



**Developing World Class Projects for the Expanding Graphite Market**  
**Completing Development Milestones on Ancuabe – DFS, Offtake, EPC**

September 2017

# Corporate Summary (ASX: TON)

## Corporate Overview

Shares on Issue	657.8M
Share Price 11 Sept 2017	\$0.096
Market Capitalisation	\$63.15M
Unlisted Options*	54.5M
Performance Rights**	17.5M

\* 4.5M at \$0.27 expiry January 2018; 50M at \$0.10 expiry June 2018.

\*\* Issued to CEO and management, expiry between Dec 2018 & Dec 2019.

## Substantial Shareholders

Shandong Tianye Mining Co Ltd (In process of taking up creep provisions to 23%)	20.00%
SG Hiscock & Company Limited	5.08%

## Research Reports

Edison July 2017 – Valuation 22 cents per share

Somers May 2017 – Target price 28 cents per share

## Share Price Performance and Daily Volume



## Board and Management

Xingmin (Max) Ji – Non-Executive Chairman

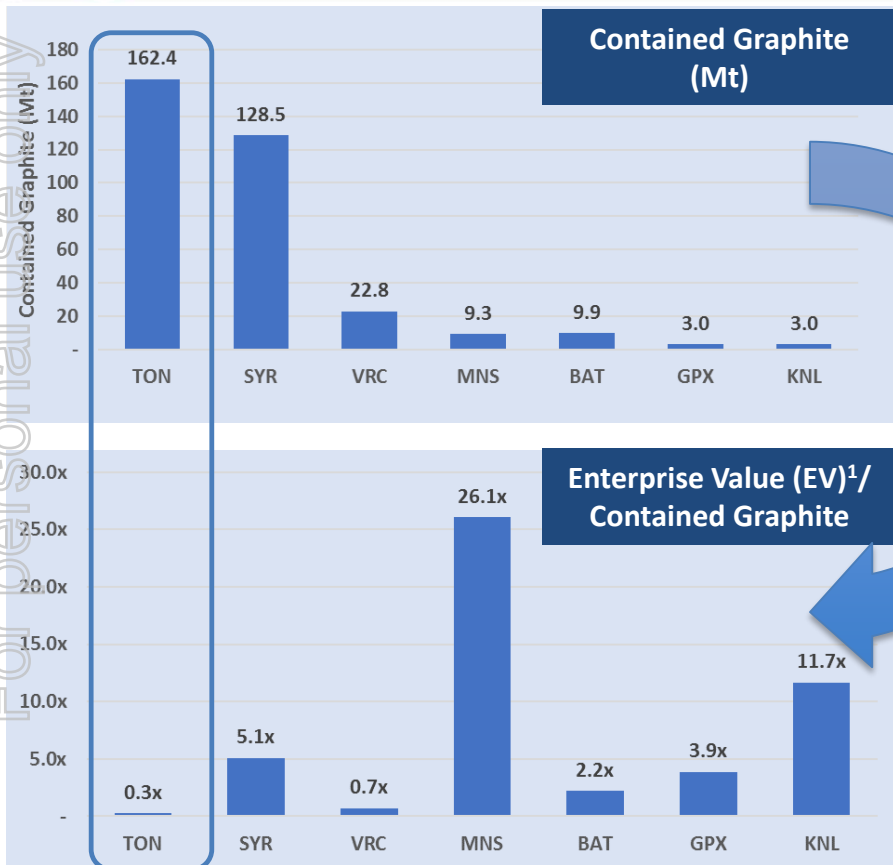
Peter Canterbury – Managing Director

Patrick Burke – Non-Executive Director

Paula Ferreira – Non-Executive Director

Guanghui (Michael) Ji – Non-Executive Director

# Undervalued Relative to Peer Group



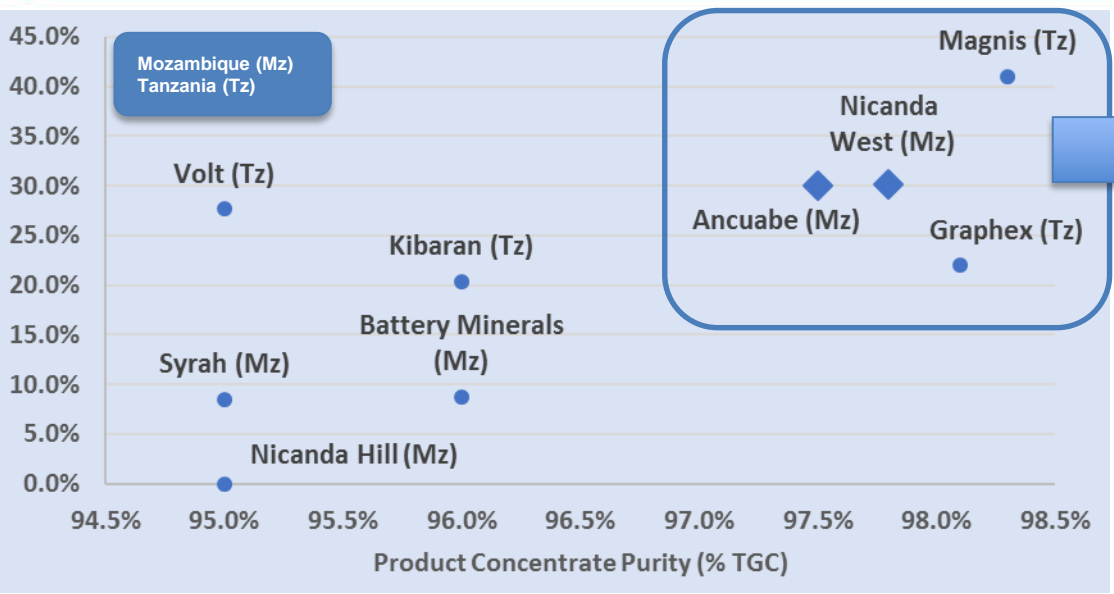
Independent research supports undervalued proposition with Edison placing valuation of 22 cents per share

- Triton is trading at the lowest Enterprise Value /Contained Graphite multiple despite development milestones being achieved:
  - ✓ DFS & ESHIA – on track for completion in 2017
  - ✓ Offtake – MOU signed with significant Chinese Graphite company (non-binding)
  - ✓ Offtake, EPC and Financing framework agreement signed with China's largest building material group (non-binding)

1. Enterprise Value (EV) is market capitalisation plus debt less cash

# Products Ideally Suited to Growth Markets

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'Sweet Spot' for the expandable market: high purity and high proportion of Jumbo (>300 Microns) flake size

Lower flake sizes suitable for the battery markets but TGC% remains a critical factor

