Blencowe Resources PLC (LSE:BRES)

Mining –Initiating Coverage

30 April 2020

Stock Data

Share Price (Placing Price)	6p
Market Cap (£M)	5.9
EV(£M)	3.9

Company Summary

Blencowe is looking to develop the Orom-Cross graphite deposit in Uganda. This is a very large resource of high grade large flake graphite.

SHAREHOLDERS	HOLDING
CAF Uganda	33.9%
Board and Management	13.7%
John Story	13.6%
Apul Investments	8.5%
Brandon Hill Capital	5.8%

Introduction

Blencowe owns 100% of the Orom-Cross graphite project in Uganda which has the potential to become a world class graphite project, both due to its size and more importantly end product quality of its graphite. Blencowe is considering a strategy of fast tracking production on a smaller scale, but designing the operation so that it can be ramped up to produce significantly larger tonnages as required, in line with anticipated heightened demand for its range of end products.

Mining Licence Granted

The project comes with a granted mining licence, valid for 21 years, with no material further payments due until mining commences. The compensation agreement with the local landowners has been agreed, with an initial payment of US$180k. Since this payment is determined by the area actually being impacted by mining, no further payments will be required for several years.

Large Resource of High Grade Large Flake Graphite

Whilst Blencowe is aiming to be a modest producer of graphite, circa 25kt pa initially, the overall deposit is huge, containing an estimated 250Mt of graphite in 3.7Bt of ore. More importantly, the graphite is predominantly in the form of higher value product, with 74% estimated within the Jumbo, Extra Large and Large categories of flake size, based on previous studies. When combined with its high purity of 95-97% TGC and low impurities, especially of vanadium and thorium it is believed it will sell at a significant premium to the smaller size fractions. Additionally, the coarser size fractions of graphite is exactly where China is most deficient.

China Becoming a Major Importer of Graphite

Chinese graphite producers are losing their world dominance, with its share of world mined production dropping to 62% in 2019. This trend is forecast to continue due to rising wages, ever tightening environmental regulations and the closing of old mines. To compensate, China is importing increasing amounts of graphite, up to 22kt per month in 2019, which largely is sourced from Syrah Resources Balama mine in Mozambique.

New Graphite Mines Located in Politically Unstable Areas

As we discus in the report, many of the new and potential sources of graphite are located in northern Mozambique, southern Tanzania, Brazil and Madagascar. These are not areas that would be first choice for many mining companies and it is probable that this is going to cause heightened risk through supply problems going forward. Further, Uganda is a more stable country and being a former British Colony benefits from the widespread use of the English language and British based commercial law.

Research:

Peter Rose
Peter.Rose@brandonhillcapital.com
www.brandonhillcapital.com

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Executive Summary

Blencowe

Blencowe is aiming to develop the world class Orom-Cross graphite project in Uganda. It is a huge deposit of high quality flake graphite located in Uganda, a mining friendly country and one of the few countries in Africa with a surplus of electricity. The deposit is world class in both size and the end product quality of its graphite. A 21 year mining licence is already in place and no further material payments are required until mining commences.

Exploration and Metallurgy delayed by Covid-19

Before both Uganda and South Africa went into lockdown, the exploration and metallurgical test work at Orom-Cross were proceeding well. Approximately 30% of the required number of drill holes to define a JORC Resource had been completed. Assuming the Ugandan lock down ends on May 5, 2020, the drilling can be completed by the end of May, allowing for the completion of a JORC compliant resource by the end of August. Phase 2 of the metallurgical test work had also commenced but has been stalled by the lockdown in South Africa. The little work that was conducted prior to the lockdown was yielding positive results and the Company expects to restart the studies in May.

Graphite Market Growing Rapidly

Before the world effectively went into enforced shutdown, the graphite market was growing and was forecast to double to 2Mt pa over the next five years. Whilst the fastest growing sector of the market is the small/fine flake sector which is used predominantly in the lithium ion battery sector for electric vehicles, a 10% growth rate pa is also expected for the jumbo/large flake sector. These size ranges are being increasingly applied to expandables and fire retardants for use in the building materials sector. This is important for Blencowe as it is the very sector it intends to supply for over half of its end product and these products command a significant premium, with respect to sales prices, to the finer sized ranges of graphite.

China Losing its Dominant Position

Over the past 5 years, China's production as a percentage of world production has declined from 80% to 62%. This situation is forecast to continue as a result of increasing wages, more stringent environmental considerations, higher energy prices and the increasing demand for the larger size fractions of graphite which China does not to produce in large quantity. To overcome these problems, China has resorted to importing large quantities of graphite, predominantly from Mozambique. BHC sees this position continuing for some time as Chinese production continues to decline and the western world seeks to reposition its supply chains away from China.

Future Supply is Uncertain

The graphite market is estimated to be in a net deficit position of 600,000t by 2025, and as no major graphite producer (described as 100,000tpa plus of production) is forecast to come online within the next 5 years, a shortage of course grade graphite is expected to develop. Whilst on the surface, Syrah's Balama mine could be expected to provide the bulk of the growth in the smaller size fractions, it would not address the shortage in large flake graphite supply. Moreover, Syrah's continued existence may be in doubt as it has never operated cashflow positively, and was operating at 60,000tpa, a fraction of its 350kt pa full capacity, prior its shutdown due to low demand and low prices. It is not widely appreciated that there is a major insurgency that has been developing for several years in northern Mozambique and southern Tanzania. This area is home to a number of potential smaller graphite producers and BHC sees this region as very high risk. Prudent graphite consumers are expected to diversify their requirements away from this area, suggesting Orom-Cross could become more attractive to industry players.

How Large Could It Become?

Blencowe plans to bring the Orom-Cross graphite deposit into production around 2024, when it is perceived there will be an emerging shortfall of flake graphite as forecast by Benchmark Minerals Intelligence. Initial production will be considered at a modest 25kt pa but the plan is to build a processing plant that is easily expandable so that production can be increased to match an expanding market. With no shortage of resources, this is seen as a prudent strategy which minimises short term capital expenditure, and with future expansions being funded from cashflow.

Company History

Blencowe Resources Plc was incorporated on 26 September 2017 and is a United Kingdom public listed company focussing on development of opportunities in the resources sector. Blencowe is domiciled in the United Kingdom and has a wholly owned subsidiary, Consolidated African Resources (Uganda) Limited (Consaf UG) which owns the Orom-Cross tenements and is domiciled in Kampala, Uganda.

Blencowe acquired 100% of the Orom-Cross Graphite Project in Uganda via the acquisition of Consaf UG in April 2020 for £2M, which was paid in shares and locked in for 12 months. This lock in ends in April 2021. Blencowe then raised £2M in new cash at 6p in March 2020 to develop the project.

The Orom-Cross Graphite Project

The Orom-Cross project is located in the north-east of Uganda. It comprises three granted Exploration Licences, one granted Mining Lease and one Retention Licence.

It is located approximately 6km east (in a straight line) of the town of Orom and 75km east of the town of Kitgum in northern Uganda.

The Project topography is mostly low relief with average elevations of around 1,100m asl. Within the applied tenement RL1025, the topography is quite hilly attaining a maximum elevation of 2,400m asl, however the mineralised graphitic units that Blencowe is targeting occur in the valleys, which occur at a lower elevation and are generally broad and flat lying.

The climate is generally tropical with maximum temperatures occurring between the months of April and May. The vegetation in the Project area is dominated by tropical savannah consisting of scattered trees and tall grasses.

Exhibit 1: The Location of the Orom Graphite Project

Source: Blencowe

Geology

The project is considered an Advanced Exploration stage project under VALMIN (2015) Code guidelines. To date, four main phases of exploration have been carried out:

- Phase 1 Mapping
- Phase 2 Diamond drilling
- Phase 3 Geophysical surveying; and
- Phase 4 Trenching.

The sample assay results from the Phase 1 exploration programme can be summarised as follows:

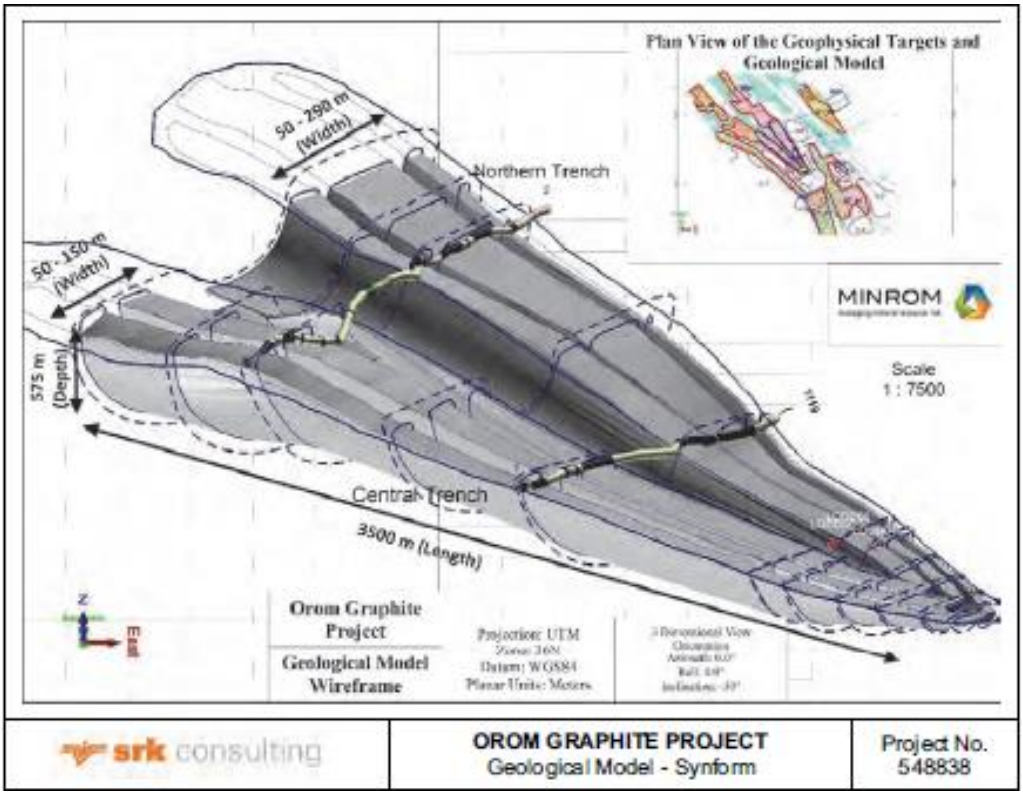
- 184 out of a total of 218 samples were analysed for a total graphitic carbon (TGC) content of > 5%
- 68% of those samples were above 7% TGC
- The highest grade was 15.9% TGC.

