20 March 2023

EVOLUTION ENERGY MINERALS

ASX ANNOUNCEMENT

FEED and updated DFS confirms Chilalo as a standout high margin, low capex and development-ready graphite project

HIGHLIGHTS

Strong project economics

- Post-tax NPV_8 of US$338M and post-tax IRR of 32%
- High margin of US$841/t (52% operating margin)[1] , driven by world-leading flake size
- Capital cost of US$120M (including contingencies) is low compared to other development-ready graphite projects

Premium product

- High value concentrate product delivering attractive average sales price of US$1,614/t at today's prices:
  - Coarse flake – qualified as suitable for high-value expandable graphite and foil markets with binding offtake agreement in place
  - Fine flake – confirmed suitability to produce high-quality coated spherical purified graphite **('CSPG')** for use in lithium-ion battery anodes[2]

Development-ready

- Permitted to commence construction – Mining Licence and environmental approvals in place
- Framework Agreement, setting the government free-carried interest and fiscal stability, agreed with the Government of Tanzania
- Building a team capable of delivery – includes former members of Syrah Resources' management team, with real graphite project development and operating experience

Sustainability focus

- Documentation associated with environmental and community factors aligns with IFC Performance Standards and the Equator Principles
- Dry-stacking of tailings, together with introduction of solar power and gas, to lower carbon footprint and materially reduce environmental risk associated with tailings management

Graphite market

- Market moving into deficit as rapidly-growing demand from batteries surges to 50% of the graphite market
- China becoming a net importer of flake graphite demonstrates the need for ex-China flake graphite sources and value-added processing
- Significant opportunity for development-ready graphite projects to be constructed during a time of expected rising prices

1 Based on average operating costs for the first nine years of production.
2 ASX announcement 21 July 2022.

Evolution Energy Minerals Limited (ASX: EV1) ('Evolution' or the **'Company')** is pleased to announce the results of the front-end engineering design **('FEED')**, incorporated into an updated Definitive Feasibility Study **('DFS')** for its Chilalo Graphite Project (**'Chilalo'** or the **'Project'**), located in south-east Tanzania.

The Company engaged highly experienced engineering design and construction company, CPC Engineering (**'CPC'**) to undertake the FEED workstream. CPC has significant experience in the graphite industry, having undertaken the study work on Syrah Resources' Balama Project and completed several feasibility studies. The purpose of the FEED was to ensure that, subject to the availability of finance, Chilalo is construction-ready. Key deliverables of the FEED work included detailed engineering, cost estimation, schedule optimisation, development of Project Execution and Operational Readiness plans, and tenders for long lead equipment items. The completion of FEED is a key requirement of financiers and enables the Company to further progress the debt finance process.

The results demonstrate that Chilalo is a robust project, underpinned by exceptional margins and product quality

KEY DFS OUTCOMES

US$338m
Post Tax NPV_8

32%
Internal Rate of Return

52ktpa
Ave Graphite Concentrate

17Yr
Mine Life

US$120m
Pre-Production Capital

12ktpa
Steady State Exandable Graphite Sales

US$82m
Annual EBITDA

52%
Operating Margin

8ktpa
Steady State Micronised Graphite Sales

3.3 Yr
Payback Period (Post tax)

500ktpa @ 10.6% TGC
Average Annual Plant Feed

Evolution Managing Director,
Phil Hoskins commented

"We are extremely pleased with the results of the FEED process and the updated DFS, confirming Chilalo is a high-margin, low-capex development option, poised to become a meaningful producer of high-value graphite products and take advantage of the looming graphite supply shortage.

"The compelling case for the development of Chilalo is simple:

- *Chilalo's coarse flake graphite drives leading operating margins (US$841/t) at current prices (predominantly fine flake mines are not economically viable at current graphite prices);*
- *Chilalo presents a low capex (US$120M), financeable development option;*
- *Evolution's commitment to customer testwork and qualifications since 2015 confirms the suitability of Chilalo graphite for high-value applications, yielding quality offtake arrangements;*
- *Evolution has built a team with previous graphite development and operating experience, thereby de-risking development and ensuring DFS assumptions are based on real-world graphite experience; and*
- *The Company's sustainability commitment has attracted a substantial cornerstone investor committed to following their investment through to financing.*

"This FEED and updated DFS, under the oversight of Executive Director, Michael Bourguignon (ex-Syrah Resources project manager for construction and commissioning), CPC Engineering (the engineering firm engaged by Syrah Resources) and experienced graphite processing expert Oliver Peters, has predominantly retained the flowsheet used in the previous DFS. This is a strong vote of confidence in the technical work undertaken, including substantial variability testwork and pilot plant tests, confirming Chilalo's ability to produce a high-value concentrate product. This work is part of the significant investment that has been made into the development of the Chilalo project since its discovery almost nine years ago.

"Graphite represents approximately 45% of a battery's mass (some 7-10 times the amount of lithium). As widely reported, battery related demand for graphite is growing rapidly, expected to grow from ~50% of the graphite market to ~70% of the market in the coming 24 months. When this threshold was crossed in the cobalt and lithium markets in 2016 and 2020 respectively, price increases of ~350% and 1,300% then followed respectively for those commodities over the ensuing 24-month period. Combined with the substantial under-investment in new supply, it is difficult to see how graphite will not experience a supply deficit and rising prices over a similar period.

"Moreso than any other battery material, the mining and processing (with the exception of coating) of graphite is dominated by China. During 2022, China moved to a net importer of flake graphite reinforcing its strategy to dominate the anode supply chain end-to-end. This has resulted in increased demand for ex-China supply sources and with sustainability a key requirement of any new supply sources, both of these factors work in favour of the sustainably produced graphite products from our Chilalo Project.

"The need to secure an ex-China supply chain also extends to the processing of fine flake graphite into CSPG. The US Government has introduced a number of policy initiatives designed to bring critical mineral processing onshore in the US. Evolution has intentionally left its fine flake graphite uncontracted to an offtake agreement and intends to pursue vertically integrated downstream processing into CSPG in the USA. Further information on the development of Evolution's US-based downstream processing initiative is expected to be announced in the coming months. As an alternative to vertical integration, a portion of the fines offtake could be contracted if the counterparty meaningfully assisted with the Company's project financing plans for Chilalo.

