

## **AMENDED INVESTOR PRESENTATION**

The following Investor Presentation for the 6<sup>th</sup> Graphite & Graphene Conference, Berlin on the 16 & 17 March 2017 has been amended to correct an error on the table on page 13

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Developing a high-quality graphite project for the rapidly growing global battery market

## EPANKO GRAPHITE PROJECT

ASX:KNL FSE:FMK

premium quality graphite **uniquely tanzanian**



# DISCLAIMER

## Securities Disclaimer

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## Forward looking Statements

Various statements in this presentation constitute statements relating to intentions, future acts and events. Such statements are generally classified as “forward looking statements” and involve known and unknown risks, uncertainties and other important factors that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed herein. The company gives no assurances that the anticipated results, performance or achievements expressed or implied in these forward looking statements will be achieved.

## Competent Person

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Andrew Spinks, who is a Member of The Australasian Institute of Mining and Metallurgy included in a list promulgated by the ASX from time to time. Andrew Spinks is a director of Kibaran Resources Limited 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”. Andrew Spinks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based on information compiled by Mr David Williams, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy. David Williams is employed by CSA Global Pty Ltd, an independent consulting company. Mr Williams 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”. David Williams consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Ore Reserve has been compiled by Mr Steve O'Grady. Mr O'Grady, who is a Member of the Australasian Institute of Mining and Metallurgy, is a full time employee of Intermin Engineering and produced the Mining Reserve estimate based on data and geological information supplied by Mr Williams. Mr O'Grady has sufficient experience that is relevant to the estimation, assessment, evaluation and economic extraction of Ore Reserve that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr O'Grady consents to the inclusion in this report of the matters based on his information in the form and context that the information appears.



## OUR VISION

premium quality graphite uniquely tanzanian



*“To become a major producer of high-value, premium quality large flake graphite in Tanzania as a long-term stable supplier of graphite for the high growth battery market”*



## OVERVIEW – THE CASE FOR KIBARAN

**Epanko is positioned as one of the most advanced graphite projects globally**

- Bankable Feasibility Study completed to the highest technical and financial standards complies with stringent IFC Equator Principles for Social & Environmental
- BFS for 40ktpa and expanded production case to 60ktpa due early April to drive further value

**Robust marketing strategy**

- High percentage of large flake products from simple processing differentiates Epanko from other aspirants
- Offtake and sales agreements secured with blue-chip European and Japanese graphite and lithium-ion battery industry participants provides access to customers
- Strategy matches the “reality” of prevailing graphite markets

**Growth opportunities to enhance project returns**

- Conversion of flake graphite to spherical graphite at Epanko has the potential to add significant value – Feasibility Study underway and due for completion in Q2-2017
- Project economics do not include product sales into the high growth lithium-ion battery markets where significant increases in demand and value are expected to significantly impact market demand dynamics
- Abundant mineralisation provides ample scope for production growth



