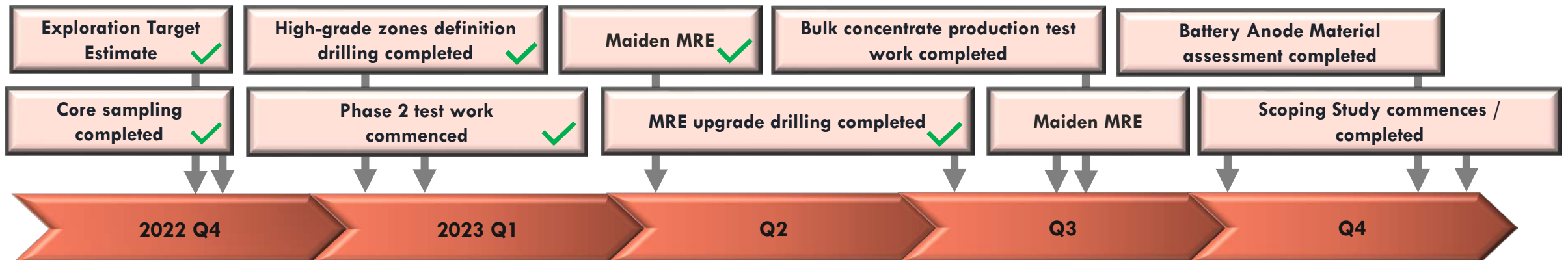
# Social Licence to Operate

- MD and in-country team has 14yrs successful local operational experience.
- Acting and communicating respectfully, transparently, inclusively and constructively with all stakeholders.
- Honouring and awareness of traditions, heritage and rural practices.
- Maximising local content, local employment and training opportunities.
- Minimising environmental impact and operational footprint, continuously rehabilitating and appropriately compensating.
- Conducting operations safely and minimising risk to all parties.



# Fast-Track Evaluation to Meet Forecast Supply Deficit

- Considerable progress in last 18 months
- Expected milestones in 2H 2023:
  - ✓ Updated MRE.
  - ✓ Phase 2 test work.
  - ✓ Specialist assessment of concentrate for BAM.
  - ✓ Scoping Study commencement.
  - ✓ Development / offtake partnership discussions.





**Michael Atkins**  
Non-Executive Chair  
(Corporate & Finance)



**Stephen Stone**  
Managing Director  
(Corporate & Geology)



**James Guy**  
Non-Executive Director  
(Geology and Mining)

**Paul Amoako Atta**  
Ghana In-Country Manager & Director

**George Asamoah-Boadu**  
Ghana Manager Geology

**Dean Wadsworth**  
Projects Manager & Lithium Specialist

**Jade Styants**  
Company Secretary & Finance

**1,124.5M**

Ordinary Shares (CDT)

**205.5M**

Options Listed (CDTO & CDTOA)

**36.0M**

Options (Unlisted)

**A\$14.7M**

Market Cap (\$0.013/ share)

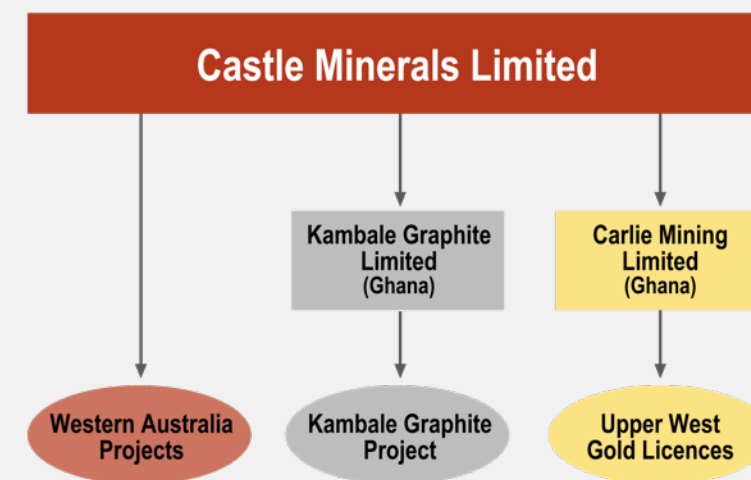
**A\$2.6M**

Working Capital

**A\$12.1M**

Enterprise Value

Major Shareholders (Grouped)	
Stephen Stone	4.6%
George Bonney	4.1%
Michael Atkins	1.9%
Citicorp Nominees	1.6%
Top 20	23.2%
Total Shareholders	3,438