"Historically, securing the finance for development of graphite projects has proven to be challenging. However, the five bullet points mentioned above combine to make Chilalo's case for financing a compelling one. We have been particularly encouraged by the multiple expressions of interest received from potential financiers in the process being run by our debt advisor, Auramet International. With the DFS completed, engagement with these potential financiers will now ramp-up as they accelerate their due diligence.

"The timing couldn't be better to be bringing the development-ready Chilalo graphite project towards a financing and construction decision. I couldn't be more excited by what 2023 holds in store for Evolution's shareholders as we strategically assess the financing and development options available to us."

KEY RESULTS

Table 1 – Key DFS outcomes

Physicals	Unit	DFS
Mine life	Years	17
Total plant feed	Mt	8.3
Annual plant feed	ktpa	500
Average head grade	TGC %	10.6%
Average graphite concentrate production[1]	ktpa	52
Steady state expandable graphite sales[2]	ktpa	12
Steady state micronised graphite sales[2]	ktpa	8
Project Financials	**Unit**	**DFS**
NPV_8 (post-tax)	US$M	338
IRR (post-tax)	%	32%
Payback period (post-tax)	years	3.3
Pre-production capital cost (incl. contingency)	US$M	119.7
Average annual EBITDA	US$M	82

Product Segment Financials	Unit	Concentrate	Expandable graphite	Micronised graphite	Consolidated production[4]
Average sales price (FOB)	US$/t	1,614	6,446	2,922	3,047
Operating costs	US$/t	773[3]	604	435	1,349
Operating margin	US$/t	841[3]	5,842	2,487	1,698

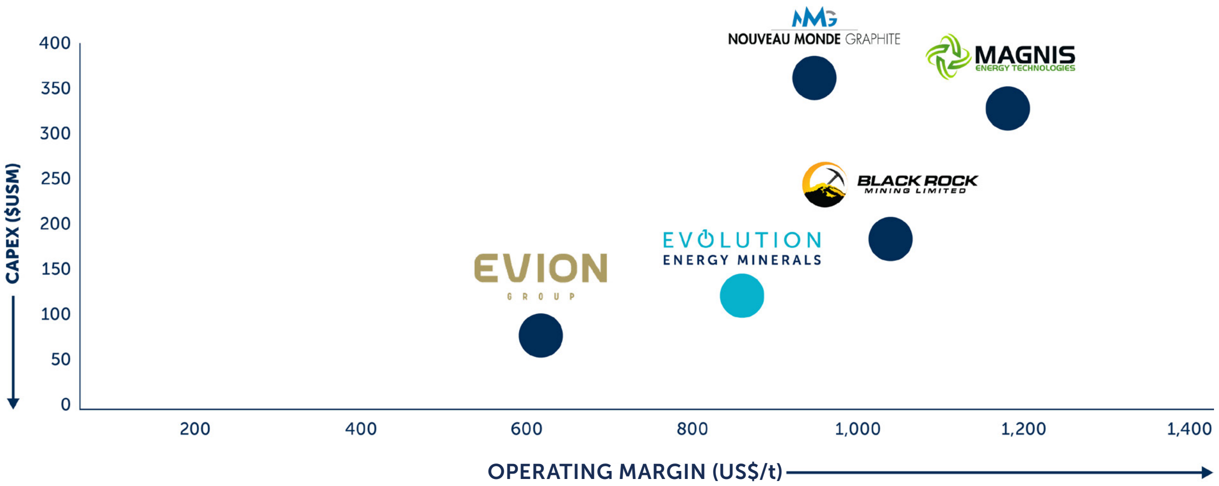
1. Some graphite concentrate is assumed to become feedstock into expandable graphite and micronized graphite.
2. See Figure 6 for conservative sales ramp-up to steady state by year 7.
3. Based on average operating costs (first 9 years), C1, FOB Dar es Salaam Port.
4. Consolidated Production shows the average sales price, operating costs and margin for the consolidated operation (ie. Inclusive of concentate, expandable graphite and micronised graphite).

The key DFS outcomes set out in Table 1 are based exclusively on the Ore Reserve estimate for the Chilalo Project. The Ore Reserve estimate underpinning the production targets (and the forecast financial information based on those production targets) comprised in the DFS outcomes has been prepared by a Competent Person in accordance with the requirements of the JORC Code.

Development-ready graphite projects – Chilalo represents a financeable option

There is an immediate opportunity to develop new supply of flake graphite to take advantage of the looming supply shortfall. However, owing to the post-COVID inflationary environment, to be development-ready, projects need to have released recent capital and operating cost updates. As such, Figure 1 below compares the capital costs and operating margin for all development-ready graphite projects. Note that operating margin is the meaningful comparison for flake graphite projects given the average sales price will vary depending on the differing products produced.

Figure 1 - Development ready projects – capital cost and operating margin comparison



1 The average sales price of all companies has been adjusted to apply the pricing assumptions underpinning Evolution's DFS.
2 The published operating cost per tonne for the companies shown in Figure 1 have been used in the margin analysis.
3 Black Rock operating costs are for the first 10 years of production which include three plant expansion modules and grid power from year 2-10. The up front capital costs Black Rock exclude modules 2-4 and the capex of the grid power line.
4 Nouveau Monde figures translated to USD at an exchange rate of USD:CAD of 1:0.75.
5 Refer to Table 6 for supporting information on peer group comparisons.

As shown above, the Company's Chilalo project is a high-margin project with a low and financeable capital cost representing a compelling case for development.