# THE RIGHT TEAM TO ADVANCE EPANKO



## BOARD & KEY MANAGEMENT

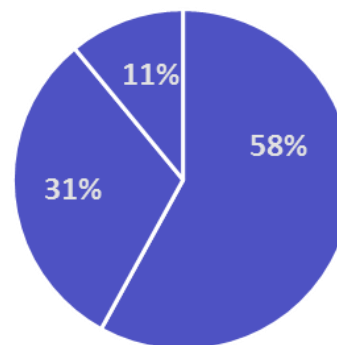
## A STRONG MIX OF MINING, COMMERCIAL AND GRAPHITE EXPERIENCE

Robert Pett (Non-Executive Chairman)	Minerals Economist with over 30 years' experience in developing resources and mines in Australia and Africa. Founding Chairman of Resolute Mining with a strong track record of board governance and leadership in listed companies.
Andrew Spinks (Managing Director)	Geologist with over 25 years' experience. Expertise in exploration, mining and management across a range of commodities and geographies. Former resident of Tanzania at the Golden Pride mine.
Grant Pierce OAM (Executive Director)	Mining engineer, over 25 years' experience, including development of African mines Tulawaka, Golden Pride and Edikan. Order of Australia Medal 2003 for social development in rural Tanzania.
Christoph Frey (Non-Executive Director)	German-based graphite industry professional with over 20 years' graphite experience in Russia, Europe, Africa and China. Direct experience in both traditional and evolving graphite markets including the production of spherical graphite.
John Condi (Non-Executive Director)	Member CPA with 14 years of experience in developing, acquiring and managing publicly listed businesses. Significant experience in acquiring and developing technology companies.
Robert Hodby (CFO/Company Secretary)	Member of CPA Australia and Governance Institute of Australia with over 20 years' industry experience in financing and administration of public and listed companies.
Dr Jaka Mgwabi Mwambi (Director, TanzGraphite (TZ) Limited)	Served as Vice Chairman of the National Environmental Management Council Board of Directors, Regional Commissioner of four regions, and more recently Tanzania's Ambassador to Russia, Ukraine and Belarus.

## CAPITAL STRUCTURE (ASX:KNL, FSE:FMK)

Shares on Issue	243.2m
Share Price (14 March 2017)	\$0.165
Market Capitalisation	41.3m
Net Cash (31 December 2016)	\$7.3m
Unlisted Options – Various Expiries & Exercise Prices	12.1m
Top 20 Shareholders	41.5%

## SHAREHOLDER BASE



- 58% Other Shareholders
- 31% Other Top 20 Shareholders
- 11% Directors/Management



## OUR STRATEGY

- Exploiting the competitive quality advantage of Epanko graphite
  - *High proportion of large flake and high crystallinity*
- Production profile to match underlying market fundamentals
  - *Base level production to meet market demand with a modular expansion approach as demand from new industries increase*
- A viable business model attracting leading European and Japanese project funding and offtake partners
  - *A project supported by traditional graphite markets with opportunity to add significant value by expanding into high growth battery market*
- A high returning project to provide a launching pad into high growth markets
  - *A robust development scenario that does not rely on a short term exponential demand increase*
- Management team with a track record of mine and graphite product development
  - *Reduces production and development risk which safeguards our shareholders capital*



## A HIGH RETURNING BASE CASE BFS

- BFS study on 40,000tpa completed in July 2015
  - BFS update well advanced and due for release in Q2-2017
  - Study will consider a 60ktpa case
  - Updated study areas brings study into full compliance with Equator Principles
- Study utilised industry leading consultants with strong track record of delivering mining projects in Tanzania, including:
  - GR Engineering, Knight Piesold, CSA Global and IMO Metallurgy
- BFS economics are based on sale into refractory and other established markets
  - Significant upside potential through access to high value markets including spherical and expandable graphite<sup>#</sup>

Key BFS outcomes		Parameters (LOM)
Plant Throughput	(tpa)	434,000
Plant Recovery	(%)	93.3
Feed Grade	(%)	8.6
Carbon Grade	(%)	96.3
Production Concentrate	(tpa)	36,400
Base Price Assumption	(US\$/t)	1,446
Cost per Tonne of Concentrate	(US\$/t)	570
Mine Life	(Yrs)	25
Pre-Production Capital	(US\$m)	77.5
Strip Ratio	(W:O)	1:1
Discount Rate	(%)	10
Payback	(Yrs)	2.7
EBITDA/Annum (Avg)	(US\$m)	30.3
Pre-tax IRR	(%)	41.2
Pre-tax NPV	(US\$m)	197.4