Six holes were drilled for Phase 2, with 56% of each hole being classified and subsequently sampled as a graphite-bearing unit. A visually uniform, good-quality graphitic concentration was found throughout the drill hole ore zone intersections. The graphite intersections were characterised into the following three groups: high grade, medium grade and low grade.

This was followed up by Phase 3 aeromagnetic and versatile time-domain electromagnetic (VTEM) geophysical surveys covering 1,078kms, and Phase 4 trenching of the anomalies. The VTEM anomalies and graphite mineralisation demonstrated a strong correlation. As a result, the high-level exploration potential assessment of the area identified three zones. Zones 1, 2 and 3 have a combined thickness of approximately 1,085 m and a strike length of approximately 55 km.

In total, 600m of diamond drilling and 4,200m of trenching have been completed historically.

Exhibit 2: Interpretation of the folded exploration target of the mineralisation



Source: Minrom Report on Orom Graphite Project

The dimensions of the Exploration Target have been modelled and used for the determination of the grade and tonnage ranges. The graphite mineralisation occurs as tabular shaped deposits.

The dimensions of the weathered and un-weathered graphite mineralisation are as follows:

- weathered zone of graphitic gneiss varies from 50 to 200 m width, has a strike length of 3,500m and extends to a depth of approximately 20 m below surface; and
- the un-weathered in-situ zone of graphitic gneiss varies from 50 to 200m width, has a strike length of 3,500m and extends to a maximum depth of 575m below surface.

This yielded the following exploration target as shown in exhibit 3

Exhibit 3: Exploration Target

Part of Deposit	Min. Mt	Min. TGC (%)	Min. GC (%)	Max. Mt	Max. TGC (%)	Max. GC (%)
Top 20 m	26	4.7	4.3	48	8.7	8.1
Below 20 m	675	4.6	4.2	1,254	8.5	7.8
TOTAL	701	4.6	4.3	1,302	8.5	7.8

Source: Minrom Report on Orom Graphite Project

Current Exploration Programme

The current exploration programme for 2020 includes a 1,800m drilling campaign comprising of 59 holes and was underway before being halted by the Covid-19 lockdown in Uganda. The aim of this programme is to prove up an 8-10Mt JORC compliant Indicated Resource on which to base a preliminary feasibility study. The size of the deposit required has been back calculated from the requirement to produce 25kt pa of final product which requires an ~800kt pa mine and processing plant.

This will be sufficient for the first 10 years of mine life and keeps both the exploration costs and likely capital expenditure to a minimum. This resource would represent under 1% of the overall deposit highlighting the capacity Blencowe retains to ramp up production at any time should market considerations warrant it. It is not an efficient use of the Company's funds to drill out more at this stage.

Drill rigs for the current campaign remain at site, ready to recommence immediately upon the relaxing of the Covid-19 induced lockdown measures.

Infrastructure

The project can be accessed from the south west via sealed road from Guloto to Kitgum and thereafter by 87km of gravel roads. The nearest large settlement to the Project is the village of Orom, located in Chua East Country.

The majority of Uganda's imports and exports come via from Mombasa port in Kenya, either by road or rail. A standard gauge rail line is in the process of being built from Mombasa to Uganda. At present, the line is currently approximately 50% complete but there is no known date for its completion. As Uganda is a land locked country, all imports and exports are transported via the existing road network. Significant trade occurs along the existing routes and there is an opportunity for Blencowe to utilise back loading of this road transport to deliver graphite to external markets at a reasonable commercial cost. These trucks bring products into Uganda, South Sudan and northern DRC and often return to Mombasa empty.

There is a 132kv electrical supply 120km from the proposed mine site and together with the sealing of the last 100km to the mine gate, Blencowe has asked the local ministers of parliament for government aid in addressing these two key infrastructure points.

Exhibit 4: The Existing Ugandan Narrow Gauge Railway

Source: BHC

Mining

Virtually no work has been conducted in terms of historical mining. However, since the bulk of the foreseen project's mineralisation is hosted in weathered surface material, it is highly likely that the material will be free digging for at least the first 20m. Furthermore, it outcrops and therefore mining in the early stages of the mine is expected to be straightforward with a low strip ratio.

Metallurgy

The first phase of flotation test work was conducted at SGS laboratory in South Africa and showed that flotation processing of the Orom material generated 95 percent graphite recovery into a rougher concentrate with a grade over 57 percent graphite. Cleaner flotation test work results indicated a product grade of 86 percent graphite at 89 percent recovery without regrind or depressant addition. The test work included rougher and cleaner flotation with a single stage of attrition regrinding ahead of recleaner flotation.

This first phase of test work also indicated that Orom graphite has predominantly jumbo and large flakes with low impurities and can upgrade via floatation to a TGC concentrate greater than 93 percent. Due to the limited amount of test work conducted to date, the graphite recovery is currently only 32%, however, it is likely that additional metallurgical test work commencing shortly will improve both the recovery and concentrate grade.

A second phase of flotation test work conducted at Metanza laboratory in South Africa in 2019 on a composite trench sample grading 5.6% TGC was aimed at generating a concentrate of 94% TGC and was successful. Although the TGC recovery was comparatively low at only 31.7%, this was due to the focus of the study being on TGC%, rather than recoveries. This test work involved crushing to 1mm and then attritioning the crushed sample followed by desliming at 38µm, then rougher flotation and 4 stages of cleaning. The company expects that the graphite mineralisation can be upgraded via floatation, with additional cleaner stages and regrind stages to a greater than 94% TGC concentrate. Mineralogical investigations suggest that a significant portion of the contained graphite is coarse. Flake analysis showed that 80 percent of graphite in three samples was in the +212 µm flake length class. This analysis also showed that the smaller flakes were better liberated from the gangue minerals than the larger flakes Blencowe will be required to undertake additional metallurgical test work and technical marketing to establish reasonable grounds for a saleable product.

During test work it was shown that the 4th cleaner flotation stage concentrate did contain material with a TGC% of 94.1% (collected between minutes 1-2), while the cumulative concentrate assay including that stage was 93.5%. This result shows that some concentrate from 4 stages of cleaning does have a grade of 94.1% TGC, however, it was recommended that further test work (additional cleaner stages and regrind stages) be performed to upgrade more of the concentrate to this grade.

The next phase of the metallurgical test work is targeting improved recoveries of up to 80% and a concentrate grade of 95-97% TGC with very low impurities, especially of vanadium and thorium. It will also target delivery of >50% of end product as Jumbo/X-L or Large flakes. This would deliver a very pure, high grade end product that would be in demand and sell for higher prices. This further test work is expected to be completed over the next few months.

As the plan is to start up on a relatively small scale, to meet market demand, the design of the plant will be such that it can quickly and easily be expanded to react to changes in market conditions that may increase demand.

Royalties and Taxes

The Ugandan Government, unlike many other African nations does not require a free carried interest in any mining development. The project will have to meet royalty payments of 5% of gross revenues and company taxation is 30%.

Use of Funds

Blencowe raised £2M of new cash in March 2020 to develop the Orom-Cross Project. The use of these funds for 2020 is shown in Exhibit 5

Exhibit 5: Use of funds

Use of Proceeds (2020)	£	% Funds
Drilling (JORC Indicated Resource) + Phase 2 met test work	700,000	35.00
Corporate:		
RTO creditors / CRA payment / Cap raising	350,000	17.50
Board & Management / Listing / Marketing / Admin costs	250,000	12.50
Tenement costs and compensation (mining license)	200,000	10.00
Scoping/Pre-Feasibility Study	500,000	25.00
Total *(Exercising of 4p-6p Warrants can deliver additional £0.63m)*	**2,000,000**	**100.00**

Source: Blencowe

Drilling & Phase 2 Test Work

Upon receipt of the funds in May 2020, Blencowe will immediately resume exploration and further metallurgical test work. This work is extremely important as it will provide the necessary information for the scoping study/pre-feasibility study. The company estimated that 30% of the planned exploration was completed before Uganda when into Covid-19 lockdown, a situation that is expected to end on the 5th May. If this date holds true, then exploration completion will be targeted for the end of May and a JORC compliant resource calculated by the end of August.