# Why Castle?



- ✓ **Kambale Graphite Project:** Robust 15.6Mt at 9.0%TGC (“MRE”) = 1.4Mt.
- ✓ **MRE upgrade August 2023:** Infill drilling just completed.
- ✓ **Test work:** Phase 2 test work well advanced and proceeding well.
- ✓ **Excellent infrastructure:** Hydro-generated (“green”) grid power nearby.
- ✓ **Strategically located:** A potential non-China supply.
- ✓ **Jurisdiction:** Ghana = “Africa 101”. Safe, politically stable. Tier 1 miners.
- ✓ **Management:** Many years successful Ghana operating experience.
- ✓ **Funding:** MRE, test work and next study phase are funded.
- ✓ **Portfolio:** Battery and Future Metals projects in Australia and Ghana.
- ✓ **Catalysts:** High-level of news flow / investment catalysts in 2H 2023.
- ✓ **Modest Enterprise value:** A\$12.1M





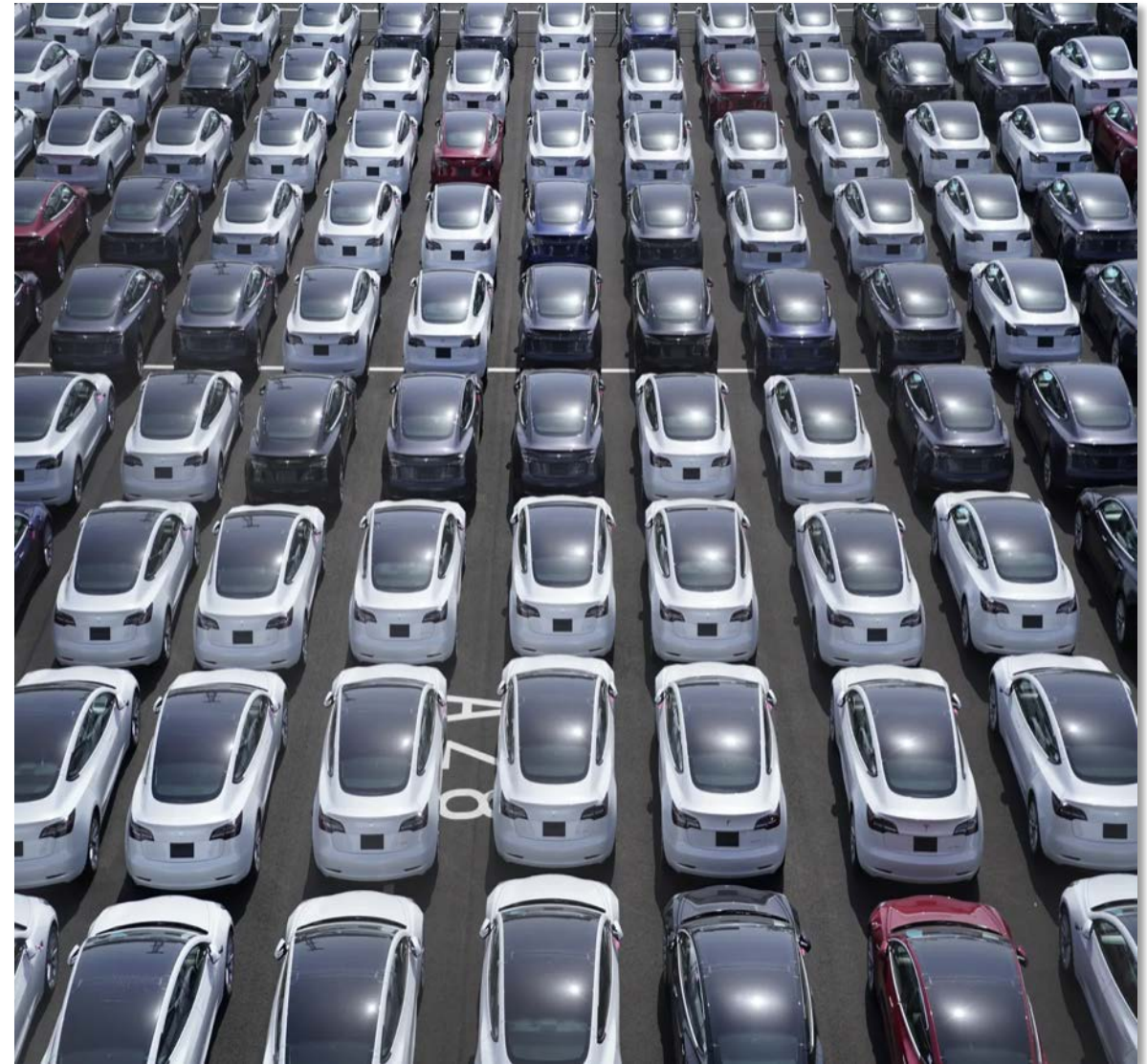
# Considerable Value Compressed Into Modest Market Capitalisation