- Margin not grade drives profitability - basket price is determined by concentrate purity, flake size distribution and end market suitability
- Significant purification cost benefits for higher concentrate graphite (over 97.0% TGC)
- East African Projects will support supply constrains impacting the traditional Chinese source of supply

# Portfolio Snapshot

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- ✓ Portfolio of the **world class graphite projects**
- ✓ Ideally positioned to capture significant market share of a rapidly growing market as the graphite market **undergoes fundamental structural changes – Supported by recent significant >30% price increase**
- ✓ Project Delivery Phase Underway – **Technical, Marketing and Strategic Advisors appointed in China** – DFS and Offtake Agreements on target for end of 2017

## Project Portfolio

**Ancuabe:** Industry leading flake size distribution, purity and expandability  
**Nicanda Hill:** One of the worlds largest flake graphite/vanadium deposits  
**Nicanda West:** Industry leading flake size distribution and purity

## Infrastructure

Projects located in Mozambique, the world’s most advanced new graphite region  
Best access to port, power and road infrastructure of all the East African graphite projects  
Located next to existing graphite mines (AMG, Syrah Resources)

## Markets

Independent testwork confirms product is highly suitable for the rapidly growing expandable graphite and battery markets

# World Class Portfolio of Graphite Assets

## Ancuabe



- Premium quality graphite due to large flake size and very high purity and expandability - confirmed by internationally recognised independent experts
- JORC Indicated + Inferred Resource: 27.9Mt at 6.0% (ASX Announcement 10 April 2017)
- 59% large flake graphite (>180µm), 32% jumbo flake graphite (>300µm)
- Excellent concentrate purity (average 97.5% TGC across all flake sizes) from simple flotation
- Excellent expandability results undertaken by independent experts and laboratories in Australia, Germany and China