<sup>#</sup> Refer to ASX Announcement 14 September 2015 for further details



# TANZANIA IS AN ESTABLISHED MINING JURISDICTION



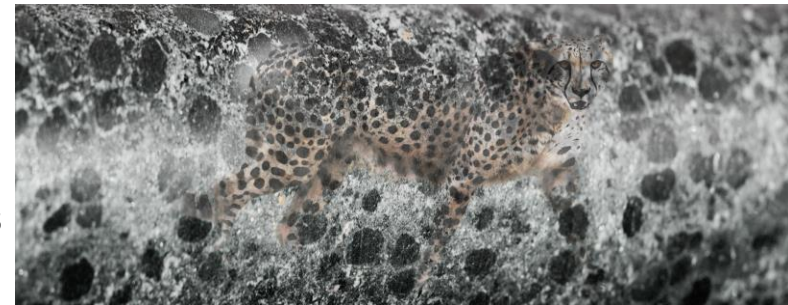
- Established mining industry with a strong track record of foreign investment
- High level of in-country professional, established training practices and service providers
- Kibaran has secured a 100% mining licence and all other prerequisite permits to commence activities
  - Licence for 10 years with option to renew for subsequent 10 year periods
  - Fiscal stability terms – Company Tax 30%, Royalties 3% and Ulanga District 0.3%
  - No requirements to list on the Dar es Salaam Stock Exchange
- Resettlement Policy Framework and Stakeholder Engagement Plan completed
  - Work designed to meet Equator Principles and IFC Environment and Social Performance Standards with disclosure period commenced
  - Relocation Action Plan well advanced and nearing completion





## IMPORTANCE OF GEOLOGY AND MINERALOGY

- Epanko dominant host mineral is a calc silicate mineral
  - Result of a pre-existing sedimentary unit subjected to contact metamorphism and local structural effects
- Metamorphism defines crystallinity
  - Epanko rocks undergone extremely high metamorphic pressure and temperature that has created unique 'cheetah' like rock textures
- Benefit of Favourable Mineralogy and Metamorphism
  - Graphite is easily liberated and delivers high yield
  - Higher carbon grade achieved through simple processing
  - Low levels of in-situ deleterious elements
- All graphite projects have different mineralogy
  - The favourable mineralogy delivers quality and drives strong project economics

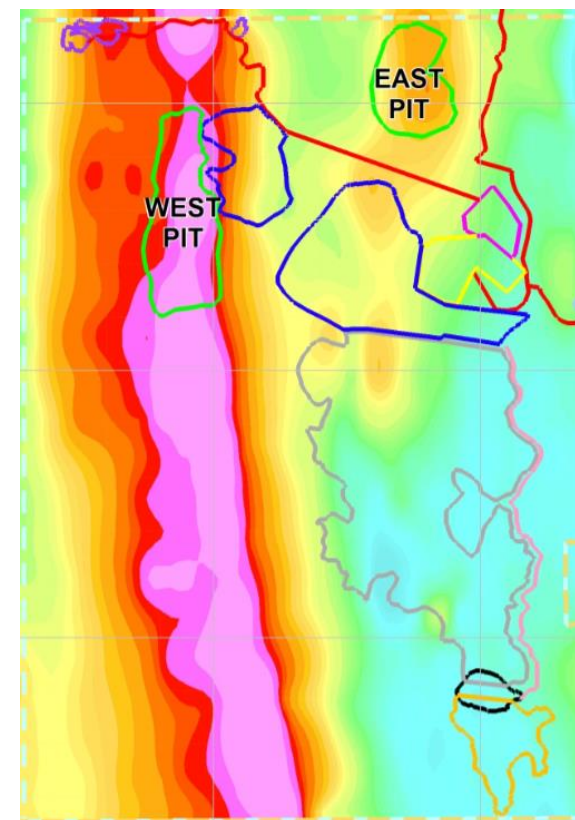




## HUGE RESOURCE UPSIDE TO SUPPORT EXPECTED GROWTH

- JORC Reserve underpins base case 25 year LOM at 40ktpa graphite concentrate
  - Large sections of thick mineralisation open at depth and along strike
  - Kibaran has confirmed the potential to increase mining rates from current reserve/resources to meet future market demand
- Significant resource growth potential
  - Only 30% of identified strike extension drilled
  - VTEM indicates significant mineralisation consistent with Epanko Deposit
- Extensive 7,734m drilling program completed, to be incorporated in the expanded case for 60ktpa