*“The Kambale graphite project is rapidly emerging as a credible proposition at a time when graphite is now firmly on the Critical Minerals list and a supply deficit looks likely.”*

*“Castle’s investors can look forward to a high-level of near-term, value-adding news flow and investment catalysts from Kambale and the Company’s other Future Metals projects.”*



**Stephen Stone**  
**Managing Director**



# CASTLE



Thank You

Contact:

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**ASX: CDT**

# APPENDIX



# Ghana: Quality Gold Assets

## 100% Carlie Mining Limited

- One of largest consolidations (4,392km<sup>2</sup>) of Birimian geology tenure in West Africa.
- Adjacent to Azumah Resources Limited's Wa Gold Project (2.8Moz Mineral Resource and 1.1Moz Ore Reserve)<sup>1</sup>.

## Royalty:

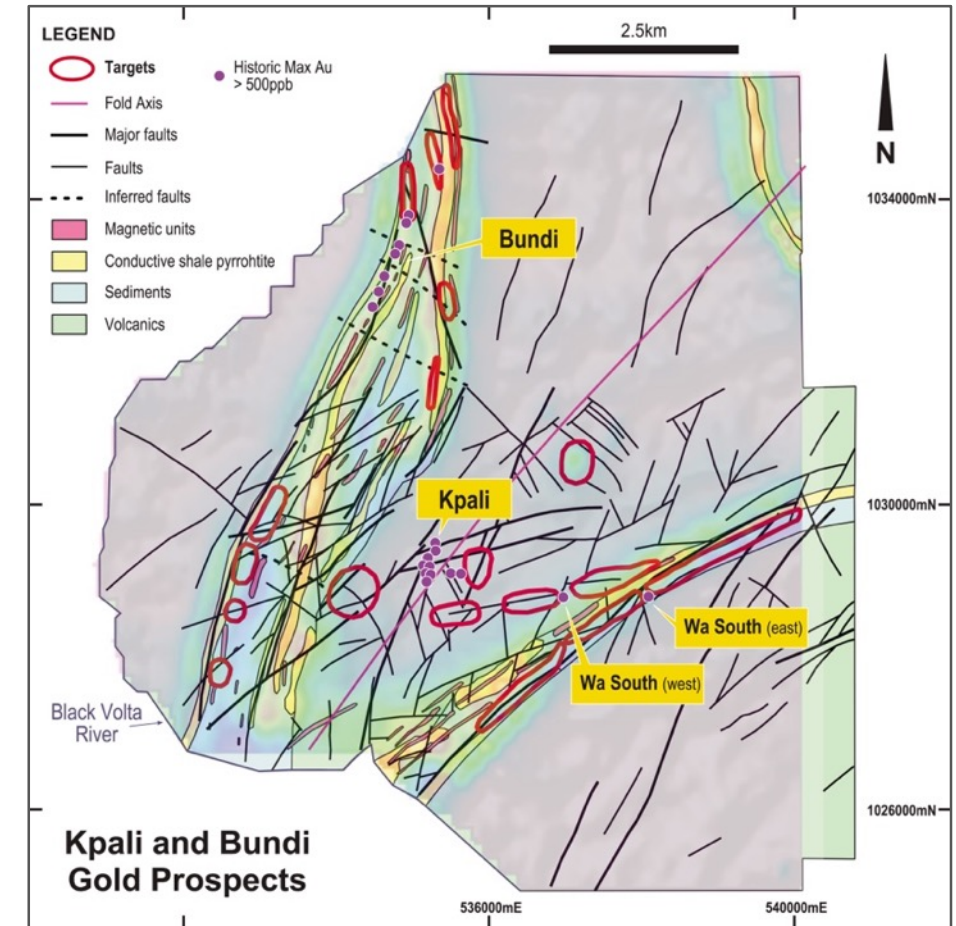
- **4% NSR** on Azumah's Julie West project's **73,100oz Ore Reserve** (Measured & Indicated)(@ US\$1,250/oz and 1g/t Au lower cut-off)<sup>1</sup>.