## Nicanda Hill



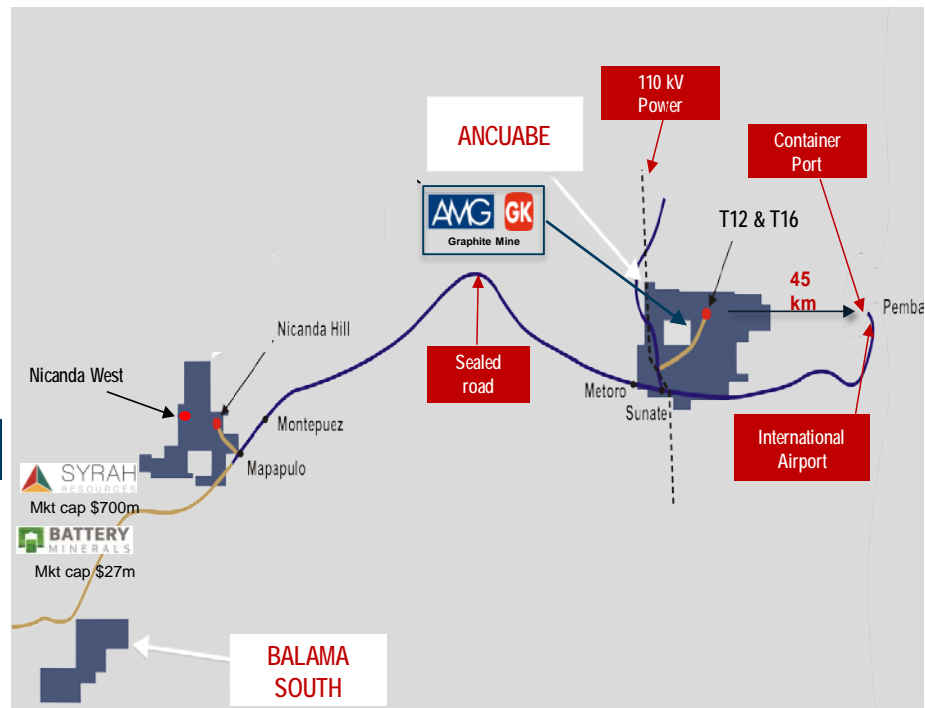
- JORC Resource 1.43 Bt at 11.1% TGC<sup>1</sup>
- Next door to Syrah Resources' Balama Project
- Spherical graphite already produced from Nicanda Hill
- Feasibility study partially complete (S/Study and EPDA completed)

## Nicanda West



- 30Mt Mineral Resources Estimate at 6.6% TGC<sup>3</sup>
- 70% of material >150µm, 62% large flake size and above (>180µm)<sup>3</sup>
- Average purity of 97.6% TGC<sup>3</sup> – World class metallurgy

## Projects



- ASX Announcement 16 September 2016 "Restated Mineral Resource Estimate for Nicanda Hill"
  - ASX Announcement 26 November 2014 "Nicanda Hill Scoping Study"
  - ASX Announcement 17 May 2016 "Maiden Inferred Mineral Resource – Nicanda West"
- There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

# Ticking the Development Boxes

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- ✓ EPC, Financing and Offtake Framework Agreement with Sinoma, subsidiary of China's largest building materials company (non-binding)
- ✓ Framework Offtake Agreement with Qingdao Tianshengda Graphite, minimum five year term (non-binding)
- ✓ Further discussions underway with further potential offtake partners and project investors
- ✓ DFS being undertaken by Independent Consultants with significant experience in East Africa and Graphite (Lycopodium, CSA Global, Knight Piésold etc) – On track for Completion in December 2017
- ✓ ESHIA – Internationally recognised CES undertaking EIS to IFC standards – On track for Completion in December 2017
- ✓ Mozambique approvals process underway





# Graphite Market Undergoing Major Transformation

**Demand:** Environmental legislation and structural change in the expandable graphite, Electronic Vehicle (EV) and battery markets

**Supply:** Supply is expected to come under pressure due to changing environmental regulations and declining grade in parts of China