For the metallurgical test work, there is currently no laboratory availability at the moment. Much of this work is being conducted in South Africa and the country is currently in lockdown. Prior to work stopping the results were very positive. This test work is very important as until it is completed and the specifications of the final product ascertained, Blencowe will be unable to talk with any degree of certainty with potential off takers. Assuming South Africa also emerges from lockdown in the current quarter, then results on the metallurgical test work will be completed in Q3 2020.

Comparative Companies

In the BHC list of comparative companies we have selected companies that are in southern Africa, and are looking to develop open pit graphite resources, but they all have reserves, whereas Blencowe is still in the exploration stage. However, Africa is a vast continent and conditions between various countries vary considerably. Each of these companies intends to start production on a small scale and then ramp up production as demand increases. They are all relatively high grade and low-cost operations, with Blencowe, Armadale and Sovereign planning to work off grid power and are all free dig, which minimises mining costs. All have low strip ratios. Further compared to most gold companies, the capital expenditure required to bring these mines into production is relatively low, varying between US$20M and US$49M.

All four of the comparatives are targeting the jumbo/large flake sector of the graphite market, an area in the market in which China finds it hard to compete and is therefore having to import material in this category. Further, not only is the size distribution of the flake product a key to its value, the grade and levels of impurities are also important, as they can limit its use. Blencowe have commented that their graphite has very low levels of both thorium and vanadium which are key, and the fact that both NextSource and Walkabout have secured offtake agreements suggests that their products are clean as well.

Sovereign Metals

Sovereign Metals is an Australian listed pre-production and development company with its prime assets in Southern Africa. These are the recently discovered rutile deposits in central Malawi and its 2015 discovery of the Malingunde graphite deposit just 15km SW of Lilongwe, Malawi's capital city, thus it has access to infrastructure. It is 25km from operating rail, 20km from a major power sub-station and has plentiful fresh water sources nearby. Malingunde should have low mining costs as the deposit is free digging material with a low strip ratio. It is also expected to have low processing costs as it requires no primary crushing and no grinding circuit resulting in significant capital and operating cost advantages. Its pre-feasibility study, delivered in 2018 showed that with operating costs forecast to be approximately US$323 per tonne of concentrate it would be at the very bottom of the graphite supply cost curve along with Blencowe. Total capital was estimated to be US$49M to deliver 52,000t of graphite concentrate annually over an initial mine life of 16 years.

The maiden resource estimate was 65.1Mt grading 7.1% TGC at a 4% TGC cut-off. The combined concentrate grade across all flake size fractions is projected to be 98.6% TGC with ~71% of the product in the +149 micron size fraction, or medium, large and jumbo flakes.

Walkabout Resources

Walkabout Resources Limited is an African focused energy minerals developer, based in Western Australia and listed on the ASX. The Companies' flagship project is the Lindi Jumbo Graphite Project located in south east Tanzania. Walkabout has taken the project from discovery in October 2015 to the completion of a highly robust Definitive Feasibility Study ("DFS") within 16 months and has been granted a mining lease over the deposit.

The DFS was completed in February 2017, updated in August 2017 in response to changing Tanzanian Government Legislation, and again in March 2019 incorporating the updated 2018 Resource and Reserve. The DFS confirms the project to be technically sound with excellent economic returns even at potential domestic softening price regimes for premium graphite flake material. Payback period for the project is less than two years. The DFS was based on an annual production of 40,000 tonnes of graphite concentrate with a high grade feed to the plant at an average of 230,000 tonnes per annum of the Life-Of-Mine (LOM) of 24 years. The project has ore reserves of 5.5Mt grading 17.9% TGC and containing 987,000t of TGC. The resource figure, published in 2018 is 41.8Mt grading 10.8% TGC.

One of the attractive parts of the Lindi project is that approximately 50% of the graphite produced will be in the jumbo and super jumbo size ranges, categorised as being larger than +300µm or 35 mesh, and it has an expansion ratio of up to 590 m3/g, approximately twice the average expansion ratio of China sourced graphite.

NextSource Materials

Nextsource is a Canadian based resource company based in Toronto, Canada that is developing its 100% owned feasibility stage Molo graphite project in south-western Madagascar. The Molo is at feasibility-stage and is a fully permitted flake graphite project that ranks as one of the largest-known and highest quality deposits in the world. Molo hosts a National Instrument 43-101 compliant total combined graphite resource of 141.28 Mt at 6.13% total graphitic carbon (TGC), with a contained ore reserve of 22.44 Mt at 7.02% TGC. Interestingly, this deposit is not all free digging.

A new Feasibility Study completed September 2019 reconfirmed that the Molo Project has one of the lowest mine capital costs and a lowest-quartile future producer due to its low-cost, open pit operation that has a negligible stripping ratio. The 2019 Feasibility Study was undertaken to reflect NextSource Materials' phased approach to production, using a full-modular mine build approach.

Phase 1 will consist of a processing plant with a feed rate of 240,000 tonnes per annum and a production rate of 17,000 tonnes of flake graphite concentrate for the first two years of operation at purities up to 98%C per annum with simple flotation. This production level will rank the Molo Project among one of the top five largest producers of large flake graphite globally. It is anticipated that the project will have a nine month build time, cost US$21M and is due on-stream in 2021.

Phase 2 incorporates the expansion of production to 720,000 tpa of processed ore in the third year to accommodate additional sales, resulting in a total of 45,000 tpa of flake graphite concentrate being produced for a mine life of 30 years and costing an additional US$49M. 46.4% of production is expected to be in the large flake size or above with carbon grade of 97%.

Armadale Capital

Armadale Capital is an AIM-listed diversified investment company focused on natural resource projects in Africa. Its current focus is on advancing its 100% owned Mahenge Liandu Graphite Project in Tanzania to production. It is one of the largest high-grade graphite projects in Tanzania and has proven potential as a commercially viable deposit. The deposit is only 5km away from grid electricity and 80km by sealed road to the central rail hub at Ifakara with direct rail access to Dar es Salaam 320km away.

It is a near surface high grade deposit with a total resource of 59.5Mt grading 9.8% TGC with a 3.5% TGC cut-off grade. It has high purity and excellent flake size distribution, with up to 97.1% purity for large and medium flake fractions. Its forecast cash costs are US$385/t placing it in the lowest quartile of cash costs being driven by a high mined grade of 12.5% TGC and a low life of mine strip ratio of 1:1.

A definitive feasibility study was completed in March 2020 showing a capital expenditure of US$38.6M was required for stage 1, and the stage 2 expansion is expected to be funded from internal cashflow and be completed in year 5 of operations. Stage 1 calls for a mill throughput of between 0.4 and 0.5Mt pa to produce a nominal 60kt pa of graphite for the first 4 years of production. Armadale plans to apply for a Mining Licence in the second quarter of 2020.

	Blencowe	Sovereign Metals	Walkabout Resources	Nextsource Materials	Armadale Capital
Project	Orom	Malingunde	Lindi	Molo	Mahenge Liandu
Country	Uganda	Malawi	Tanzania	Madagascar	Tanzania
Ticker		SVM ASX	WKT ASX	NEXT TSX	ACP AIM
Market Cap (US$M)	7.4 [1)]	30.4	36.1	14.6	10.8
Cash (US$M)	2.5	1.1	3.3	0.6	0.1
EV (US$M)	4.9	29.2	33.4	14.0	11.6
Stage	Exploration	PFS	DFS	FS	DFS
Resources					
Measured (Mt / %)		4.8Mt / 8.5%	6.5Mt / 12.1%	23.62Mt / 6.32%	11.5Mt / 10.5
Indicated (Mt / %)		32.3Mt / 7.2%	8.4Mt / 10.5%	76.75Mt / 6.25%	32Mt / 9.6
Inferred (Mt / %)		27.9Mt / 7.0%	26.9Mt / 10.5%	40.91Mt / 5.78%	15.9Mt / 9.8
Cut-Off (%)		4%	5%	2%	3.5%
Reserves					
Proven (Mt / %)		3.1Mt / 9.5%	2.54Mt / 19.3%	14.17Mt / 7.00%	
Probable (Mt / %)		6.4Mt / 9.5%	2.97Mt / 16.7%	8.37Mt / 6.25%	
Total (Mt / %)		9.5Mt / 9.5%	5.5Mt / 17.9%	22.44Mt / 7.02%	
Flake Sizing Distribution Summary					
Large Flake %		50%	74%	46%	
Fine Flake %		50%	26%	54%	
Strip Ratio		1:1	4.4:1	0.53:1	1.1:1
Mine Life		16 years	24 years	30 years	17 years
Operation Costs		US$323 /t concentrate	US$347 /t concentrate	US$566 /t concentrate [2)]	US$385 /t concentrate
Capex		US$49M	US$27.8M	US$21M [2)]	US$38.6 [3)]
Off-take Agreement			Binding off-take TS for a minimum of 20kt pa; sales and marketing agreement for 10kt pa	17kt pa off-takes with Japanese and European companies	MOU Signed for 35kt pa
Production		52kt pa	40kt pa	17kt pa [2)]	60kt pa [3)]
Notes	[1)] based on placing price of 6p			[2)] Phase I only	[3)] Stage 1

Investment Risks

Mining & Metallurgy

Currently the key risk to success at The Orom-Cross graphite project rests with the metallurgical test work. The target is improved recoveries and to demonstrate that a coarse flake graphite grading around 95% to 97% TGC can be produced. Mining would seem to be simple and low cost.

Geology

At the moment there is no JORC compliant resource, a fact that the current Covid-19 stalled drilling programme is addressing. Whilst Orom-Cross is potentially a multi-billion tonne orebody, the plan is only to drill out a small proportion of it, circa 8-10Mt, sufficient for an initial 10-year mine life.