## Kandia prospect:

- **62,900oz** Indicated and **44,600oz** Inferred in two zones<sup>2</sup> incl.
- 15m at 2.39g/t Au from surface and 40m at 1.17g/t Au from 20m.

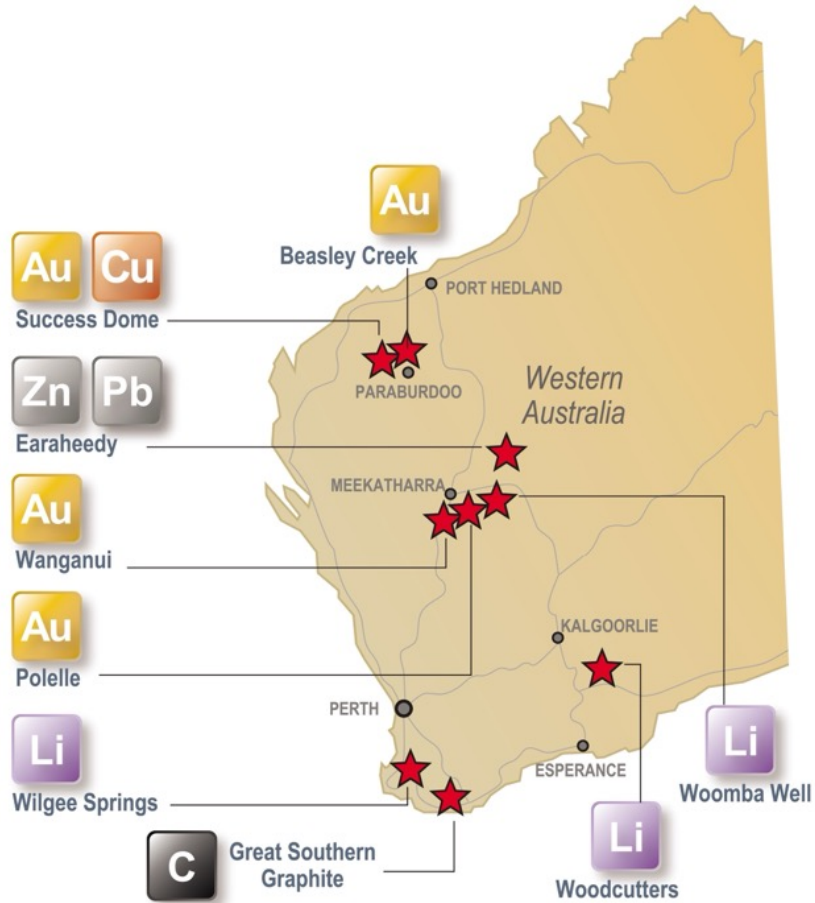
## Kpali & Bundi prospects:

- **107,200oz** Inferred<sup>3</sup>.
- Castle intercepts incl: **28m at 2.26g/t Au from 81m, 15m at 2.08g/t Au from 87m, 3m at 6.52g/t Au from 97m, 14m at 2.29g/t Au from 98m, 16m at 3.23g/t Au from 9m and 10m at 2.10g/t Au from 22m.**<sup>4</sup>



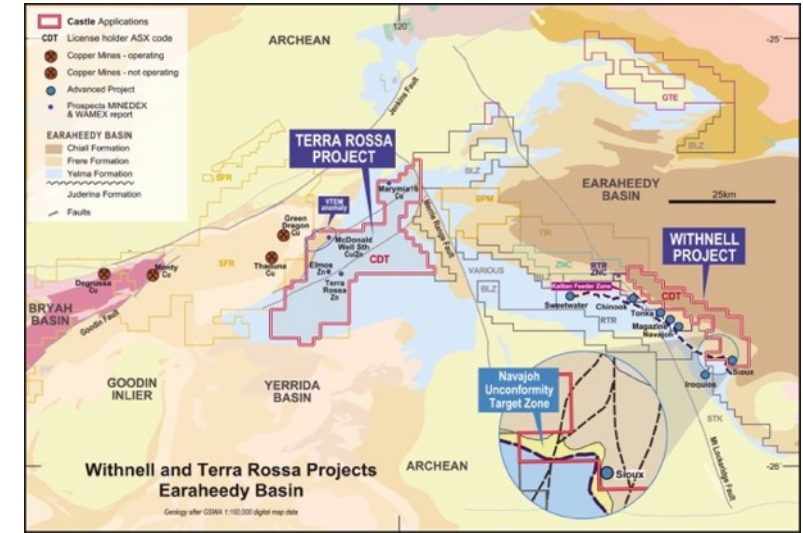
1. Refer Azumah Resources Limited ASX release 30 January 2019 (NB: Azumah is now delisted from ASX) .  
2. Refer ASX release dated 2 July 2014 re reporting of Kandia 8000 Zone Mineral Resource and appended JORC Code, 2012 Edition – Section 3  
3. Refer ASX release dated 2 July 2014 re reporting of Kpali Mineral Resource and appended JORC Code, 2012 Edition – Section 3  
4. Refer ASX release dated 18 January 2014 re “Kpali Drilling Results” incl. of JORC Code, 2012 Edition - Table 1