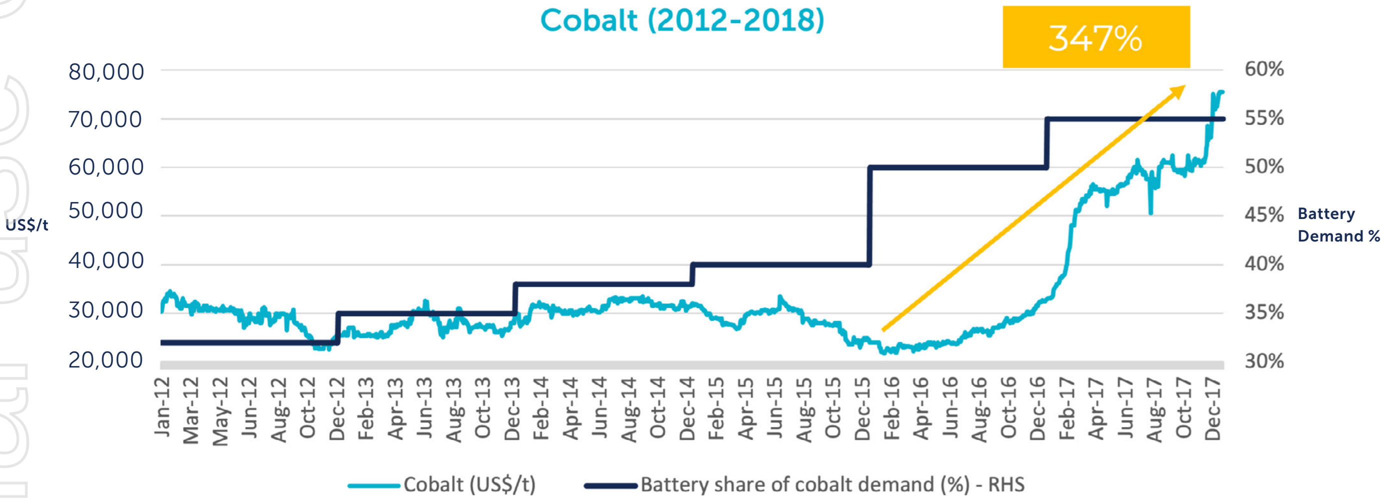
"GRAPHITE REPRESENTS APPROXIMATELY 45% OF A BATTERY'S MASS (SOME 7-10 TIMES THE AMOUNT OF LITHIUM). AS WIDELY REPORTED, BATTERY RELATED DEMAND FOR GRAPHITE IS EXPECTED TO GROW FROM ~50% OF THE GRAPHITE MARKET TO ~70% OF THE MARKET IN THE COMING 24 MONTHS."

PHIL HOSKINS | MANAGING DIRECTOR

Graphite market context

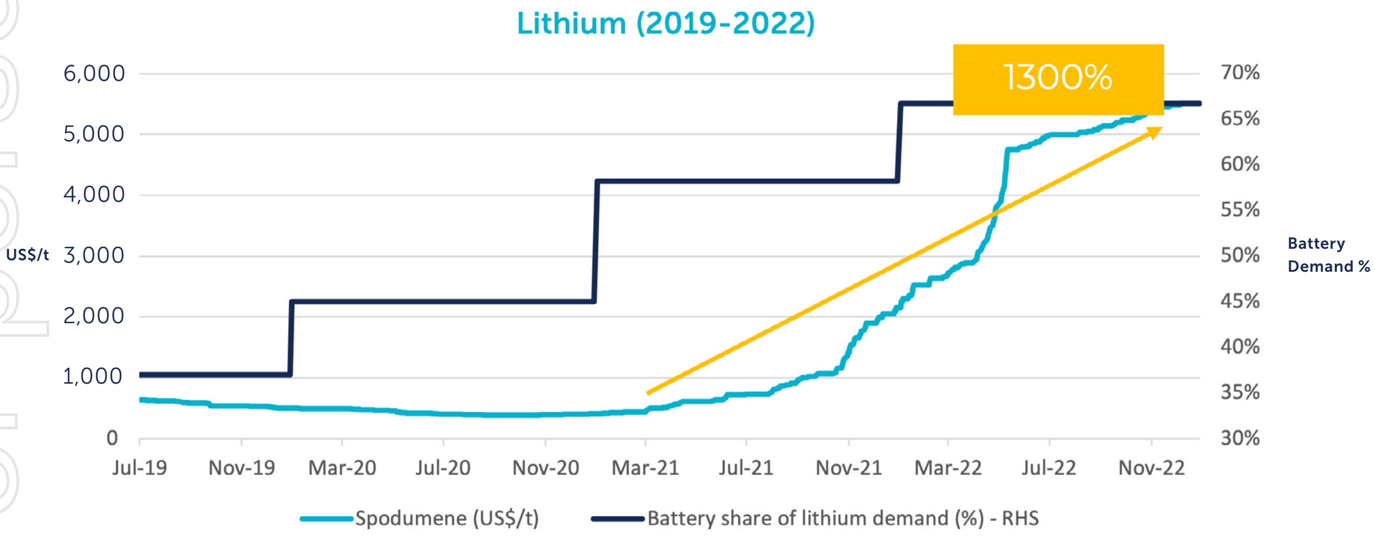
Graphite represents approximately 45% of a battery's mass (some 7-10 times the amount of lithium). As widely reported, battery related demand for graphite is expected to grow from ~50% of the graphite market to ~70% of the market in the coming 24 months. As shown in Figures 2 and 3 below, similar inflection points for cobalt and lithium occurred in 2016 and 2020, resulting in price increases of ~350% and 1,300% respectively for those commodities over the ensuing 24 month period.

Figure 2 - Cobalt price reaction to increased market share from batteries



Source: Joint Research Centre – European Commission

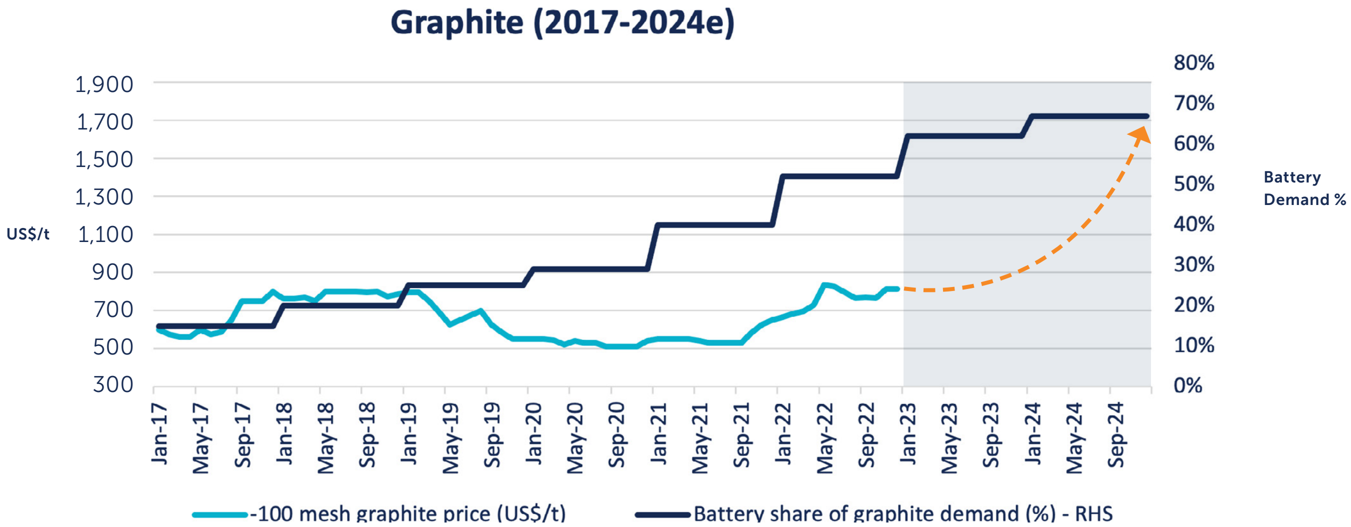
Figure 3 - Lithium price reaction to increased market share from batteries