## EVs and batteries

- Strong demand for Lithium-Ion Batteries (LiBs) due to growth in EV and battery storage markets
- LiBs require spherical graphite as a non-substitutable component of the battery (anode)
- Global shift towards sustainable sources of natural graphite as a cheaper, more efficient and more environmentally friendly alternative to synthetic graphite in the production of spherical graphite

## Expandable Graphite

- New legislation in China, EU, Japan and Korea have either required flame retardants in building codes and/or banned brominated and asbestos based fire retardants
- Graphite is a cost effective alternative with the added advantages of higher thermal efficiency and denser composition
- Expandable graphite attracts a significant market premium to batteries and refractories with many uses outside the building industry
- If similar laws enacted in other countries (EU for example) the potential growth in demand is exponential. Expandable graphite is anticipated to be the second highest graphite market segment
- Building fire safety improved significantly through use of flame retardant materials

**Triton's premium graphite is suitable for both markets**



# Chinese Market Dominance Declining

## Driven by Environmental Policy & Legislation

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- Environmental management is a key pillar of Chinese Government policy
- Not only focused on growing car and bus EV capability but also cleaning up major polluting industries
- Chinese graphite industry has already been impacted with many mines closed down
- Acid treatment (using hydrofluoric acid) of lower grade concentrate now a focus
- Government concern with poor management of acid treatment water



Examples of typical Chinese graphite plants and poor environmental management

# Triton's Primary Focus is Expandable Graphite

## What is Expandable Graphite

Graphite is expanded by immersing the natural flake graphite concentrate (usually at a grade of 95% to 99% Total Graphitic Carbon (TGC)), in a bath of acid and oxidising agents, which forces apart the crystal lattice planes.,

Material is then heated up to 950°C resulting in rapid expansion

Expanded Graphite generates inert gas when heated and extinguishes a fire by cutting off the supply of air.

Highly heat resistant ✓

Low material use ✓

Radiation resistant ✓

Corrosion resistant ✓

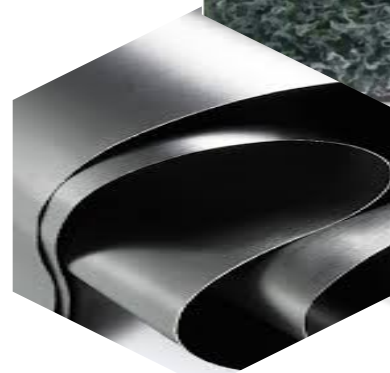
Free of heavy metals ✓

Non-polluting ✓

Relatively low cost ✓

Reduces fume formation ✓

## TRITON'S EXPANDED GRAPHITE



FOIL MADE FROM EXPANDED GRAPHITE



GRAPHITE FOAM MADE BY BASF

# What will drive Expandable Graphite Demand?

## FLAME RETARDANT BUILDING MATERIALS (FRBM)

- Fire safety a growing global issue in commercial and residential construction
- China has recently mandated FRBM in all new buildings and will ban traditional brominate flame retardants in 2018
- Concerns over the combustibility in building materials used historically may require retrofitting of existing buildings (eg the Lacrosse Melbourne Docklands building fire in 2014 where combustible cladding was recently ordered to be replaced)
- Likely to drive the increased use of suitable flame retardant materials in all new buildings

### Graphite based Flame Retardant Building Materials (FRBM) possess:

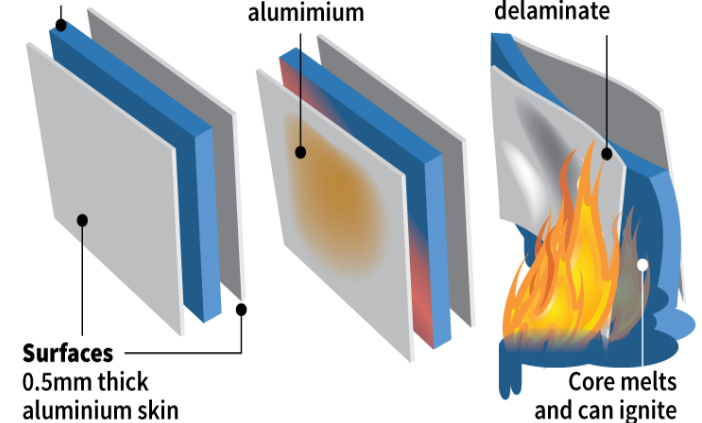
- ✓ excellent flame suppression qualities
- ✓ improved thermal efficiency
- ✓ cost effective alternative
- ✓ denser composition