VTEM highlights significant mineralisation



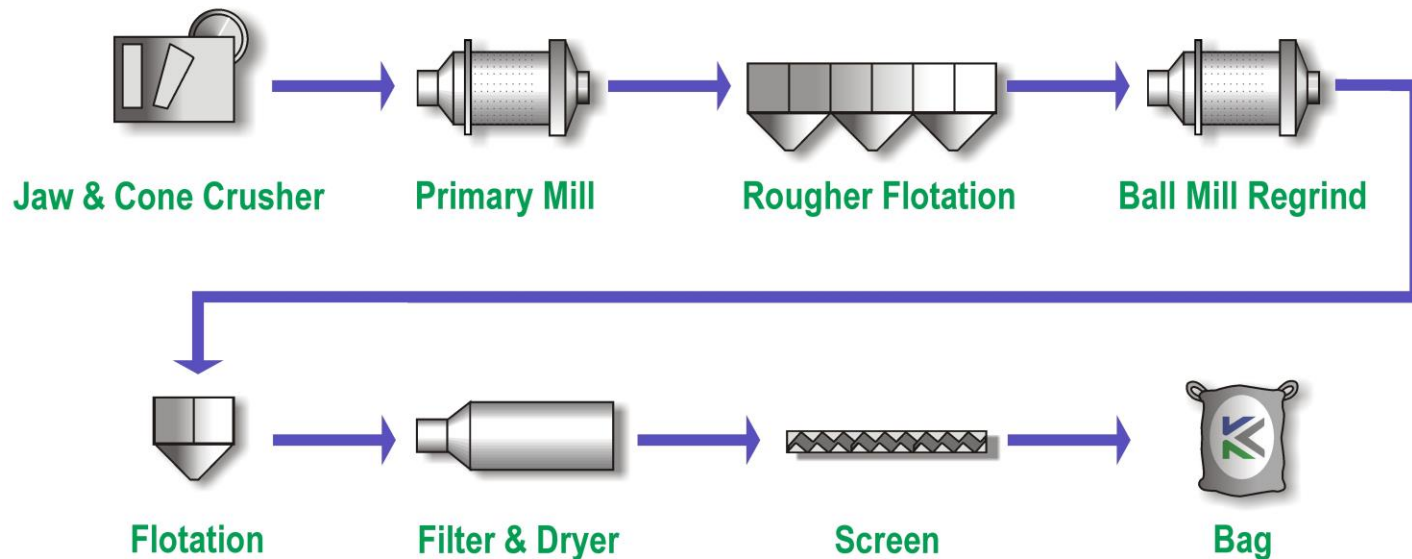
1 kilometre

	Mt	TGC Grade (%)	Contained Graphite (kt)
<b>Ore Reserve</b>	<b>10.9</b>	<b>8.6</b>	<b>938</b>
Measured & Indicated	14.5	9.9	1,421
Inferred	8.8	8.7	774
<b>Mineral Resource</b>	<b>23.3</b>	<b>9.4</b>	<b>2,195</b>



## EPANKO PROCESS SIMPLE & LOW COST

- Simple and low cost processing
  - Rougher, scavenger, primary cleaner and secondary cleaner flotation stages
- High level of independent testwork to support BFS including 200t bulk sample
  - Bulk sample was treated at an existing industrial facility
  - Returned excellent results despite the plant not being optimised for Epanko material
- Testwork currently being conducted on various regrind mills for small flake sizes (<100 mesh) to increase purity levels by flotation to further enhance
  - Cost and operating risk trade off assessed in light of increased operating risk of extra flotation steps against proven upgrading and established purifying methods at industrial scale