Country

Uganda is a stable mining friendly country that does not require a free carried interest as do many other African countries and has no black empowerment requirements. Its royalty and taxation regime is very comparable to many other countries and quite similar to Australia.

Financial

At the time of writing, financial markets are hesitant. It is also challenging for small companies to raise finance for new projects. However, whilst this remains a risk, better conditions may be prevailing later this year. If the scoping study/ preliminary feasibility study shows the project to be a potentially robust producer of high grade coarse flake graphite, then there is also a good chance to open the door with respect to offtake financing. The Company has recently closed on a £2M fundraising and is funded through to 2021.

Graphite Price

Graphite prices are subject to fluctuation in world markets and are dependent on such factors as and demand, global economic trends and geo-political stability. By starting small, Blencowe plans to partially fill the shortage in supply that is expected to develop from 2024 and not disrupt the market. Moreover, given the majority of Blencowe's expected product is at the larger flake size end of the spectrum, when coupled with the anticipated low production cost, there should still be a significant margin. This in turn should enable Blencowe to absorb any softening in the graphite pricing, whilst still remaining profitable.

The Graphite Market

Graphite

Graphite is an allotrope of carbon. Graphite, meaning "writing stone", was named by Abraham Gottlob Werner in 1789 from the Ancient Greek γράφω (graphō), "to draw/write", for its use in pencils, where it is known as lead (not to be confused with the metallic element lead).

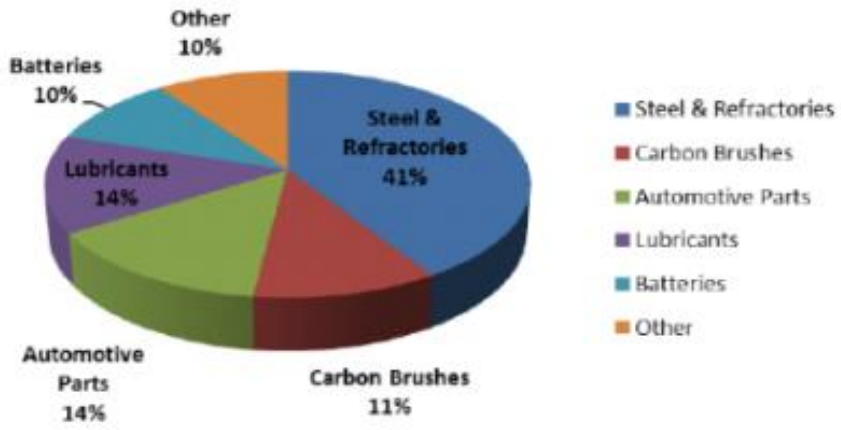
Graphite is the most stable form of carbon under standard conditions. Graphite occurs in metamorphic rocks as a result of the reduction of sedimentary carbon compounds during metamorphism. It also occurs in igneous rocks and in meteorites. Minerals associated with graphite include quartz, calcite, micas and tourmaline. In meteorites it occurs with troilite and silicate minerals. Small graphitic crystals in meteoritic iron are called cliftonite.

Graphite has a layered, planar structure. In each layer, the carbon atoms are arranged in a honeycomb lattice with separation of 0.142 nm, and the distance between planes is 0.335 nm. The two known forms of graphite, alpha (hexagonal) and beta (rhombohedral), have very similar physical properties, except that the graphene layers stack slightly differently. The alpha form can be converted to the beta form through mechanical treatment and the beta form reverts to the alpha form when it is heated above 1300°C.

1) Graphite is one of the most stable forms of carbon. Its four main properties are:
2) It is an excellent electrical conductor
3) It forms extremely strong cohesive bonds
4) It is heat resistant to 3,000 ^{0}C
5) It is resistant to solvents, dilute acids and fused alkalis.

These widespread properties have seen demand increasing rapidly, with the major uses being refractories, batteries, steelmaking, expanded graphite, brake linings, foundry facings and lubricants.

Exhibit 6: Common uses for Graphite



Source: Mackie Research Capital 2011

Today 95 % of the EU's graphite is imported from China who currently account for almost two thirds of world graphite production. This is only one of the reasons why the EU raw materials initiative identified graphite as a critical high tech raw material. China's raw material export restrictions and a graphite industry that experienced high growth rates with the lithium battery industry and electromobility being the main drivers, have fostered the development of numerous graphite projects outside China.

Graphite consists of a stack of individual carbon layers in which the carbon atoms are arranged in a honeycomb structure, individual layers being weakly held together. This structure results in very good heat and electrical conductance within the layers, flexibility, high resistance to chemical attack, and its highly refractory characteristic.

These unique properties make natural graphite the material of choice for a wide variety of applications including steel manufacturing, refractories, lubricants, automotive parts, carbon brushes, batteries and a variety of other applications.

Besides these rather traditional uses there is a wealth of emerging applications including graphite making up to 50% of the weight of most lithium ion batteries, fuel cells, pebble bed nuclear reactors, ceramic armour tiles and a variety of special applications of graphene in the high-tech industry which will lead to a greatly increased demand.

Graphite is traded in amorphous (70-85% C), flake (85-90% C), vein (90-96% C) and synthetic (97-99% C) grade. Prices achieved for the grades are dependent on carbon content, flake size, ash levels, impurity levels and impurity types.

Flake or vein graphite can be processed to the high value expandable graphite or spherical graphite qualities which are obtained by a sequence of processing steps ending up with a high purity product. Flake graphite is playing a key role in the green energy revolution since electromobility and energy storage solutions rely on spherical graphite as anode material in Lithium ("Li")-ion battery which offers higher power densities, being lighter and more compact than conventional batteries. Graphite makes up the bulk of Li ion batteries in weight and is more than 10 times the weight of lithium. Amorphous graphite is used in applications such as brake linings, refractories and steelmaking.

Graphene, a material consisting of just one single carbon layer, is of considerable interest as it holds tremendous potential for many emerging and highly advanced technical applications. This is because it combines the favourable physical properties of graphite such as superior strength and flexibility with extremely good heat and electrical conducting properties which make it a superior material.

Synthetic and Natural Graphite

There are two separate forms of graphite, synthetic graphite and natural graphite.

Synthetic graphite is manufactured from petroleum coke. This is a long, expensive and energy intensive process. It has different physical properties from natural graphite and the two types of graphite only compete in very small, speciality niches which does not include lithium ion batteries. The total market for synthetic graphite is approximately US$12B, with three major components. These are carbon electrodes for electric arc furnaces, US$5.5B, carbon fibre including composite materials, US$4B and shapes and others US$2.5B.

The natural graphite market in 2016 was 2.45Mt pa, split between amorphous graphite with a demand of 1.8t and flake graphite with demand of 650kt pa. There is also a small market for vein graphite of around 10kt pa. This hides a growing divergence in the markets between flake and amorphous graphite. The global graphite market was valued at US$13.0B in 2015 and was expected to reach US$18.8B by 2022, supported by a CAGR of 5.4% although this is likely to be revised downwards soon. Looking further out, over the period 2025 to 2035, the CAGR is expected to be in excess of 13%

There is a posted price for graphite which provides a guideline with respect to longer term trends but transactions are largely based on direct negotiations between the buyer and seller. Graphite prices are also a function of flake size and purity with large flake (+80 mesh) and >94% carbon varieties commanding premium pricing. Prices exceeded US$1,300/t in the late 80's but crashed to US$600-750/t in the 90's as Chinese producer's dumped product on the market. During this period there was essentially no exploration and no significant new mines were built outside of China for over 20 years. This ended around 2016, when Syrah's Balama mine started construction in Mozambique.

Graphite prices did not start to recover until 2005 and surpassed US$1,300/t average with premium product selling at up to $3,000/t in 2012 as the supply of large flake, high carbon graphite was tight in early 2012. Price appreciation was largely a function of the commodity super cycle and the industrialization of emerging economies as new, high growth applications such as Li ion batteries began to have an impact on demand and consumption. Graphite prices have since declined to below $1,300/t dependent on TGC and flake/mesh size for large flake graphite due to the slowdown in China and the lack of growth in the global economy generally.

Three types of natural graphite

Graphite Type	Description
Natural flake	Typically found as discrete flakes ranging in size from 50-800 micrometers in diameter and 1-150 micrometers thick. Normally sold by grade and flake size.
Natural amorphous graphite	Most abundant form of graphite, occurring in veins. Typically higher in ash than other forms of natural graphite, since it is deposited contemporaneously with other mineral matter that flows into swamps, bogs, deltas, and other "coal producing" environments. Therefore requires extensive processing for higher value applications.
Natural vein/crystalline graphite	Only produced in Sri Lanka. As mined material is available in sizes ranging from fine powder to 10cm lumps.
Synthetic graphite	Produced by a long, expensive and energy intensive process and is therefore very expensive, between US$10K and 20K/t. Global market is just over 1Mt pa

Vein

Vein graphite, also known as crystalline vein graphite, Sri Lankan graphite, or Ceylon graphite, is a naturally occurring form of pyrolitic carbon (solid carbon deposited from a fluid phase). Vein graphite has a morphology that ranges from flake-like for fine particles, needle or acicular for medium sized particles, and grains or lumps for very coarse particles. As the name implies, this form of graphite occurs as a vein material. Vein fillings range in size from 1-150 cm. "As mined" material is available in sizes ranging from fine powder to 10 cm lumps.