Source: JP Morgan

Graphite has now reached a similar inflection point which, combined with the substantial under-investment in new supply, positions the graphite market to experience a supply deficit and rising prices over a similar period (see Figure 4 below).

Figure 4 - Graphite fines price relative to market share from batteries



Source: Benchmark Mineral Intelligence, internal price projection applied

Graphite pricing

Evolution subscribes to pricing data and forecasts from Fastmarkets, Wood MacKenzie and Benchmark Mineral Intelligence as well as other independent sources. Graphite analysts face some significant challenges in arriving at the price for each flake graphite product (eg. based on mesh size and purity):

1. It is potentially misleading to ascribe a single price to a particular flake graphite product (eg. +895, or +80 mesh, 95% C) given not all graphite meeting those characteristics is the same. Graphite sales require qualification and if flake graphite can qualify into value-added products, it is likely to sell for higher prices than graphite that has not qualified for such products. This challenge is acknowledged by these analysts; and
2. Graphite pricing is intellectual property of customers and as such, they are generally unwilling to disclose pricing to analysts without a non-disclosure agreement.

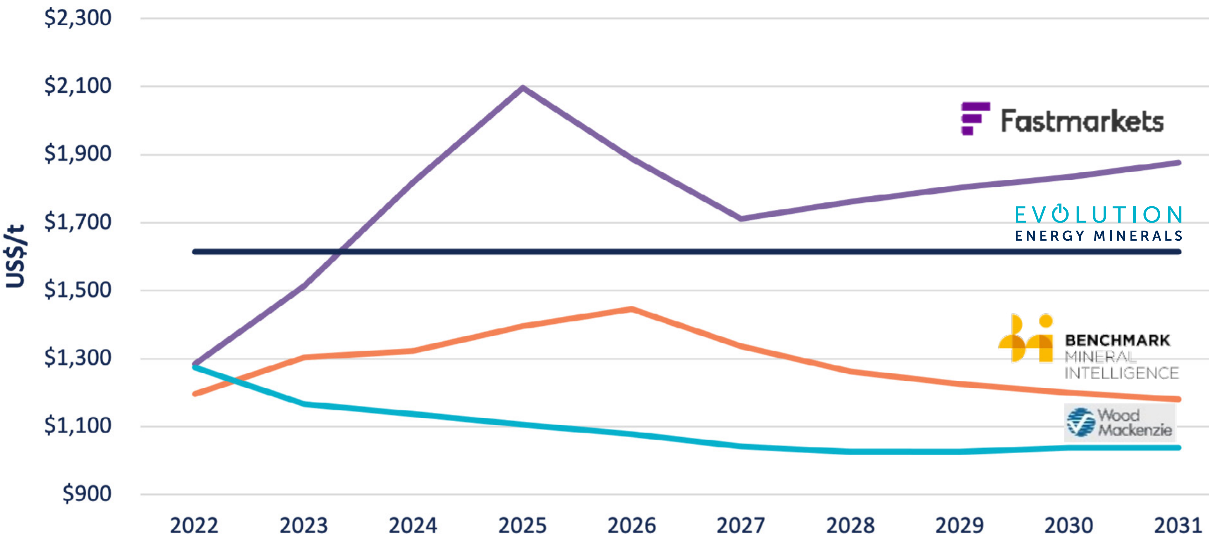
Evolution forms its graphite pricing assumptions through a combination of the data provided by the above analysts, and with its own discussions with customers and other experienced market advisors. Evolution's belief is that, given Chilalo graphite has qualified and been determined suitable for high-value applications, it will attract a premium to the analysts' prices, given they represent an 'average' price of all graphite at the quoted specification. Figure 6 shows that Evolution's sales price assumption is more conservative than Fastmarkets but higher than Benchmark Mineral Intelligence and Wood MacKenzie for reasons outlined above.

Figure 5 shows the weighted average sales price per tonne of Chilalo graphite assumed in the DFS relative to the current and forecast prices of the abovementioned analysts.

"EVOLUTION'S BELIEF IS THAT, GIVEN CHILALO GRAPHITE HAS QUALIFIED AND BEEN DETERMINED SUITABLE FOR HIGH-VALUE APPLICATIONS, IT WILL ATTRACT A PREMIUM TO THE ANALYSTS' PRICES, GIVEN THEY REPRESENT AN 'AVERAGE' PRICE OF ALL GRAPHITE AT THE QUOTED SPECIFICATION."

PHIL HOSKINS | MANAGING DIRECTOR

Figure 5. Graphite price forecasts



1 Benchmark Mineral Intelligence does not forecast +32 mesh pricing, therefore the Company's +32 mesh price has been applied

Scope changes and optimisations

The scope of the DFS has remained largely in line with the 2020 DFS except for the following scope changes and optimisations.