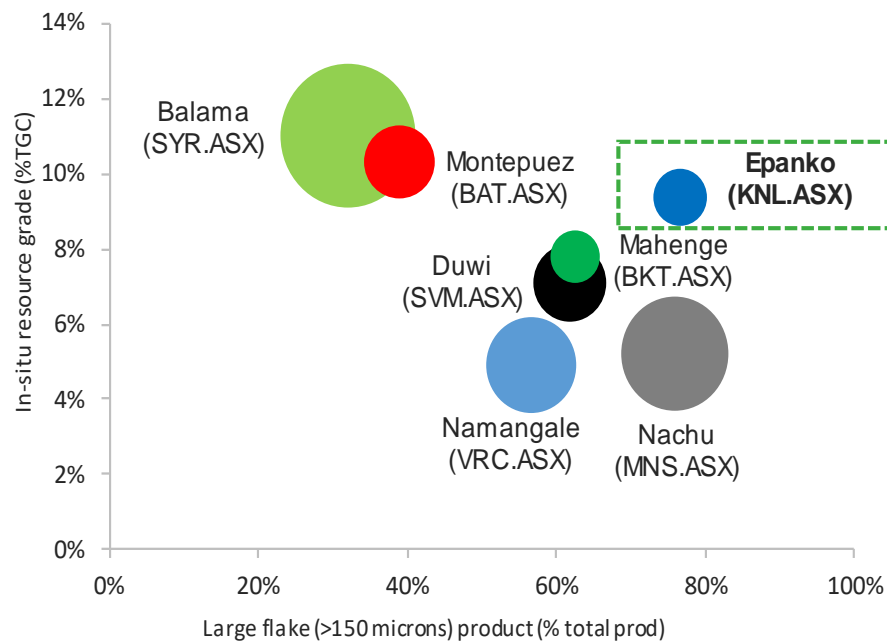


## BOTH GRADE & FLAKE SIZE ALLOW EPANKO TO SELL INTO ALL MARKETS

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- Epanko BFS flowsheet methodology designed to maximise saleable product value
- Project is scoped to access established product markets in viable quantities and underpin project financing
- Epanko's flake size distribution allows sales into all graphite product markets
- Purity of concentrate is driven by mineralogy, choice of milling equipment and operating conditions
- Robust testwork at an industrial scale lowers design risk and optimises equipment selection
- Epanko has the advantage of flexibility due to high in-situ grade and flake size distribution

*Epanko has both grade and flake size distribution*



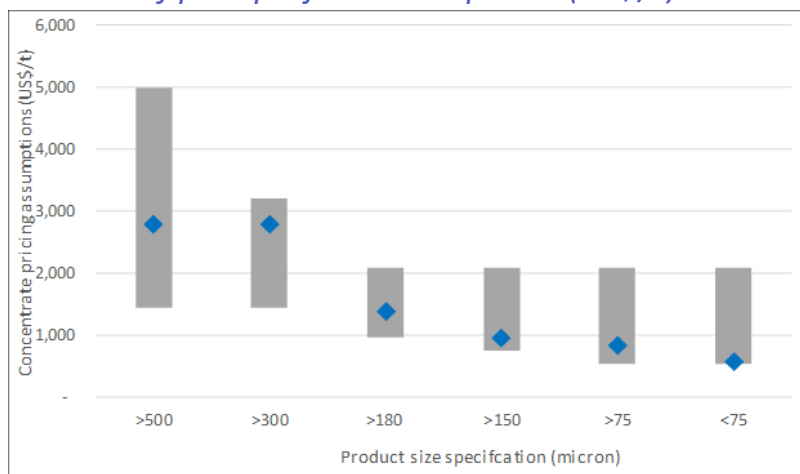
Bubble size = Average annual production target (ktpa graphite concentrate).  
Epanko flake size distribution incorporates both the Western and Eastern zone pits.  
Source: Company exchange releases.



