

RNS Miscellaneous

Orom Cross PEA

BLENCOWE RESOURCES PLC

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Date: 29 September 2021 **Blencowe Resources Plc**
("Blencowe" or the "Company")

Orom-Cross PEA Shows Potential for Long Life, Highly Profitable Graphite Project

Results of internal Preliminary Economic Assessment ("PEA") demonstrate compelling case for the development of a major new graphite project, paving the way for a Pre-Feasibility Study.

Highlights

Low operating costs and robust financials for mining operation:

- Net Present Value (NPVs) of US\$317M / IRR 49% over 13-year life of mine from 2025.
- Average nameplate production of 75,000tpa graphite sold as concentrate, with ability to extend this after further drilling.
- Life of mine C1 operating cost of US\$498/t (CIF Mombasa port) which would make Orom-Cross one of the lower cost graphite projects worldwide.
- An initial capital cost of US\$80M, inclusive of 15% contingency.
- Orom-Cross will generate an average US\$40M pa in EBITDA over life of mine at a weighted average price of US\$1,050/t for the full basket of all end-products sold from 2025 onwards.
- Cumulative post-tax net cash flow of US\$351M generated over initial 13 years life of mine.
- 4-year payback on capital.

Next Steps:

- Work will now begin on Pre-Feasibility Study (PFS) using an independent consultant, including an upgraded JORC Standard Resource statement.
- Sales and marketing analysis to source potential off-take partners to commence immediately.

Attractive size and scale of deposit with high quality end-product:

- Estimated 2-3 billion tonnes flake graphite deposit at Orom-Cross, with 16.3Mt already drilled to JORC Resource standard, covering initial life of mine.
- High grade 97-98% TGC (Total Graphite Content) concentrate proven, with low impurities, high recoveries and strong mix of jumbo/large flakes within overall end-product.

Low risk operation:

- Shallow, free dig open pit mining operation with low strip ratio.
- Well established, proven plant design and process to deliver high grade concentrates.
- Key infrastructure (roads, electricity, water) all available at mine site.
- Stable jurisdiction to develop a long-term mining venture.
- 21 year mining licence granted in 2019

Cameron Pearce, Executive Chairman commented;

"We are pleased to announce the first full economic evaluation of the Orom-Cross graphite project based on prudent assumptions. The current internal PEA underpins our view that we have a robust Project that we will now advance to the next stage of development. We are confident that the Project economics can improve further, notably by extending the life of mine and/or increasing the levels of production.

The Project has several key attributes that underpin the decision to move forward with its development including the ability to upscale production volumes and/or extend the life of mine; high quality output via purity of end concentrates and a mix of different flakes sizes which delivers an excellent weighted average selling price for the entire basket; plus a low operating cost helped considerably by shallow free-dig mining and processing that does not require excessive crushing and grinding.

The Project will provide a range of high quality end-products that will be sold into what is generally forecast by most leading analysts as a rapidly growing demand for flake graphite ahead, particularly driven by electric vehicle expansion.

All of these factors combine to deliver a standout PEA result that we believe confirms Orom-Cross as one of the premium graphite projects available worldwide, delivered from one of the safest locations for a long-term mining venture in Africa.

We still have further work ahead to deliver Orom-Cross into first production but we are making considerable progress. The next step is the revised and upgraded JORC Standard Resource by end-2021 which will then underpin our Pre-Feasibility Study in 1H 2022, where we revisit all of these Project inputs within the model to build further layers of confidence everywhere."

Blencowe Resources (LSE:BRES) is pleased to announce the results of its Preliminary Economic Assessment (PEA) for the Orom-Cross graphite project located in Uganda. This PEA highlights the potential to deliver a long-life mining operation with strong financial returns.

The PEA indicates that Orom-Cross production is economic at forecast graphite prices and it supports Blencowe's view that the Project is one of the best undeveloped graphite projects worldwide.

The PEA was compiled and completed internally by Blencowe's management team using information and data largely provided by third party experts, including the JORC Standard Resource statement, metallurgical test studies, processing and plant design, operating costs (including logistics), product pricing and sales and marketing forecast information. This PEA is an internal document which has not been reviewed or approved by a third party technical firm as that will be done within the Pre-Feasibility Study, which is the next stage in the development of this Project.

Cautionary Statement:

The PEA is a preliminary assessment based on lower accuracy technical and economic assessments (25-35% range), undertaken internally by Blencowe management to consider the full mining operation and to determine the financial viability of the Project prior to the PFS. The PEA is insufficient to support the estimation of ore reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the PEA will be realised. Further work will be undertaken ahead to build the confidence in this model and provide additional reassurance in the outcomes.

The information in the PEA and this RNS that relates to metallurgical testwork and capital costing is based on information compiled and reviewed by Mr David Pass, who is a member of the Australian Institute of Mining and Metallurgy. Mr Pass is an employee of Battery Limits Pty Ltd. Mr Pass has sufficient experience relevant to the mineralogy and type of deposit under consideration and the typical beneficiation thereof to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). The information in the PEA and this RNS that relates to Mine Reserves, capital and operating costing is based on information compiled and reviewed by Mr Iain Wearing, who is a member of the Australian Institute of Mining and Metallurgy. Mr Wearing is an employee of Blencowe. Mr Wearing has sufficient experience relevant to the mineralogy and type of deposit under consideration and the typical operation thereof to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). Both Mr Wearing and Mr Pass consent to the inclusion in the PEA and this RNS of the matters based on the reviewed information in the form and context in which it appears.