# Australia: Future Metals & Gold Projects

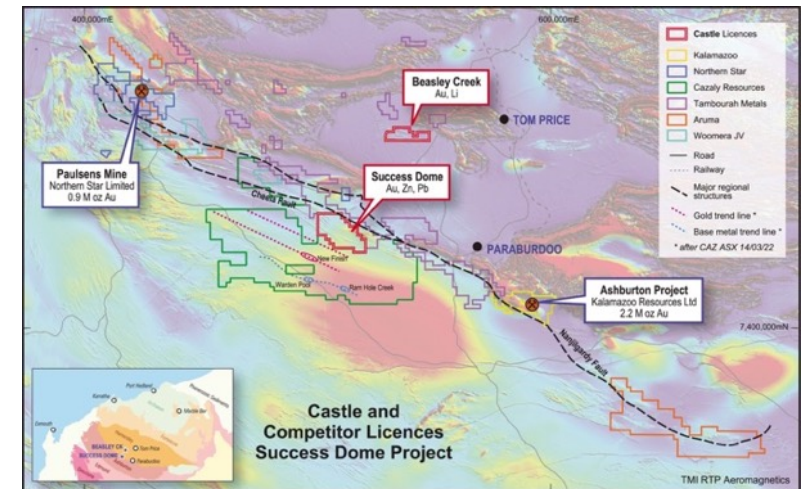


*“Castle has accumulated an enviable position in the rapidly emerging Earaheedy Basin base metals province where Rumble Resources Limited has made a Tier-1 scale, open-ended SEDEX and MVT-style zinc-lead-copper discovery.”*

*“Polelle / Wanganui, Beasley Creek and Success Dome provide additional quality base metals and gold exposure that have been incubated to a stage where targets have been identified”*