- **Power –** To counteract the rising diesel price (~50% increase since 2020) and to reduce the project's carbon footprint, the power generation has switched from diesel generation to a hybrid power solution comprised of solar power and a dual fuel diesel/gas generator. This has had the impact of reducing power cost (from US$0.31/kWh to US$0.22/kWh) whilst substantially improving the project's carbon footprint.
- **Tailings –** Rather than depositing tailings into a tailings storage facility (**TSF**) as had previously been proposed, the Company has opted to pursue a strategy of dry stacking its tailings. This methodology requires some additional filtration and centrifuge equipment has been added to the processing plant enabling tailings to co-disposed with mine waste in the waste rock dumps. This has removed significant earthworks costs from upfront capital costs and TSF wall lifts from sustaining capital, whilst removing a considerable ESG risk from the project site for the mine life and post closure.
- **Mining –** the Company spent considerable time optimising the mine plan in more detail and determining appropriate pricing from reputable mining contractors.
- **Camp –** the decision was made to take ownership of camp construction compared to the previous strategy to pursue a build, own, operate and transfer a camp. This strategy allows the Company to ensure the ongoing quality of camp infrastructure and services, which is a causal factor in employee longevity and productivity.
- **Carbon footprint –** the Company plans to install a waste heat recovery system aimed at diverting waste heat from the power station to supplement the product dryers. This significantly reduces the volume of diesel consumed in drying the graphite concentrate to acceptable moisture levels. Combined with the reduced carbon emissions from power generation, this is expected to significantly reduce the overall carbon footprint, which was already comparatively low compared to existing graphite production[1]. The Company continues to investigate strategies to further reduce its carbon footprint including electrification of mining fleet, engaging a logistics contractor that runs its haulage fleet on compressed natural gas, and seeking to secure carbon offsets to deliver carbon neutrality.

1 See ASX announcement 6 October 2022.

Summary of capital and operating costs

The updated capital cost estimate (including contingencies) for the Chilalo Project (100% basis) is set out in Table 2 below.

Table 2. Capital cost estimate

Description	US$M
Direct Costs	
Earthworks	2.8
Concrete	3.3
Structural	7.4
Platework	2.3
Mechanical	18.5
Pipework	3.2
Electrical equipment	7.5
Buildings	0.9
SMP Installation	7.8
Civil construction	0.8
Freight	4.7
E&I construction	5.3
Building Installation	1.2
Total Direct Costs	65.5
Indirect Costs	
Spares	0.8
Camp and messing	7.4
Mining pre-production	8.0
Other owner's costs[1]	29.5
Contingency	8.4
Total Indirect costs	**54.2**
TOTAL	**119.7**

1. Includes owner's project management, engineering and procurement, Relocation Action Plan execution, clean water storage facility, access roads, owner's equipment, insurances, business systems and other pre-production owner's costs.

In the event that the Company's exploration program is successful in discovering additional near-surface graphite deposits (see page 11), it is unlikely the mine will go to the depths currently proposed in the life of mine model (~180 metres) and mining costs would be lower than those reported in the DFS. The average operating costs over years 1-9 are shown in Table 3 below.

Table 3. Operating costs

Description	US$/t
Mining Costs	227
Labour	96
Process Plant Variable Costs	65
Process Plant Fixed Costs	59
Power	91
Logistics	175
G&A	60
TOTAL	**773**

1. C1, FOB Dar es Salaam, average of first 9 years.

Funding

Since May 2022, the Company has been working with Auramet International **('Auramet')**, its advisers with respect to securing an optimal financing solution for the Chilalo Project. Auramet is a leading financial advisor to the resources sector, with significant experience in Africa and has completed numerous project finance agreements for companies operating in the resources industry.

The initial phase of the engagement with Auramet entailed sending an information memorandum to potential debt financiers, who then conducted preliminary due diligence. Numerous parties responded with an expression of interest and with the DFS now complete, the Company expects to increase its engagement with those interested parties, with a view to appointing a syndicate of financiers to conduct more extensive due diligence and provide the Company a credit approved term sheet.

The Company's major shareholder is ARCH Sustainable Resources Fund LP **('ARCH SRF')** which holds 24.7% of the Company's issued and outstanding shares. ARCH SRF is advised by ARCH Emerging Markets Partners Limited, a specialist investment advisory firm with deep experience in emerging markets, private equity, asset management and ESG. ARCH acquired a 24.7% interest in Evolution when it subscribed, as a cornerstone investor, in the Company's initial public offering in November 2021 **('IPO')** and retained that interest when it participated in a placement that was completed in October 2022 **('Placement')**. ARCH's position as a supportive cornerstone investor is expected to be an important component of any financing arrangements for the development of Chilalo.

The Framework Agreement and Shareholders Agreement for the ownership, development and management of Chilalo **(**together, the **'Agreements'**) are in a form that has been agreed with the Tanzanian Government. The Agreements, among other things, confirm the Tanzanian Government's 16% non-dilutable free carried interest and commitment to jointly develop Chilalo. The Agreements also specify the rights and obligations of the parties as shareholders of Kudu Graphite Limited, the Tanzanian entity through which Evolution and the Tanzanian Government hold their respective equity interests in Chilalo. Evolution recognises that financiers require certainty around the operation of the Tanzanian Government's free carried interest and the completion of the Agreements is a key pre-requisite for obtaining project finance. The Company is awaiting notification of the formal public signing ceremony with respect to the Agreements, which, at this stage is expected to take place in March 2023.

The Company has signed a binding offtake agreement with Yichang Xincheng Graphite Co Ltd for the sale of 30,000 tpa of coarse flake graphite from its Chilalo Project for the first three years of operation **('Offtake Agreement')**. The Offtake Agreement covers over 50% of Chilalo's production for the first three years and represents over 70% of forecast revenue over the same period.

While the Company could sign an offtake agreement for the sale of its fine flake graphite, owing to the exceptional testwork results associated with using Chilalo fine flake graphite to produce coated spherical graphite and other high-value products, it has elected to retain maximum flexibility with its fine flake material and not entered into offtake arrangements. This also ensures that that there is sufficient fine flake graphite available to supply feedstock into micronised graphite and to support Chilalo's anode qualification programs.

With the Updated DFS complete, key agreements with the Tanzanian Government in place, the existing offtake agreement for coarse flake graphite from Chilalo, and a supportive cornerstone investor, the Company is well positioned to secure the finance required for development of Chilalo.