## GRAPHITE PRICING ASSUMPTIONS IN CONTEXT OF PEER GROUP

- Banks won't lend without realistic pricing and offtake partners
- Kibaran has made no “heroic” pricing assumptions in base case basket pricing assumptions
  - Realistic pricing has been used without further value capture of value added products (i.e. spherical graphite)
  - Offtake is essential given there is no transparent intermediate market with acceptable payabilities for seaborne spherical graphite feedstock
- Epanko base case pricing **does not** include value capture for sales into high growth markets such as spherical and expandable graphite

*Epanko BFS pricing assumption in context of range of peer project assumptions (US\$/t)*



Source: ASX Company Releases - Peer group includes, Battery Minerals, Magnis Resources, Black Rock Mining, Volt Resources, Walkabout Resources.

*Epanko BFS pricing assumptions (US\$/t)*

Product	Micron	Epanko (%)	Pricing (US\$/t)	Grade (% TGC)
Super Jumbo/ Jumbo	>300	20.0	2,800	97.1
Large	>150	35.4	1,400	96.7
Medium	>106	30.3	950	96.2
Small	>75	7.4	840	95.3
Fine	<75	6.9	580	92.6

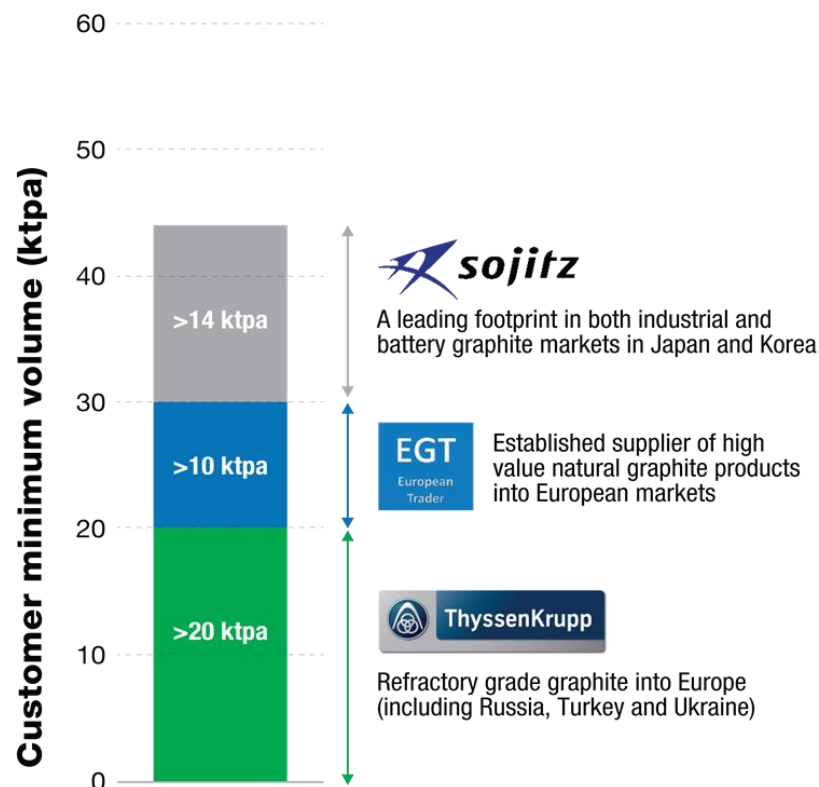
Published BFS results reflect Western Zone flake distribution only.





## THE RIGHT OFFTAKE PARTNERS FOR DEVELOPMENT IN GROWING MARKETS

- Sales and offtake agreements in place for 100% of Epanko base case production
  - Supportive customers and established product markets support project finance
- Complementary agreements to cover the full range of Epanko concentrate and value added products
- All offtake partners have established positions in graphite industry and bring a high level market intelligence on traditional and high growth emerging end markets
- Marketing strategy is consistent with end user buying behaviour





## A DELIVERABLE MARKETING STRATEGY OUTSIDE OF CHINA

- Europe is the largest refractory market
- Japan and Korea is the largest battery graphite market
- USA an emerging market