Earaheedy Basin: Withnell and Terra Rossa

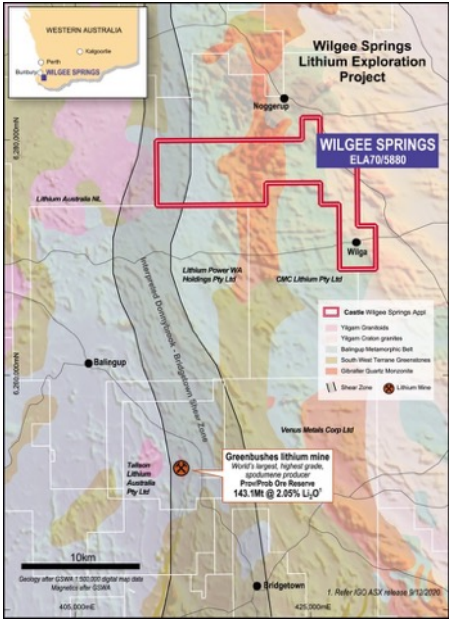
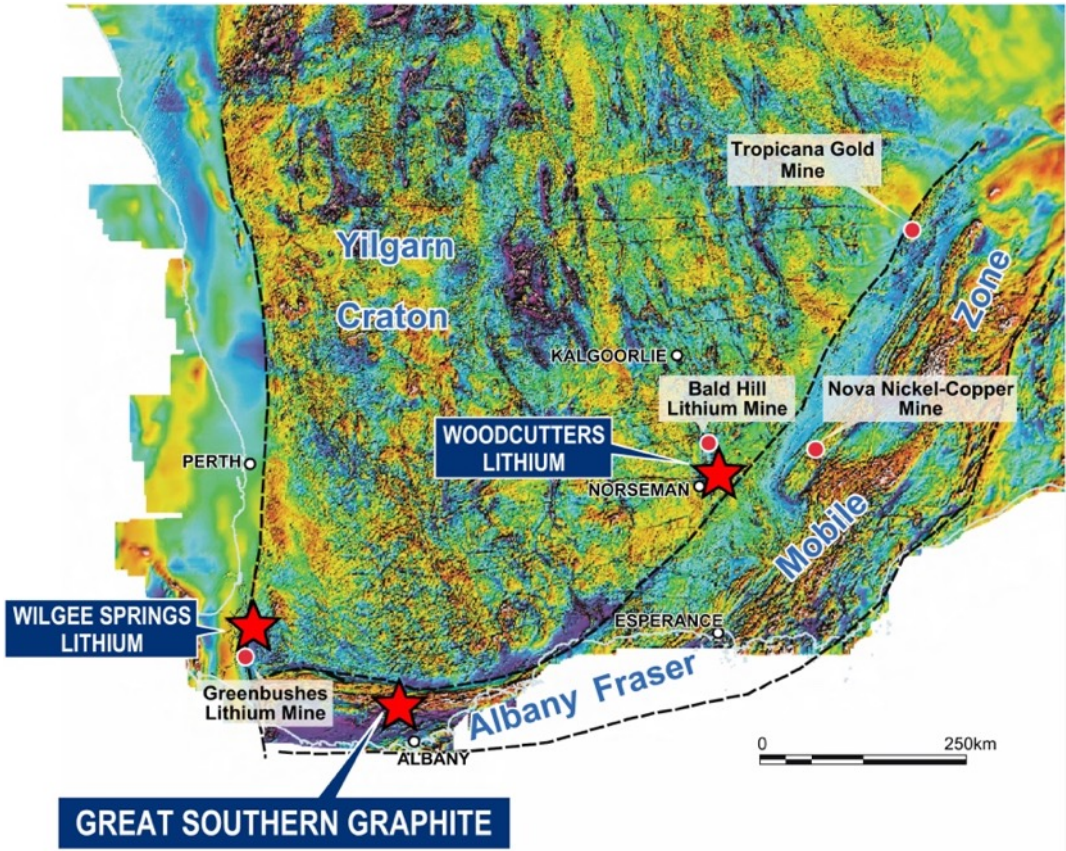


Beasley Creek and Success Dome

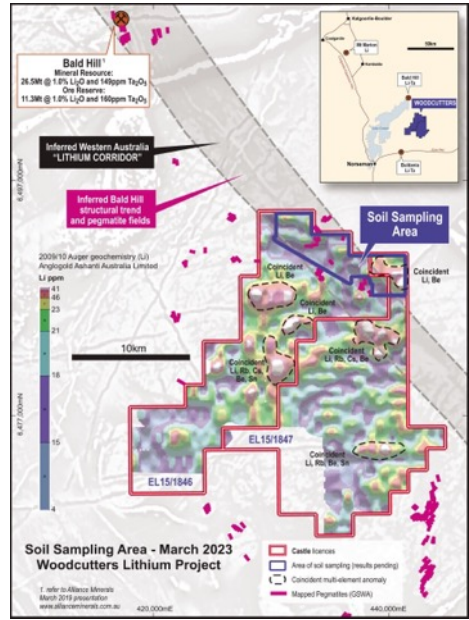
# Australia: Other Battery Metals Projects



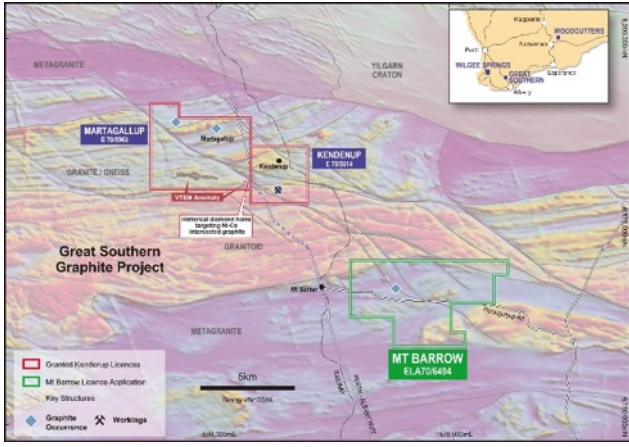
*“Castle has moved quickly in Western Australia to participate in the forecast increases in demand for graphite and lithium for use in the electric vehicle and power storage sectors.”*



Wilgee Springs (Lithium)



Woodcutters (lithium)



Kendenup , Martagallup and Mt Barrow (graphite)