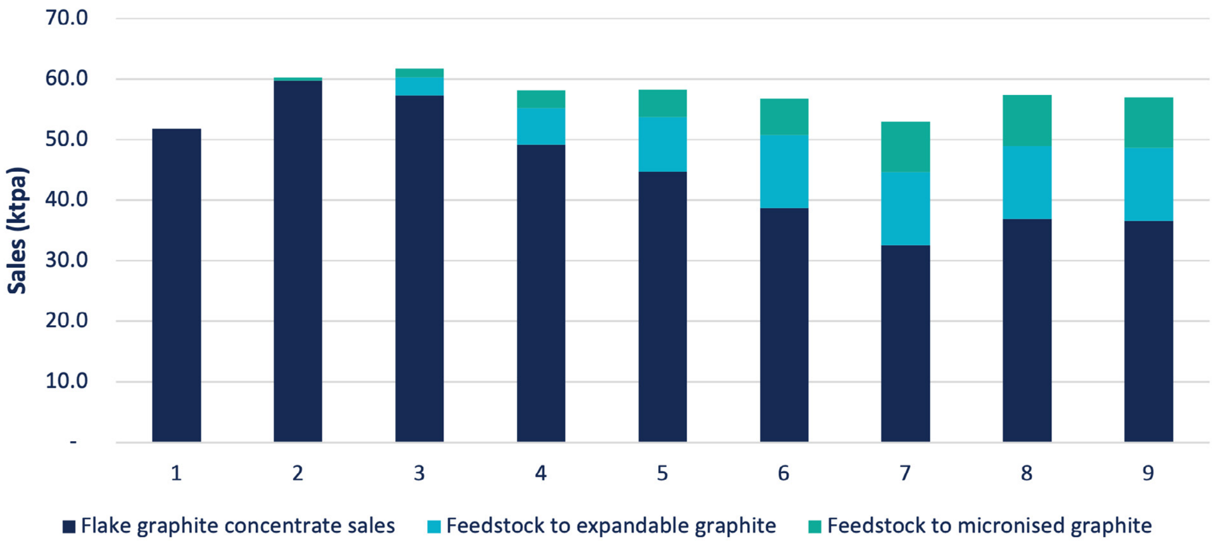
Vertically integrated graphite strategy

Evolution continues to adopt the same low-risk, low capital intensity value-added strategies outlined in the previous Chilalo DFS including:

- Toll-treatment of Chilalo flake graphite concentrate into high-purity expandable graphite by Evolution's offtake partner YXGC for qualification and direct sale to customers identified by the Company; and
- Installation of fine milling equipment to produce micronised graphite for qualification and sale to customers identified by the Company.

Figure 6 shows the updated DFS production and sales profile assumptions from years 1 to 9 of the various graphite products expected to be produced by the Company.

Figure 6 - Graphite sales profile – increasing volumes to high-value applications



Opportunities

The DFS has identified several opportunities that could potentially improve the Project's economics as follows:

1. Exploration upside – reduced mining costs and expansion potential

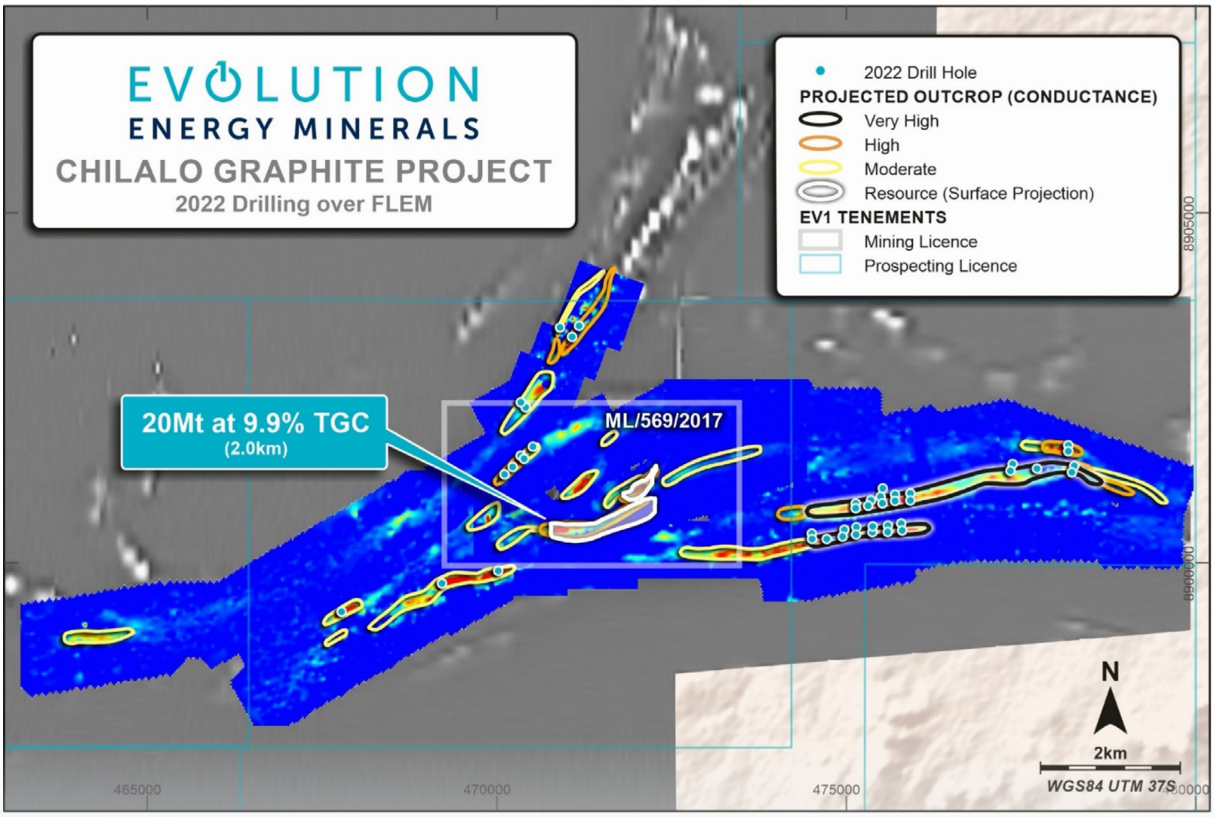
During the December quarter of 2022, Evolution commenced exploration drilling at Chilalo. The drilling program, which concluded in late 2022, comprised 44 holes for 5,440 metres of shallow reverse circulation **('RC')** drilling into a number of the strongest electromagnetic conductors (see Figure 7). Assay results are expected to be available in March and April 2023.