Vein graphite has the highest "degree of crystalline" perfection of all conventional graphite materials. As a result of its high degree of crystallinity, vein graphite is utilised extensively in "formed" graphite products that are used in electrical applications. Many of the highest quality electrical motor brushes and other current-carrying carbons are based on formulations using vein graphite.

In friction applications, vein graphite is used in advanced brake and clutch applications. Other applications include most of those that can utilise flake graphite.

Flake

Flake graphite is a naturally occurring form of graphite with graphite crystals present in the form of discrete flakes. Individual flakes can be easily recognized by naked eye with typical sizes ranging from fine (<150 µm or 100 mesh) to coarse (>150 µm). Typically graphite occurs as disseminated flakes in metamorphic rocks (e.g gneisses) displaying carbon grades ranging from 5 to 30 wt.-%. Such can be concentrated by physical processing and purified by advanced thermal technology and chemical purification techniques into high purity products +99.9 wt.-%. Specifically large flake sizes are sought after since they are needed for high purity, technology grade graphite applications such as the production of spherical graphite used in Li-ion batteries. Graphite flakes are made up of parallel sheets of carbon atoms in a hexagonal arrangement. It is possible to insert other chemical species between the sheets, a process termed intercalation, thereby modifying its structure and tuning its physical and chemical properties. Graphite can be intercalated with sulphuric and nitric acids which will serve as a feed material for production of expanded graphite from which foils are formed that are used in seals, gaskets, and fuel cells.

Large flake grades made approximately 20% of total flake graphite output (of 650,000 tonnes) in 2016, and with competition for this quality of product from other traditional markets (i.e. the refractories sector), new projects are likely to be required to meet the battery market demand.

Flake graphite deposits are generally found at or near surface and are therefore amenable to open-pit mining. There are significant flake graphite deposits in China, India, Brazil, Germany, Canada, Mozambique and North Korea with recent production dominated by China (60%) and Brazil (23%).

It is normally sold in three different sizes, -100mesh (-150 microns), +100 mesh (150 microns) and +50 mesh (300 microns). Buyers tend to prefer high-grade, large-flake graphite for their products, with the coarser material being better suited to being feedstock for lithium-ion batteries. It is more critical to refractory applications for the steel industry and hence the battery industry is currently skewed towards the cheaper smaller flake sizes as its feedstock.

Amorphous

Amorphous graphite is a term used for microcrystalline graphite occurring in masses that consist of individual very fine graphite crystals at the µm-scale that cannot be resolved by naked eye or optical microscopy. It is the most abundant form of graphite. It is typically formed from anthracite, i.e. thermally metamorphosed coal seams during a metamorphic event, i.e. the action of temperature or pressure due to intrusion of a magmatic body or a tectonic event. Amorphous graphite deposits typically show total graphitic carbon contents (TGC) ranging from 20 to 40 wt.-%, while amorphous graphite products will be in the range 70 to 85 wt.-%. Therefore, amorphous graphite is typically lower in purity than other natural graphite. This is due to an intimate contact between graphite micro crystals and the mineral impurity phases with which it is associated. This close graphite/impurities association makes flotation and other density and chemical based separation techniques inefficient if not impossible.

Due to its limited purity and flake size, amorphous graphite is mainly used in standard commodities (lubricants, brake linings, refractories, steelmaking where higher ash contents are acceptable) and is the lowest priced graphite. Major deposits of amorphous graphite are found in China and Mexico; there are also deposits in the United States and in Europe.

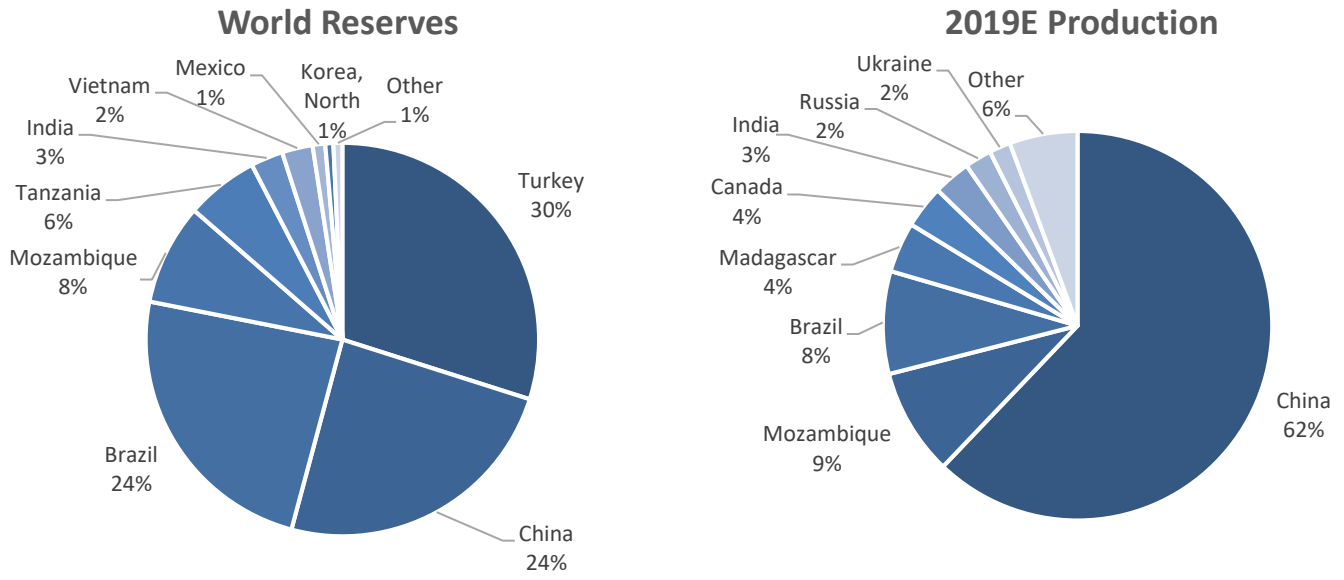
The term “amorphous graphite” is a contradiction in terms. All graphite is crystalline by definition, therefore it is impossible for graphite to be amorphous. However, the term was applied due to the anhedral (no visible crystallinity) morphology of this form of graphite. To the untrained eye a piece of amorphous graphite simply looks like a lump of anthracite coal. However, it is much denser than anthracite, 2.2g/cc vs. 1.7g/cc, and is soft and lubricious. Amorphous graphite is a seam mineral. It is formed by the metamorphism of previously existing anthracite coal seams. It is typically higher in ash than other forms of natural graphite, since it is deposited contemporaneously with other mineral matter that flows into swamps, bogs, deltas, and other “coal producing” environments.

Amorphous graphite is the least “graphitic” of the natural graphite types. It is extracted using conventional coal-type mining techniques. Most of the current supply of amorphous graphite available in the United States is imported from Mexico and China. Amorphous graphite is used in many lubricant products especially greases, forging lubricants, etc. In applications where higher ash contents are acceptable or preferred this type of graphite is a good choice.

Supply

China accounts for 62% of the world’s supply and 24% of the world graphite reserves according to the 2020 United States Geological Survey.

Exhibit 7: Graphite Production and Resources Distribution



Source: U.S. Geological Survey, Mineral Commodity Summaries, January 2020

China has dominated the natural graphite market for at least the past 20 years. Its production is mainly in the amorphous and flake graphite categories, whereas Canada and Brazil are predominantly flake graphite producers. However, China does not produce much Jumbo and X-Large flake graphite, it imports this specification.

Current Demand for Graphite

Most of the available articles on graphite were written pre the Covid-19 pandemic swept across the world, which is likely to have some negative impacts on demand for all non-food commodities. There are many questions associated with the flake market. To start, does the natural graphite industry even need a mine as large as Balama right now – which at full capacity (350 ktpa) would be larger than current global consumption of natural graphite in batteries? And is there a future for the other flake graphite projects looking to move into production in this environment – particularly given a seeming resurgence in interest in synthetic graphite? As it was, in 2019, China, the world's largest EV market contracted. According to the Chinese Automotive Manufacturers Association, EV sales reached 1.206 million last year, around 4% lower than in 2018 and 20% lower than China's target for the year. In the US, the reduction was equally noteworthy at around 10% y-o-y. A sluggish global automotive sector and changing subsidies were certainly contributing factors, nevertheless it's clear that EVs are not yet ready to stand on their own feet.