## Aluminium composite panel Flammable core

**Insulating core**  
2-5mm thick,  
100% polyethylene

Heat from a fire will  
conduct quickly to the  
core through thin  
aluminium

Core loses ability to  
bind, causing outer  
skins to deform and  
delaminate



# Expandable Graphite in Flame Retardant Building Materials

## ADVANTAGES

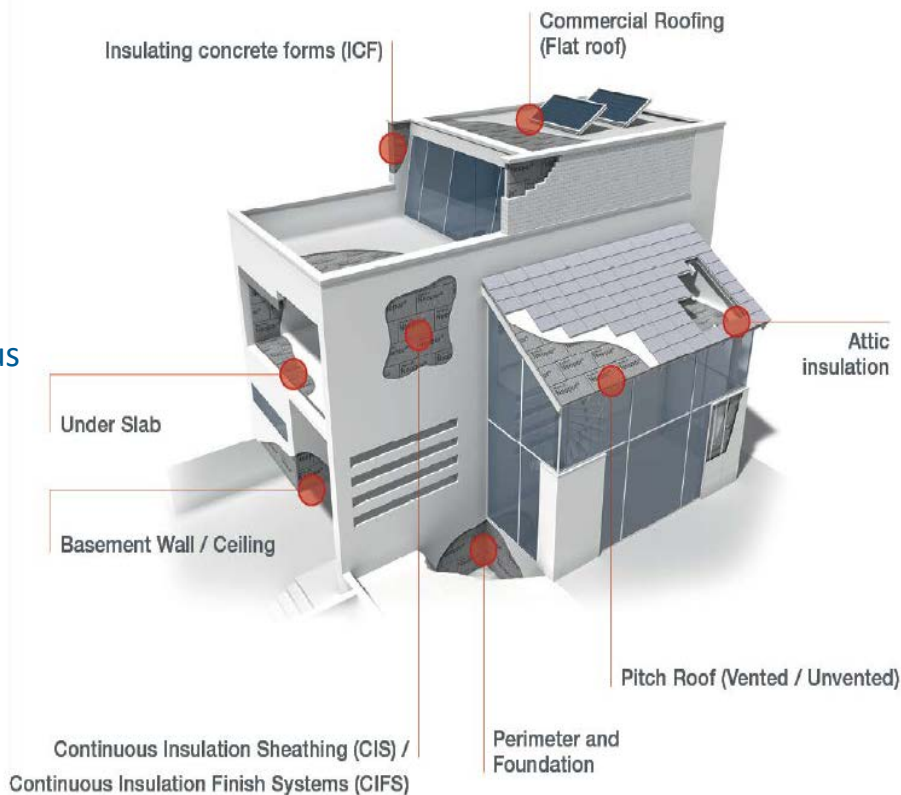
- ✓ Can be expanded by low heat (150 to 300°C)
- ✓ Safe and chemically inert
- ✓ Halogen free
- ✓ Heavy metal free
- ✓ Reflects radiant heat energy and reduces thermal conductivity

## APPLICATIONS

Has been used as a non-halogen flame retardant in various applications such as:

- |                       |                          |
|-----------------------|--------------------------|
| ✓ Polyurethane foam   | ✓ EVA foam               |
| ✓ Roofing             | ✓ Concrete               |
| ✓ Non-flammable paint | ✓ Construction materials |
| ✓ Sealings            | ✓ Polyolefin resin       |
| ✓ Thermoplastic resin | ✓ Rubber                 |

## Uses for Graphite Polystyrene (Source BASF website)



# Accelerated project development

Aiming for first production in 2019

## Timeline

## Milestone

Q4 2016

- ✓ Triton recapitalised & appointment of Peter Canterbury as Managing Director
- ✓ Drilling commenced on T16 prospect
- ✓ Triton relisted on the Australian Securities Exchange, Board focus on Ancuabe

Q1 2017

- ✓ T16 discovery
- ✓ New management team appointed to deliver strategy
- ✓ Scoping study commences