Geophysical surveys previously identified 33km of high and ultra-high conductance targets in addition to the existing mineral resource – these conductors are expected to represent near-surface, high-grade, thick graphite deposits.

Exploration success is expected to result in the following:

- Ability to expand production to meet customers' growing requirements, resulting in increased cash flow and project valuation;
- A reduction in mining costs by deferring the need to mine the deepest parts of the main ore body (trenching indicates that any new graphite mineralisation encountered is expected to start from surface); and
- Extensions to mine life, increasing the strategic value of the Project.

Figure 7 - RC Drillhole locations on FLEM conductors



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2. Reduced logistics / road transportation costs

a. Conversion of diesel trucks to CNG

The Company is in discussions with logistics contractors regarding converting diesel trucks to compressed natural gas (**'CNG'**). The reduced cost of CNG vs diesel may provide an opportunity for cost savings relative to conversion cost and any additional infrastructure requirements.

b. Shipping from the Mtwara Port

The FEED assumes that graphite concentrate produced at Chilalo will be transported by truck to the international port of Dar es Salaam, a distance of approximately 638km, which is predominantly by sealed bitumen road, from where it will be shipped.

The Mtwara Port is located approximately 180km from Chilalo. In 2021, an expansion project undertaken by the Tanzanian Ports Authority increased the capacity of the Mtwara Port from 400,000 tonnes per annum to 750,000 tonnes per annum. The Mtwara Port is a deep-water port that can accommodate four ships and one coastal vessel at a time. It has extensive storage capacity and cargo handling equipment and is designed to handle conventional and containerised cargo.

Evolution continues to monitor shipping through the Mtwara Port and while an increase in activity has been observed over the past 12 months, there is currently insufficient containerised shipping utilising the Mtwara Port to support the Project's shipping requirements.

Should the Company be able to ship its product through the Mtwara Port, it is estmated that this would reduce logistics costs by US$65 per tonne.

c. Alternative road route to Dar es Salaam

Discussions with TANROADS indicate that plans to bituminise the road from Ruangwa to Kiranjeranje is expected to take place in the 2025 financial year, potentially prior to the commencement of operations at Chilalo. As shown in Figure 8 below, this would significantly reduce the trucking distance to Dar es Salaam from 638km to 411km resulting in a saving of approximately US$32 per tonne.

Figure 8 - Comparison of DFS road route to potential alternative route

3. Reduction in power costs

a. Potential for additional solar power

The Company has elected to commence operations on a relatively conservative solar penetration level of 20% to ensure solar generated power is not wasted. The DFS assumes that the remaining power is generated using diesel (70%) and CNG (30%).

Updated Ore Reserve statement

The Ore Reserve estimate has been updated to 8.0Mt at a grade of 10.5% TGC for 836Kt of contained graphite. The updated Ore Reserve estimate is an update of the previous estimate, reported as at 12 November 2021.

The updated Ore Reserve estimate was prepared by a Competent Person in accordance with the requirements of the JORC Code and is set out in Table 4 below.

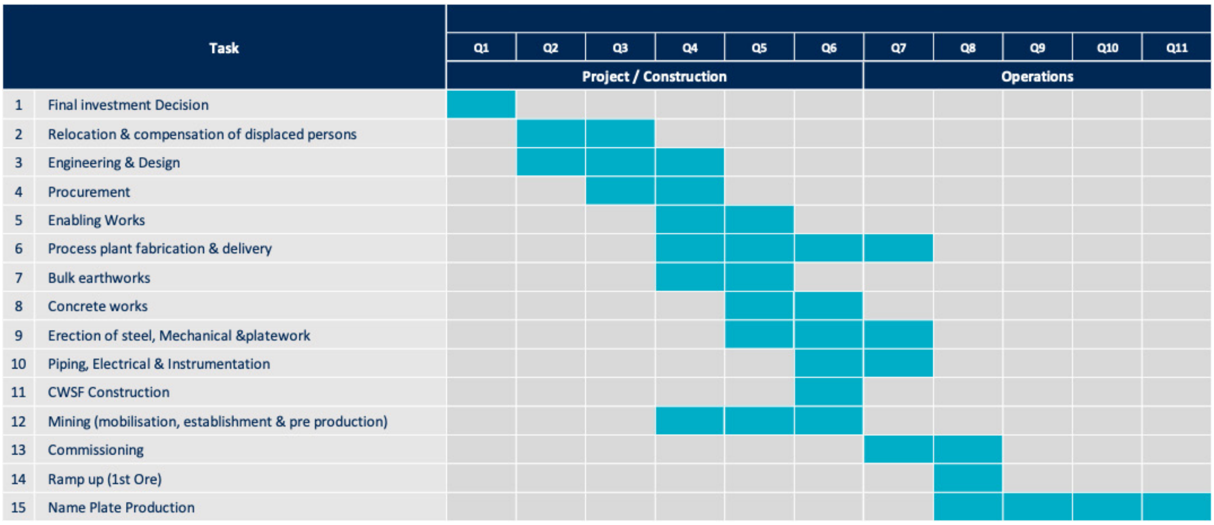
Table 4. Ore Reserve Estimate

Deposit	JORC classification	Tonnes (Mt)	Grade TGC (%)	Contained Graphite (Kt)
Chilalo	Proven	-	-	-
	Probable	8.0	10.5	836
Total	Total	8.0	10.5	836

Next Steps

With the terms of the Framework And Shareholders' Agreements settled with the Tanzanian Government[3], the Company is now preparing for execution of the Resettlement Action Plan and commencement of detailed design (items 2 and 3 in the below table, which can be undertaken independent of obtaining project finance for the construction of Chilalo). An indicative schedule is shown in Table 5 below.

Table 5. Project development schedule



The Company will also continue to further investigate the opportunities outlined above which have been identified as having the capacity to deliver improved financial outcomes for the Project.

Further details on the updated DFS are summarised in Annexure A to this announcement.

Phil Hoskins
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3 ASX announcement 8 March 2023.