This RNS includes statements that are, or may be deemed to be, "forward-looking statements". Such statements appear in a number of places and include statements regarding the intentions, beliefs or current expectations of the Company and the Board concerning, among other things, results of operations, financial condition, capital resources, prospects, capital appreciation of the shares of the Company. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. Forward-looking statements are not guarantees of future performances. The Company's actual performance, results of operations, financial condition, distributions to Shareholders and the development of its financing strategies may differ materially from the forward-looking statements.

Key Performance Indicators (KPIs)

The following KPI's illustrate the graphite mining operation considered at Orom-Cross:

KPI	Result	
Life of Mine (LOM)	Initial 13 years	Further years will be added following additional resource drilling
Average Annual Production	75,000tpa	End-product as concentrate, split into four separate mesh sizes for sales 65% sold into battery metals market
Recovery Rate (end-product)	90%	Composite product - per metallurgical test work
Capital Cost, including 15% contingency	US\$80M	Plant, all infrastructure, vehicles and camp
C1 Cash Operating Cost	US\$498/t	CIF Mombasa (end-products as concentrate)
Weighted Average Selling Price	US\$1,050/t	Using 2025 forecast pricing - overall for all four end-products as assumed sold
EBITDA	US\$40M pa	Average pre-tax earnings over life of mine
Cumulative Free Cash	US\$351M	Generated over first 13 years life of mine, after repayment of all debt
Net Present Value	US\$317M	Pre-tax (8%), inclusive of Government royalty
IRR	49%	Pre-tax (8%), inclusive of Government royalty
Payback period on capital invested	4 years	Assumes upfront capital raised as debt: equity Split 60% : 40% respectively

Orom-Cross Graphite Project

Orom-Cross is a substantial graphite project located in northern Uganda, 100%-owned by Blencowe Resources since April 2020, with a 21-year Mining License awarded in 2019.

Mining & Processing

The Preliminary Economic Assessment conducted by Blencowe management assumes an open pit, owner-operated mining operation using existing resources (Indicated and Inferred) as drilled to JORC Resource Standard, delivering 1.4Mtpa ore on average for processing through the plant. Strip ratio is 1: 1.1 which is low. Plant recoveries are considered at 90% based upon the composite material most likely to be fed into the plant, as derived from metallurgical test work conducted by graphite expert SGS in Toronto. Initial life of mine as contemplated within the PEA is just 13 years (18Mt total throughput into plant) but this will almost certainly be extended as Blencowe has only drilled a small percentage of the total graphite available, and further drilling in subsequent years will provide additional JORC Resources when considered necessary.

The plant will be located near to the first two major deposits of graphite to be mined and the flowsheet consists of a flash and rougher flotation stage followed by a primary cleaning circuit with a polishing mill followed by three stages of cleaner flotation. The intermediate concentrate is classified and then further upgraded in secondary cleaning circuits with stirred media mills followed by cleaner flotation.

The plant will feature separate circuits that ultimately deliver an average of 75,000tpa, made up from four separate end-products, being jumbo, large, medium and small flakes size concentrates.

The split of mesh sizes / respective tonnages within each of the four end-products is illustrated below:

	End Product (Flake size)	Mesh Size	Purity % TGC	% of End Product	Tonnes pa End Product
1	Super Jumbo/Jumbo	+32 +48	98.1% 98.0%	13.7%	10,275
2	X-Large/Large	+80	97.7%	22.5%	16,875
3	Medium	+100 +150	97.5% 97.0%	24.7%	18,525
4	Small	+200 +325 -325	96.9% 96.6% 95.7%	39.2%	29,400
	Total				75,000

Manpower and Management

Orom-Cross will be owner-operated and managed by a workforce comprising of both national and expatriate personnel. Wherever possible locals will be employed, but the quality and experience of senior executives will not be compromised as necessary to ensure that all objectives are delivered.

A work force of ~45 will be on-site at any one time, some of whom will be fly-in, fly-out from international locations.

Logistics

End-product as concentrate will be bagged at site and loaded into containers for bulk transport by road through Uganda and Kenya, to Mombasa port, and thereafter shipped to final destination(s). Orom-Cross benefits from substantial container freight entering landlocked Uganda and South Sudan by road transport that currently returns under-utilised (imports exceed exports) and as such Blencowe may receive more favourable terms on backfill transport to port.

It is possible that the standard gauge rail line currently under construction between Mombasa and Kampala (via Nairobi) will be completed by anticipated 2025 Orom-Cross start-up date, but the PEA has not considered this rail option; for now only road transport has been included. Presently this new rail line is around 60% completed.

When this rail option is completed it may potentially reduce logistical costs further, which are currently ~18% of the total operating cost for the end-product as delivered to port (CIF Mombasa).