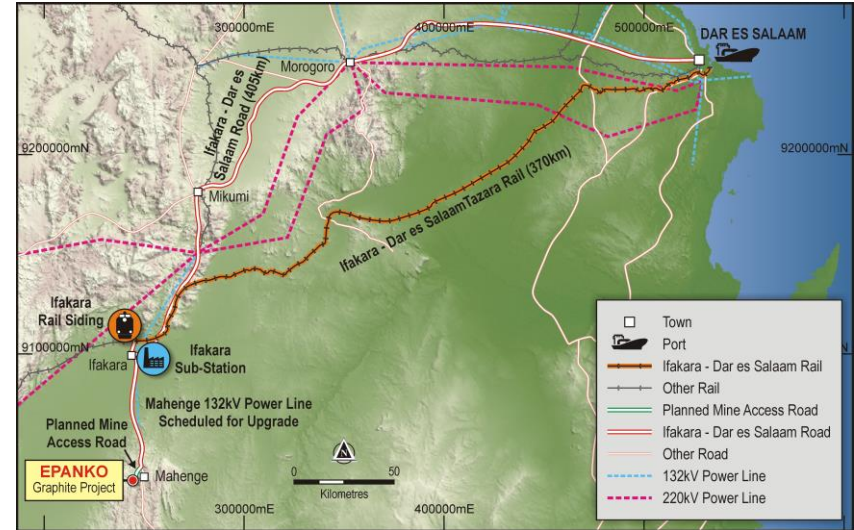


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## SUPPORTED BY EXISTING INFRASTRUCTURE

- Existing road access to Mahenge provides an effective logistics solution to Dar es Salaam
  - Construction of bridge across the Kilombero River, linking Ifakara and Ulanga Districts nearing completion and simplifies project logistics
  - 8km site access road will be constructed to bypass Mahenge
  - Freeway flyover is being constructed to provide efficient access to Dar es Salaam port
    - Proximity to the Ifakara Rail siding provides a long term strategic logistics option as Epanko production increases
- Diesel power for first 2 years of operation prior to connection to local grid power at the Ifakara sub station
  - Gird power costs expected to be \$0.9Wh v diesel costs of \$0.30kWh
- Excess water supply identified to support project requirements





## SPHERICAL GRAPHITE DEVELOPMENT PROGRAM

- Production of spherical graphite for anode battery market can add significant value
- Spherical graphite scoping study released August 2015 supporting the potential for production of spherical graphite at Epanko
- Feasibility study commenced by GR Engineering with results expected Q2-2017, key parameters include:
  - Staged integration with the ramp up of concentrate production at Epanko
  - Initial production of 6ktpa spherical graphite with modular expansion potential as growth demands
  - Examine various milling options and trade offs to increase concentrate purity across <100 micron material to further enhance margins of spherical production
  - Vendor selection from shortlisted leading Japanese and European mill manufacturers
- Discussions underway for distribution of by-product from spherical graphite production



# EPANKO CONCENTRATE FEEDSTOCK DEMONSTRATED PRODUCTION OF SPHERICAL GRAPHITE

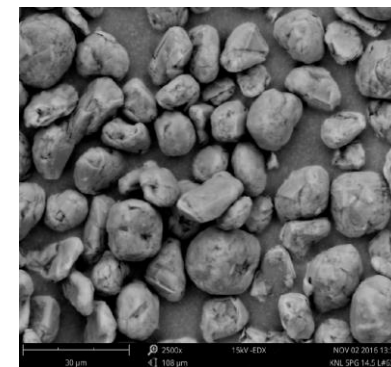


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- Spherical graphite has been produced from bulk sample of Epanko concentrate
  - Positive feedback from end users on suitability
- Physical properties meet customer specifications, in particular
  - Tap Density<sup>1</sup>, BET<sup>2</sup> and reversible capacity<sup>3</sup>
- Demonstrated deleterious impurity levels below specified levels, namely
  - Iron, silicon and ash content
  - Supporting testwork includes XRF, XRD, SEM analysis
- D002 testing confirms the high degree of graphitisation of Epanko graphite
  - Value returned 0.3356nm which compares extremely favourable to the perfect crystal structure value of 0.3354nm
- 50% yield achieved via current testwork