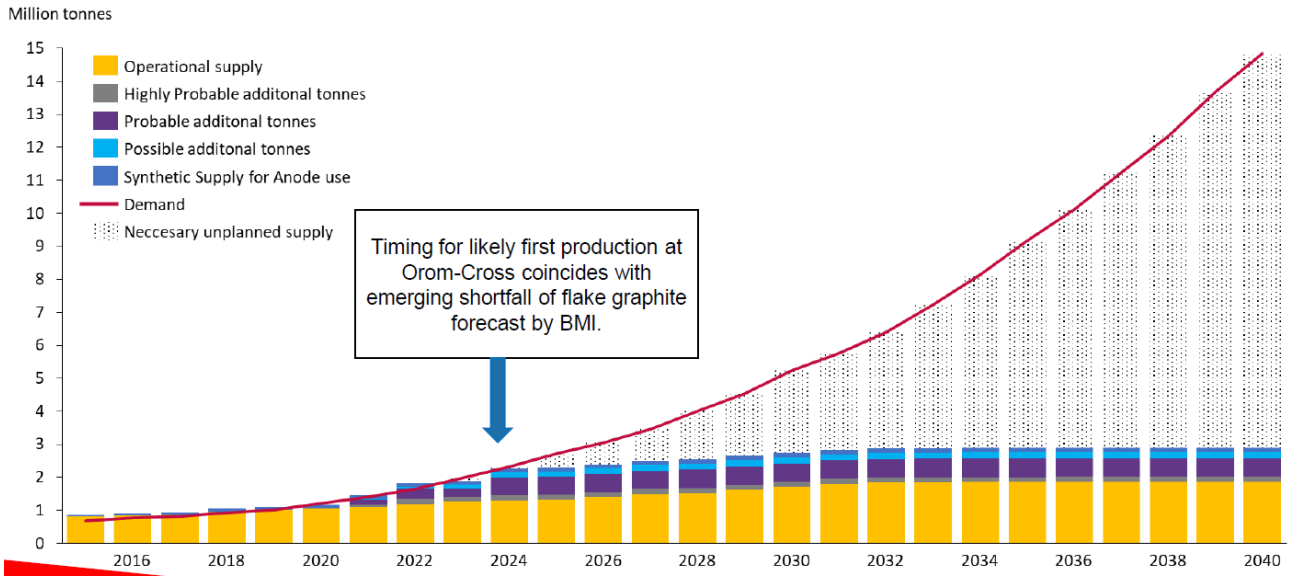
The steady ramp-up of production and exports from Syrah Resources' Balama mine in Mozambique in 2019 gradually overwhelmed the previously insulated Chinese flake market and eroded price levels as the year progressed. The extent of the oversupply eventually saw Syrah drastically cut its own output in the final quarter, and its guidance for 2020 was reduced to 60kt and the mine has now stopped production on a temporary basis from lateMarch 2020. As the largest single potential graphite mine in the world today, Syrah's production rates can and will influence the overall market

At the start of 2020, Chinese graphite production began to recover gradually through March and early April 2020 following COVID-19 closures in February. Chinese graphite producers initially extended their closures after the scheduled Chinese New Year shutdown to help prevent the spread of the new coronavirus but reports of operators reopening in the natural flake graphite hub of Qingdao, Shandong, began to be seen as early as late February. Recovery has been hampered to some extent by the voluntary self-isolation of staff and the increasing cost of domestic transport. As the effects of COVID-19 spread globally, focus has now shifted to the other major graphite supply chains in Brazil, India and Africa.

The Chinese natural graphite industry is no stranger to shutdowns, with annual environmental inspections and closures having plagued battery-grade producers since the mid-2010's. China is responsible for 100% of commercial-scale production of spherical graphite, which is the further upgrading of graphite for use in lithium-ion battery anodes, but traditional processing methods are environmentally challenging. As China improves its environmental credentials,

so the associated costs have risen. Coupled with an increase in other production costs, a decline in the country's economic reserves, orebodies getting deeper and a government drive to move the industry downstream, an increasing amount of raw material natural graphite is now sourced from imports, mainly from Africa.

Exhibit 8: Graphite Supply and Demand Forecast



Source: Benchmark Mineral Intelligence (July 2019)

China increased its imports of African natural graphite from 6kt in 2017 to 63kt in 2018 and 197kt in 2019, with a large amount coming from Mozambique, sourced largely from Syrah Resources' Balama mine. Syrah has highlighted a significant build-up of inventory in the Chinese market, which has impacted price negotiations and contract renewals. As a guide, prior to the end of 2017 China imported less than 1,000 tonnes annually, but by May 2019 this figure had grown to in excess of 22,000 tonnes monthly.

In the medium term, the demand prospects for graphite remain strong, with disruptive technologies like silicon or even lithium metal-based anodes unlikely to provide alternatives to graphite, and hence dampen growth in demand anytime soon. However, with this fledgling sector already overwhelmed with supply in specific areas of the market, 2020 looks likely to be another challenging year. With margins being squeezed, and an increasing focus on sustainability encouraging ex-China sourcing, many graphite miners selling smaller flake sizes, including Syrah, may continue to move up the value chain towards high-purity spherical graphite despite costly capex and possible environmental problems. Meantime the larger flake size market continues to operate with prices much higher and less product available and demand forecast to grow strongly, it is a much better space to be in.

There are currently 71 battery megafactories under construction world wide and 45 operating at multi-GWh scales. With the global market presently offering 165kt pa of anode material for existing battery manufacture, 1.8Mt pa is forecast to be needed by 2030 representing a huge jump in demand. Anode formation relies on synthetic and natural blending, however, the higher cost of synthetic and the difficulty scaling production will boost the significance of natural sources.

Europe is aggressively moving to establish its own lithium-ion battery (LIB) industry to reduce its reliance on currently importing all its LIB requirements from China. Despite the chasm separating European companies from the leading industry incumbents, there are strong grounds for European players to establish themselves in the sector. A global shift away from fossil fuels is leading to a boom in lithium-ion battery applications, ranging from electric vehicles to energy storage systems. The market is projected to have a value of €250B in Europe by 2025.

However, European firms face a challenging industry environment, with significant barriers. The landscape for lithium-ion battery manufacturing is dominated by Asian players, who account for 89 percent of global manufacturing capacity. In contrast, European firms hold a paltry 3 percent share.

Entering the space allows firms to prepare for the future LIB landscape as the auto manufacturers pan to align their EV auto production with their battery manufacturing partners. New entrants will naturally start as laggards, trailing the incumbents' access resources, scale, and competence in today's LIB technology. However, advanced LIBs are already under development to address the limitations of this generation. For example, solid-state batteries are expected to be commercialized in four to five years, with technologies like metal-air on the horizon. These require significant tacit knowledge and IP in battery design, chemical and thermal properties, interaction processes, cell manufacturing, automation, and assembly. If Europe is to become a player in commercializing the technologies of the future, the experience gained in catching up to today's LIB leaders is essential.

The current Covid-19 pandemic is sure to focus the attention of European battery users away from relying on China for its batteries and/or graphite which can only bode well for graphite producers in the long term. However, according to Roskill, up and until now, all commercial-scale production of spherical graphite has taken place in China, although there are numerous other projects underway in Africa, Australia, Canada and the USA, but Europe is not mentioned. Barriers to entry are high with producers looking to balance strong acid-consuming production methods amid heavy environmental regulations, with a competitive cost of production.

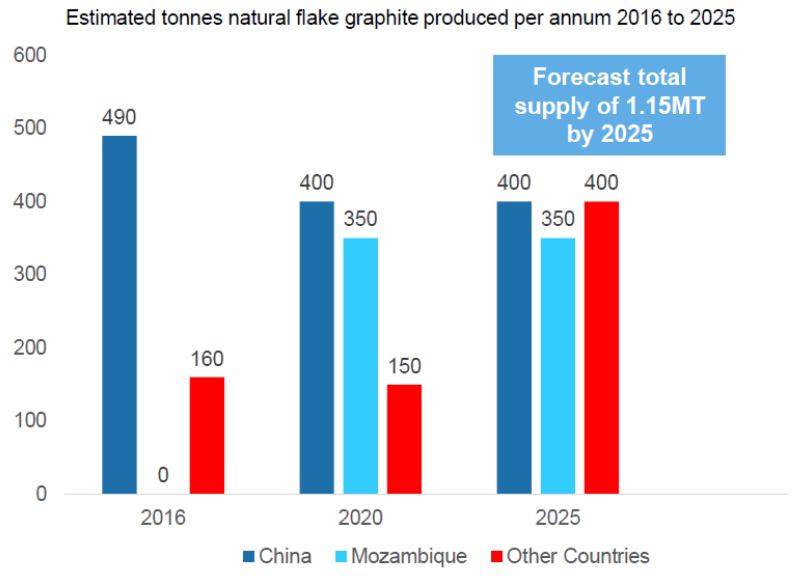
Potential Supply Issues

China's dominance of the world graphite market has been diminishing since 2013, when it produced 85% of the world's production. As Exhibit 7 illustrates, this is now down to 62%

According to a report released by London-based Benchmark Mineral Intelligence, China's share of global natural graphite output will fall by 15% in 2020 to levels not seen since the mid-1990s, when the country began exporting to international markets.

The current trade wars and the lack of clarity from China regarding Covid-19 and its impact on supply chains could possibly see the development of further graphite processing being moved out of China. Modern technologies can avoid most of the worst of the environmental risks associate with graphite processing and the western world is at last waking up to the risks of being very heavily dependent upon China. Aiding and abetting this trend are the simple facts that Chinese mining costs continue to rise with increasing labour, energy and environmental costs.

Exhibit 9: Graphite Supply and Demand Forecast



Source: Argus Graphite White Paper 2019

While Benchmark Mineral Intelligence expects the graphite market to be oversupplied in 2019 and into 2020, it then expects to see much larger volume requirements from anode consumers, helping to balance the market over the medium and longer terms. Furthermore, as battery expansions emerge elsewhere in the world it is going to become

increasingly important to create capacity at a raw material and advanced material level outside of China. This situation could be enhanced by closures based on environmental concerns in China and India.

One of the largest potential disruptions to supply is possibly occurring currently. A little-known and poorly understood conflict that is intensifying in Mozambique. The province of Cabo Delgado has become engulfed in escalating violence which commenced in 2017. This is important because Cabo Delgao is home to Syrah Resources' Balama mine and Triton Resources potential Ancuabe mine. Pemba is the port of embarkation for graphite from these sources and has been attacked by jihadist insurgents at least five times in the past 27 months. There are two problems, the poorly understood Islamist insurgency and the Mozambique government's heavy-handed security forces. In late March 2020 the insurgents took over the towns of Mocimboa da Praia and Quissanga, just 100km north of Pemba before retreating. BHC expects a strong government reaction to these insurgencies as they could have a serious impact on the gas fields in the Rovuma basin, the largest-ever energy project in Africa. If this situation is allowed to continue it could lead to significant production problems at Balama which would disrupt the flow of flake graphite to world the market.