Apr- Aug 2017

- ✓ Major resource upgrade
- ✓ Scoping study completed, DFS commenced, all major consultants appointed
- ✓ Appointed Technical and Marketing Advisor in China to undertake testing and customer acceptance
- ✓ Engaged Strategic Advisor to secure strategic partner and financing
- ✓ EPC, Financing and Offtake MOU (Sinoma), Framework Offtake Agreement (Tianshengda Graphite)

## Momentum continues to deliver strategy

H2 2017

- Customer acceptance testing and anticipated additional agreement with strategic financing/off-take partner
- Estimated completion of Ancuabe DFS

H1 2018

- Anticipated binding agreements with strategic financing/off-take partner
- Aim for Board investment decision & project approvals
- ESHIA approval, early works engineering and construction

H2 2019

- Anticipated First Ore on Ship



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An investment in the Company shares is subject to investment and other known and unknown risks, some of which are beyond the control of the Company. Such risks include, but are not limited to the market price of graphite, general business, economic, competitive, political and social uncertainties; the actual results of current exploration activities and feasibility studies; assumptions in economic valuations which prove to be inaccurate; possible variations of ore grade recoveries or rates; climatic conditions; political instabilities; insurrection or war; arbitrary decisions by governmental authorities; delays in obtaining government approvals or financing or in the completion of development or construction activities.

Information in relation to the Ancuabe Scoping Study, including production targets and financial information, included in this report is extracted from an ASX Announcement dated 10 May 2017 (see ASX Announcement – 10 May 2017), 'Ancuabe Scoping Study Results Highlight Premium Product with Robust Economics', [www.tritonminerals.com](http://www.tritonminerals.com) and [www.asx.com.au](http://www.asx.com.au). The Company confirms that all material assumptions underpinning the production target and financial information set out in the announcement released on 10 May 2017 and continue to apply and have not materially changed.

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The Scoping Study referred to in this presentation has been undertaken to determine the potential viability of an open pit mine and graphite processing plant, constructed adjacent to the Ancuabe T12 and T16 deposits, and to reach a decision to proceed with more definitive feasibility studies. To achieve the range of proposed feasibility studies and potential mine development outcomes indicated in the Scoping Study, additional funding will likely be required. Investors should note that there is no certainty that Triton will be able to raise that funding when needed. It is also possible that such funding may only be available on terms that dilute or otherwise affect the value of existing Triton shares. It is also possible that Triton could pursue other 'value realisation' strategies such as sale, partial sale, or joint venture of the project. If it does, this could materially reduce Triton's proportionate ownership of the project. The Company has concluded it has a reasonable basis for providing the forward-looking statements included in this presentation and to expect that it will be able to fund the development of the project. Triton recognises that exclusion of the Inferred Mineral Resources from the mine plan reduces the potential returns for the Ancuabe Graphite Project. This will be addressed in the next and final stage of drilling, which commenced in May 2017. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

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## Competent Person Statements

The information in this announcement that relates to the scoping study and resource estimates for the **Ancuabe Graphite Project** in relation to:

10 May 2017 "Ancuabe Scoping Study Results Highlights Premium Product with Robust Economics"

16 May 2017 "Testwork Confirms Ancuabe Graphite is a High Quality Product"

The Company confirms that it is not aware of any new information or data that materially affects the information as announced on 10 May 2017 and 16 May 2017. All material assumptions and technical parameters underpinning the results and estimates continue to apply and have not materially changed.

The information in this announcement that relates to the in situ mineral resources for the **Nicanda West Graphite Project** in relation to:

17 May 2016 "Maiden Inferred Mineral Resource – Nicanda West"

The Company confirms that it is not aware of any new information or data that materially affects the information as announced on 17 May 2016. All material assumptions and technical parameters underpinning the results and estimates continue to apply and have not materially changed.

The information in this announcement that relates to the scoping study and resource estimates for the **Nicanda Hill Graphite Project** in relation to:

16 September 2016 "Restated Mineral Resource Estimate for Nicanda Hill"

26 November 2014 "Nicanda Hill Scoping Study"

The Company confirms that it is not aware of any new information or data that materially affects the information as announced on "16 September 2016 and 26 November 2014. All material assumptions and technical parameters underpinning the results and estimates continue to apply and have not materially changed.