*Epanko Spherical Graphite Properties*

Measure	Unit	Outcome
<b>Particle size distribution</b>		
D10	(micron)	10.3
D50	(micron)	15.0
D90	(micron)	22.1
D002 <sup>7</sup>	(nm)	0.3356
Tap Density	(g/cc)	0.98
BET	m <sup>2</sup> /g	7.4
Reversible Capacity	mAh/g	367
Irreversible Capacity at	mAh/g	5
Fe	ppm	12
Si	ppm	19
Ash Content	%	0.01
Moisture Content	%	0.01



Source: 1. Tap density should be high and indicates how much active material (graphite) can be put into the battery, 2. BET should be low to reduce active material losses during the formation of the battery, 3. Reversible capacity should be as close as possible to the theoretical maximum of 372 mAh/g and irreversible capacity (loss of active material) should be as low as possible.

## A FUNDING STRATEGY WITH SUPPORTIVE PARTNERS



- Bank financing due diligence demands the highest technical, social and environmental standards
- Epanko project is scoped to match prevailing market conditions over the payback period
  - Established participants in the graphite market, selling to established customers
  - Pre-production capex US\$77.5m
- Kibaran is working with leading German bank KfW-IPEX-Bank to secure a \$40m facility
  - Experienced lender to the resources sector
  - Sponsoring the application for the Untied Loan Guarantee Scheme from the German Government
- Leading African mining lender Nedbank has expressed interest in participating in project finance syndicate
- Lenders due diligence process is nearing completion
- RFP and SEP completed to Equator Principles standards and public disclosure period commenced with RAP to follow

**KFW** IPEX-Bank







# CORPORATE SOCIAL INVESTMENT

## Donations to Local School Communities & Orphanage

- 148 school desks donated to cover the shortfall in desks for Epanko Primary School
- Donation of benches & stools for the science lab at Nawenge Secondary School
- Socks donated by Malibu Podiatry distributed by Kibaran to children at Ukwama Children's Orphanage



## Wheelchairs for Special Needs Children

30 wheelchairs have been donated by the Company to vulnerable children within the Ulunga District. The wheelchairs were made in Australia by volunteer organisation Wheelchairs for Kids.



## Bridge2Aid

Kibaran is a founding donor to Bridge2Aid Australia which commenced last year. The charity is now up and running, the first Australian volunteer dentist will be heading to Tanzania in May this year. [www.bridge2aid.com.au](http://www.bridge2aid.com.au)



## Sponsorship of Local Youth - Training

A screening process was conducted by Kibaran identifying 32 youth in the projects catchment area and as a result has sponsored 6 youths that have passed the VETA entrance exam to attend VETA in Ifakara for 2 years. VETA is akin to TAFE in Australia. Half of the group are completing fitter/mechanics, several are doing carpentry and a others are doing masonry/bricklaying. The intent being to offer them a job when they have completed their course.



## Keep a Girl in School

An initiative to keep girls from the local community in school.

*“Development of Kibaran’s graphite project will be to the benefit of all key stakeholders with genuine and lasting benefits for all the local community”*



*Well positioned to be a significant graphite producer*

**PRODUCT**

- Epanko high quality graphite concentrate
- Value-add strategies to produce a premium spherical graphite product for the global battery market

**PROJECT**

- Tanzania – an established mining jurisdiction with supporting infrastructure
- Technical and social and environmental work to Equator Principles highest standards as required to secure bank finance

**PARTNERS**

- Offtake and sales agreements secured blue-chip partners – ThyssenKrupp AG + Sojitz + EGT
- Mandated debt finance providers – KfW-IPEX Bank + Nedbank

**PEOPLE**

- Proven Management team with a track record of mine development and relevant experience in graphite production and markets



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