As Exhibit 9 shows, if the Mozambique graphite production is unavailable in 2025, there will be a huge hole in the supply side of the equation for other miners to fill. This coincides with forecast rapidly rising demand for graphite to fulfil Li-ion/EV growth, and also with Blencowe's initial production.

Graphite Pricing

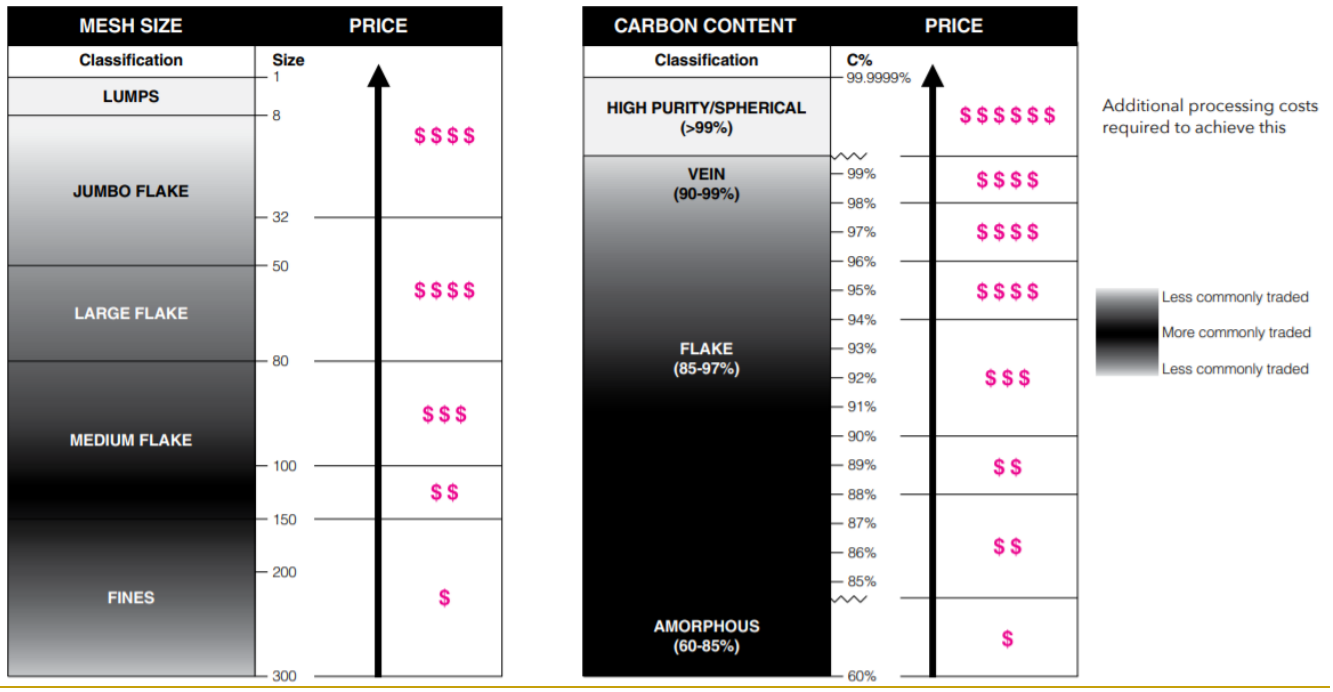
The key to graphite pricing lies in understanding the demand. Currently ~65% of graphite demand is tied to the traditional steel market, with a further 20% being associated with batteries and 10% with graphite foils. This title covers a multitude of uses including:

- Fire resistant material
- Heat sinks and thermal management
- Gaskets and sealants.

Going forward, the usage profile will change with batteries experiencing the largest growth rate and this is expected to be the number one use of graphite by the end of the decade. This is in large part due to the fact that graphite is the largest raw material in a lithium-ion battery. However, graphite foils are experiencing their fastest ever growth rate and more importantly, are made exclusively from jumbo flakes, or plus 50 mesh graphite.

There are two key elements to graphite pricing. These are flake size and purity. The larger the flake and the purer it is, so the price increases.

Exhibit 10: Two factors at play: Flake Size and Flake Purity

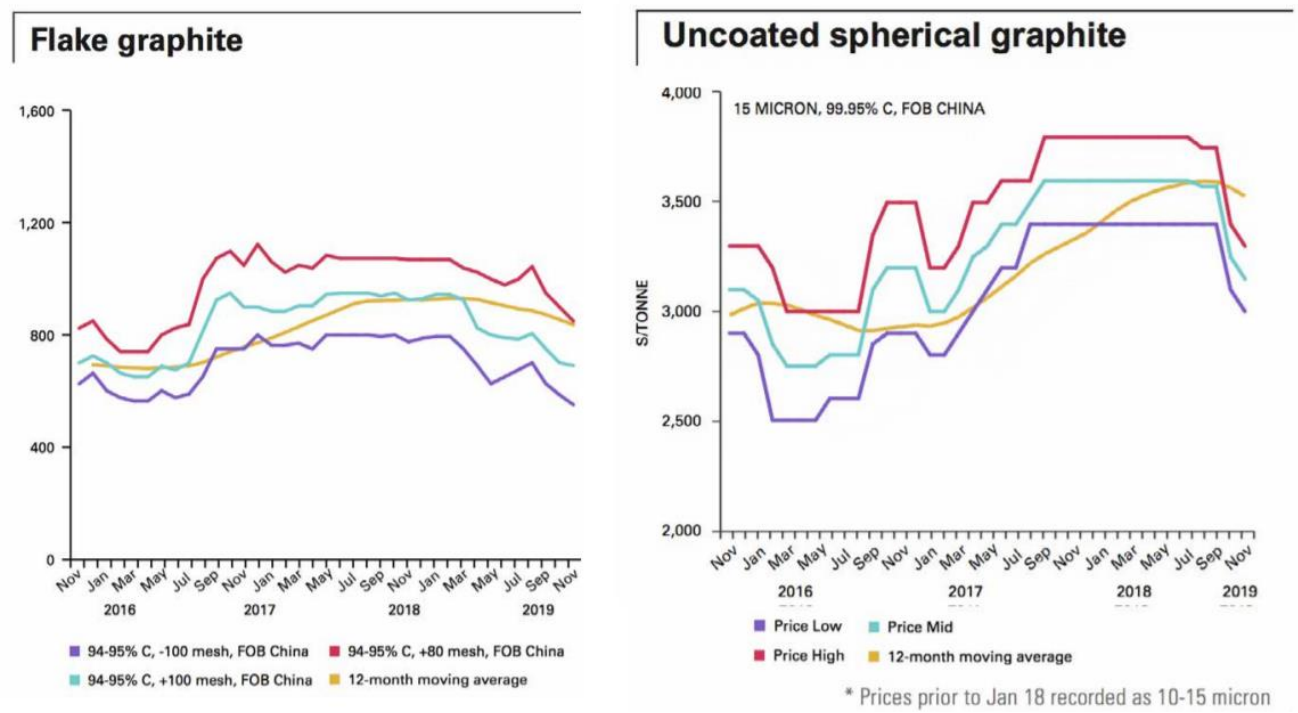


Source: Industrial Minerals

As recently as 2019, many bullish experts were predicting that graphite prices would escalate steadily into the 2020's in response to strong demand for both EVs and the production of fire-retardant building cladding. However, the reality for graphite prices, as well as other battery minerals, has been quite different. Instead, there are now concerns about oversupply.

After peaking in 2012, graphite prices experienced a long, slow decline due to a combination of a slowdown in the Chinese economy and a lack of growth in western economies. During the second half of 2017, prices showed some life and increased by between 30 to 40 percent due to an improving steel industry, environmental-related production problems in China, and continued strong demand growth from the lithium-ion battery industry.

Exhibit 11: Graphite Prices



Source: Benchmark Minerals Intelligence

Since then, however, prices have retreated, influenced to a significant degree by the commissioning of the new, large-scale Balama mine of Syrah Resources in Mozambique. Incremental production from this mine could be described as having been 'too much, too soon' with respect to the emerging EV market. Despite its star billing, the production reality has been something quite different. Balama has been in operation for just two years but has been cashflow-negative since its commissioning, operating at around 30% of its of designed name-plate of 350,000tpa capacity and this was prior to the advised 2019 reduction in production to 60Kt pa and now its temporary closure to Covid-19.

The depreciating Chinese yuan against the US dollar as a result of trade war tensions also hasn't helped, as it has applied downward pressure on US-denominated pricing negotiations with Chinese customers. The net result has been a slide in the weighted average price for small fines natural flake graphite, from US457/t in June 2019 to around to US400/t currently. Whilst larger flake price have also reduced over this period they have not been affected as much due to supply constraints and continued growth in demand.

The key factor to consider here is that the graphite industry is still evolving in terms of new-age applications like high-end batteries, and complexities within the industry in terms of battery end-users and their unique product specifications. Graphite producers need to ensure that they have a market for their specific product before progressing down the project construction route.

To help achieve this, it is not necessarily about size and more about scalability, profitability, and being able to meet customer expectations. It's also about being able to weather price downturns and make money throughout the cycle. To really be successful in the graphite market the miners need to structure their operations to be scalable and develop close relationships with their specific end-users.