Sales and Marketing

Sales and marketing are at a preliminary stage within Orom-Cross development as specific end-product specifications have only recently been formalised through metallurgical test studies. Blencowe has identified several experienced sales and marketing consultants worldwide and has engaged with each to identify the most likely channels to locate potential offtake partners. Once end users are identified the Company will engage with each to assess their interest in Orom-Cross offtake.

Product pricing has been evaluated using advice and reports generated by industry accepted graphite experts including Benchmark Minerals Intelligence (BMI) and UBS, taking into consideration potential premiums that may be achieved for higher grade concentrates that Orom-Cross can deliver and future pricing as forecast from 2025 onwards. Graphite pricing is largely opaque so forecast prices should be considered with some caution and Blencowe has chosen to adopt a conservative view on what prices may be achieved, to ensure reliability and credibility.

It is assumed for the PEA that 100% of the end-product that will produced at Orom-Cross will be sold, although there are no off-take agreements currently in place with Blencowe that can confirm this. As the majority of end-product sold from the Project will be in the category that is required for the battery metals market (for use within the anode inside lithium-ion batteries), and as most leading analysts forecast that demand will outstrip supply in this category by the 2025, the anticipated Orom-Cross start date, it is assumed within this PEA that all end-product produced will be sold.

Infrastructure

There are existing roads all the way from the Orom-Cross site through Uganda/Kenya to Mombasa port. The only section that is not currently a bituminised road is the final 90kms from Kitgum to Orom. Blencowe is currently in discussions with the relevant Ugandan Government departments to assist the Orom-Cross development by upgrading and bituminising this section of road. Currently hydro-generated electricity comes into Orom village approximately 4kms

from the proposed mine site so the Project will connect into the grid (with other redundancy power options as backup), and abundant fresh water is freely available in the area.

All key infrastructure is therefore either in place or readily available which makes a significant difference in cost savings to forecast capital expenditure to bring Orom-Cross into production.

Operating Estimate

Blencowe management has built the PEA model based on these above assumptions, with an expected life of mine operating cost (C1) of US\$498/t (CIF Mombasa port).

Ongoing capital required to maintain the Project has been included as well as a 5% royalty to Government of Uganda. A further amount has also been included for community welfare projects as Blencowe takes its ESG (environmental, social & governance) responsibilities seriously.

Operating Item	US\$ / tonne	% Total
Mining	103/t	20.7%
Processing	181/t	36.3%
Transport and logistics	92/t	18.5%
Corporate, admin & personnel (includes ESG)	65/t	13.1%
Sales commissions	10/t	2.0%
Royalties	47/t	9.4%
Total Cost (C1)	US\$498/t	100%

Capital Expenditure

The design and capital requirement for the plant has been derived from external technical firm Battery Limits / Mining Metals Technology Limited, a company with considerable graphite plant design experience. A suitable contingency has been applied to ensure adequate provision for a plant that can deliver ~1Mtpa throughput.

Further capital has been considered for all associated infrastructure required, including the following non-process infrastructure that will be constructed to support operations:

- Power sub-station and power distribution
- Raw water supply and water treatment
- Accommodation village
- Airstrip
- Offices, stores, and workshops
- Communications
- Bulk fuel storage
- Secondary roads (on-site)

A sustaining capital is included within the operating cost to ensure necessary maintenance and refurbishment of items where necessary. Capital costs are estimated to an accuracy of 25-35%.

A breakdown of the key capital cost items is shown below:

Capital Item	Cost (us\$ Millions)
Processing Plant/tailings	52
Site construction/EPCM	15
Vehicles & equipment	2
Camp & offices	5
Additional Resource Drilling	2
Mobilisation/demob & first fill	3
Community	1
TOTAL	US\$80M
Note: 15% Contingency included in all items shown above	

Project Economics

Financial analysis on Orom-Cross has been undertaken using a discount cash flow model with various sensitivities, and an 8% discount value has been used for this analysis which is consistent with current resource model forecasting and future anticipated rates pertaining to cost of capital.

It is assumed within the PEA that all upfront capital is raised from both equity and debt (35%: 65%).

A project Net Present Value of US\$317M highlights the considerable value within the initial 13-year Orom-Cross Project and the IRR of 49% illustrates the attractive return on capital invested. Payback on all capital employed is four years which is exceptional as the Orom-Cross Project is ultimately expected to run for a considerable period beyond this initial 13-year life of mine as considered.

US\$40M pa EBITDA is returned on average over life of mine, with overall cumulative free cash of US\$351M returned over the Project life of mine.

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Background

Orom-Cross is a potential world class graphite project both by size and end-product quality, with a high component of more valuable larger flakes within the deposit. A 21-year Mining Licence for the project was issued by the Ugandan Government in 2019 following extensive historical work on the deposit and Blencowe is moving into the studies phase shortly as it drives towards first production.

Orom-Cross presents as a large, shallow open-pitabile deposit, with a maiden JORC Indicated & Inferred Mineral Resource deposit of 16.3Mt @ 6.0% Total Graphite Content. Development of the resource is expected to benefit from a low strip ratio and free dig operations, thereby ensuring lower operating and capital costs.

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