Conclusion

There's no doubt that investors with a short-term investment horizon have steered clear of graphite for the time being. The changing fortunes of Syrah Resources have, to a significant degree, impacted both investor interest and market sentiment. However Syrah's potential demise will impact supply and may strengthen demand for other producers elsewhere.

Looking ahead, there is potential for the market to face a modest supply deficit in 2021 of both synthetic and natural flake graphite, which could grow over the ensuing years. With ongoing constraints to supply combined with rapidly rising demand, price action in the graphite industry will depend on the ability of new supply (increasingly from outside of China), to meet the market's needs.

When taking the impact of Covid-19 into account, there are two clear issues that stand out:

- With the significant reduction in the number of vehicles using the roads whilst many countries are in virtual lock down, the pollution levels have declined astronomically
- The business press has run many articles on supply chains and the disruption Covid-19 has caused and many have suggested that the wholesale transfer of the manufacturing base to China, has actually not been in the best interests of the western world.

This may well work out to the western world's advantage with a much stronger government led push towards electric vehicles, or at least many more hybrids accompanied by more graphite processing and battery factories in Europe versus importing everything from China. However, with no large scale graphite projects (>100kt pa) due to come online in the next four years, especially producing the jumbo and large flake products, any disruption in Mozambique/Tanzania has the potential to wreak havoc with the large particle graphite market.

Appendix A – Directors & Senior Management

Cameron Pearce — Executive Chairman

Mr Pearce is a Chartered Accountant with extensive professional experience in the finance sector in Australia and the UK. His particular focus and experience is in the setup, listing and development stage of public companies, specifically in the junior resources market, and he has been instrumental in raising capital for various listed companies over the past decade. Mr. Pearce has had previous experience managing the transitionary stage of several UK-listed companies, including most recently Emmerson Plc.

Mike Ralston — CEO

Mr. Ralston is a Chartered Accountant with 25 years' experience successfully developing businesses worldwide, including in Africa. He has been a senior executive and board member for several junior listed resource companies over the past 15 years and he has raised ~A$300M in debt and equity over that period. He brings a wealth of corporate and management experience and he has been involved in developing at least three mining companies from start-up through to production. Mr. Ralston was previously MD Balamara Resources Ltd(2011-2017), which developed two large scale coal project in Poland, and before that CFO Kangaroo Resources Ltd, which developed several coal projects in Indonesia in to production, before trade sale to a major Indonesian coal producer for~A$600M in 2010. Mr. Ralston is the founder and Non-Executive Chairman of ASX-listed Trigg Mining Limited.

Alex Passmore — Non-Executive Director

Mr. Passmore is a geologist with significant technical experience developing early stage mining projects worldwide. He has been involved in a number of junior resource companies, working in both technical and corporate positions. He brings a range of knowledge in the battery metals sector having been a Director of Cobalt One Ltd, which merged with First Cobalt in 2017 to form the largest Canadian cobalt exploration company. Mr. Passmore is currently Managing Director of ASX-listed Rox Resources, a gold exploration company in Australia.

Sam Quinn — Non-Executive Director

Mr Quinn is an experienced corporate lawyer based in UK who focusses primarily on the setup and development of junior resource companies. He has been involved in several junior listed exploration companies in UK over the past decade, with emphasis on legal, administrative, corporate and strategic advice and capital raising. Mr Quinn is currently a Non-Executive director of Red Rock Resources Plc.

Senior Management

Ian Wearing — COO

Mr. Wearing is a Mining Engineer with 30 years' experience in the resource industry, including significant project experience in Africa. He has been involved in the technical lmanagement of African projects for several companies, including Resolute Mining and Barrick Gold, and he has managed studies for several major projects including the Kibali Gold Project for Moto Gold, the Syama Project in Mali, and Golden Pride in Tanzania.
Iain brings a wealth of technical expertise to the team. His knowledge in Study management, operations planning and costing, as well as operations management, will be critical to Orom moving forward as Blencowe moves towards first production.

Osca Van Antwerpen — Technical Advisor

Mr. Van Antwerpen is a geologist and a Member of the Geological Society of South Africa and a registered professional scientist at the South African Council of Natural Scientific Professions. He is the founder and Managing Director of Minrom Consulting (South Africa), which is a specialist service provider to resource companies working assets within the African continent.

Minrom has been the technical advisor to CRA on the Orom-Cross Project for the majority of the exploration work conducted there over the past five years and will continue in this role ahead. Mr. Van Antwerpen is a resource expert

within the African market and he has advised successful international mining companies such as BHP Billiton, Goldfields, Samancor, and DRA International.

Mr. Van Antwerpen will remain in a senior consulting position with Blencowe to ensure that the knowledge gained at Orom over the past five years is brought forward and utilised. He will be a key part of the planning and execution team going forward.

Appendix B – Country Overview

Population	42.7M (2019)
Capital	Kampala
Currency	Ugandan shilling
Languages	English, Swahili
Major religion	Christianity, Islam
Main exports	Coffee, fish & fish products, tea, cotton, flowers, horticultural products
GDP (2019)	US$30.76 billion
GDP per capita	US$823
GDP growth rate	6.3% (2019E)
Unemployment rate	6.00%
Major natural resources	Coffee, oil & gas,

Uganda is a landlocked country in East Africa. It is bordered to the east by Kenya, to the north by South Sudan, to the west by the Democratic Republic of the Congo, to the southwest by Rwanda, and to the south by Tanzania. Uganda is the world's second most populous landlocked African country after Ethiopia. The southern part of the country includes a substantial portion of Lake Victoria, shared with Kenya and Tanzania. Uganda is in the African Great Lakes region. Uganda also lies within the Nile basin, and has a varied but generally a modified equatorial climate. The country is located on the East African Plateau, lying mostly between latitudes 4°N and 2°S (a small area is north of 4°), and longitudes 29° and 35°E. It averages about 1,100 metres (3,609 ft) above sea level, sloping very steadily downwards to the Sudanese Plain to the north.

Beginning in 1894, the area was ruled as a Protectorate by the British, who established administrative law across the territory. Uganda gained full independence from Britain on 9 October 1962. The period since then has been marked by intermittent conflicts, most recently a lengthy civil war against the Lord's Resistance Army, which has caused tens of thousands of casualties and displaced more than a million people. This conflict is now over and there has been peace in Uganda for over a decade.

The official languages are Swahili and English. Luganda, a central language, is widely spoken across the country, and multiple other languages are also spoken including Runyoro, Runyankole Rukiga, Langi and many others.

The president of Uganda is Yoweri Museveni, who came to power in January 1986 after a protracted six-year guerrilla war. The President of Uganda is both head of state and head of government. The president appoints a vice-president and a prime minister to aid him in governing. The parliament is formed by the National Assembly, which has 332 members. 104 of these members are nominated by interest groups, including women and the army. The remaining members are elected for five-year terms during general elections.

Agricultural products supply a significant portion of Uganda's foreign exchange earnings, with coffee alone, of which Uganda is Africa's second largest producer after Ethiopia, accounting for about 17% of the country's exports in 2017 and earning the country US$545M. Exports of apparel, hides, skins, vanilla, vegetables, fruits, cut flowers, and fish are growing, while cotton, tea, and tobacco continue to be mainstays.

Uganda's predominant mineral occurrences are gold, tungsten, tin, beryl, and tantalite in the south; tungsten, clay, and granite between latitude zero and two degrees north; and gold, mica, copper, limestone, and iron in the north. . A number of mining companies are presently exploring for various minerals and metals in Uganda and the mining sector is expanding with the support of the Government. Mining is viewed as a very important source for foreign exchange ahead and progress in this area is deemed of ‘national importance.

The latest Economic Update available is for 2019, when the country had a population of 42.7M and a GDP of US$30.76B, giving GDP per head of population of US$2,566. At that time, the Public Debt as a percentage of GDP was 30.4% and the annual inflation rate was 3.2% and on a falling trend.

Uganda is one of the fastest-growing and youngest populations in the world, with climbing unemployment and growing frustration amongst educated youth. The President, Museveni has large scale support and is working to build the economy in key areas, including mining.

Peter Rose

Peter has 34 years' experience in equities as a resources analyst; he has been at Brandon Hill Capital, formerly Fox-Davies Capital for 13 years. Prior to that he spent 11 years with Deutsche Bank in Australia. Prior to this he spent 2 years with Prudential Bache and 6 years with James Capel. Peter's industry experience includes 16 years as a metallurgist, 3 years with De Beers in South Africa and 9 years in the uranium industry, 7 of which were spent at the Ranger Uranium mine. Peter holds a BSc degree in Applied Mineral Science from Leeds University UK and a Bachelor of Commerce from the University of South Africa. Peter is also a member of the Institute of Materials, Mining & Metallurgy and a chartered engineer.

+44 (0)203 463 5034
Peter.Rose@brandonhillcapital.com

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Blencowe Resources PLC	1, 2, 5,7

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Brandon Hill Contact List

International Sales

Oliver Stansfield
Tel: +44 20 3463 5061
Email: oliver.stansfield@brandonhillcapital.com

Research

Peter Rose
Tel: +44 20 3463 5034
Email: peter.rose@brandonhillcapital.com

Corporate Finance & Broking

Jonathan Evans
Tel: +44 20 3463 5016
Email: jonathan.evans@brandonhillcapital.com

Wei Jiao
Tel: +44 20 3463 5019
Email: Wei.Jiao@brandonhillcapital.com

Enzo Aliaj
Tel: +44 20 3463 5026
Email: enzo.aliaj@brandonhillcapital.com