Competent Person's Statement – Mineral Resource Estimate

The information in this announcement that relates to the Mineral Resource estimate for the Chilalo Graphite Project is extracted from the report titled "Prospectus" released to the ASX on 12 November 2021 and available to view at https://evolutionenergyminerals.com.au/.

Evolution confirms that it is not aware of any new information or data that materially affects the information included in the original report and that all material assumptions and technical parameters underpinning the Mineral Resource estimate for the Chilalo Graphite Project continue to apply and have not materially changed.

Evolution confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original report and that the Competent Person's consent remains in place for subsequent releases by Evolution of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report or accompanying consent.

Competent Person's Statement – Ore Reserve Estimate

The information in this announcement that relates to the Ore Reserve estimate for the Chilalo Project is based on information compiled by Andrew Hutson, a Competent Person, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Andrew Hutson is employed by Resolve Mining Solutions. Mr Hutson has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of the JORC Code 2012 Edition. Mr Hutson consents to the inclusion of such information in this announcement in the form and context in which it appears.

Production Targets and Forecast Financial Information

The DFS outcomes in this announcement comprises production targets and forecast financial information for the Chilalo Graphite Project and is based on an updated feasibility study for the Chilalo Graphite Project.

The production targets (and the forecast financial information based on these production targets) are based solely on Ore Reserve estimates which have been prepared by a Competent Person in accordance with the requirements in the JORC Code. The production targets are based on Evolution's current expectations of future results or events and should not be relied upon by investors when making investment decisions. The forecast financial information is derived from the production targets detailed in the DFS outcomes.

Evolution has concluded that it has a reasonable basis for providing the production targets and forecast financial information included in this announcement. The detailed reasons for that conclusion are outlined throughout this announcement and all material assumptions upon which the production targets and forecast financial information is based are disclosed in this announcement.

Forward Looking Statements

This announcement includes certain "forward looking statements". Forward-looking statements and forward-looking information are frequently characterised by words such as "plan," "expect," "project," "intend," "believe," "anticipate", "estimate" and other similar words, or statements that certain events or conditions "may", "will" or "could" occur. All statements other than statements of historical fact included in this announcement are forward looking statements or constitute forward-looking information.

These forward-looking statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this announcement, are expected to take place. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of Evolution, the directors and management. These factors include, but are not limited to, the inherent risks involved in the exploration, development and mining of mineral properties, geological, mining and processing technical problems, the inability to obtain mine licenses, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel, various events that could disrupt operations, the possibility of project cost overruns or unanticipated costs and expenses and the ability of contracted parties to provide services as contracted.

There can be no assurance that such information or statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such information. Important factors could cause actual results to differ materially from Evolution's expectations.

Evolution does not intend to update or revise forward-looking statements, or publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this announcement, except where required by law.

All persons should consider seeking appropriate professional legal, financial and taxation advice in reviewing this announcement and all other information with respect to the Company and evaluating the business, financial performance and operations of the Company. Neither the provision of this announcement nor any information contained in this announcement or subsequently communicated to any person in connection with this announcement is, or should be taken as, constituting the giving of investment or financial advice to any person. This announcement does not take into account the individual investment objective, financial or tax situation or particular needs of any person.

Table 6. Peer Comparison

Ticker	Evolution	Magnis	Black Rock	Evion	Nouveau Monde
Market capitalisation (A$M)	52	306	113	18	436
Mineral resource (Mt)	20.0	174.0	213.1	40.0	153.3
Grade (TGC %)	9.9	5.4	7.8	6.5	4.26
Contained graphite (Mt)	2.0	9.3	16.6	2.6	6.4
Reserve (Mt)	8.0	76.3	70.5	16.2	61.7
Reserve grade (TGC %)	10.5	4.8	8.5	6.6	4.23
Reserve contained graphite (Mt)	0.8	3.7	6.0	1.1	2.6
Mine Life (years)	17	16	26	21	25
Capex (US$M)	120	324	182[3]	79	361[4]
Average sales price (US$/t)[1]	1,614	1,813	1,491	1,243	1,347
Operating costs (US$/t)	773	639	466[3]	658	421[4]
Operating margin (US$/t)	841	1,174	1,025	585	926

1 The average sales price of all companies has been adjusted to apply the pricing assumptions underpinning Evolution's DFS.
2 The published operating cost per tonne for each company has been used in the margin analysis. All projects in the above analysis are at DFS stage and fully permitted.
3 Black Rock operating costs are for the first 10 years of production which include three plant expansion modules and grid power from year 2-10. The up front capital costs Black Rock exclude modules 2-4 and the capex of the grid power line.
4 Nouveau Monde figures translated to USD at an exchange rate of USD:CAD of 1:0.75.

FEED AND UPDATED DFS

1. ANNEXURE A. FEED and UPDATED DFS – EXECUTIVE SUMMARY

1.1 Background to DFS

In January 2020, a definitive feasibility study was released on the Chilalo Project ('**2020 DFS**'), the key results of which were included in the Company's prospectus dated 28 September 2021 as supplemented by a supplementary prospectus dated 6 October 2021 (collectively, the **Prospectus**) (and lodged with ASX on 12 November 2021), in connection with its initial public offering that was completed in November 2021. In relation to information on the 2020 DFS included in the Prospectus, Evolution confirms that it is not aware of any new information or data that materially affects that information and that all material assumptions and technical parameters underpinning that Information continue to apply and have not materially changed.

As previously announced on 20 June 2022, Evolution engaged highly experienced engineering design and construction company, CPC Engineering ('**CPC**') to undertake a Front-End Engineering Design ('**FEED**') workstream for the processing plant and associated non-processing infrastructure for the Chilalo Graphite Project ('**Chilalo**' or the '**Project**').

The scope of the FEED included the evaluation of opportunities to improve plant design and, optimise and update estimated capital expenditure. CPC was selected from a panel of engineering firms on the basis of their expertise and experience in graphite processing and successful commissioning of projects, most notably, Syrah Resources Limited's Balama Graphite Project in Mozambique.

The FEED has incorporated a number of optimisations to enhance the project economics and also reduce the carbon footprint of the project. The FEED was supported by independent experts in the graphite sector and resources projects in Africa. The outcomes of the FEED have been incorporated into an updated DFS ('**Updated DFS**'), the results of which are summarised in this Executive Summary. The Updated DFS team included:

- CPC Engineering: Process Plant, Engineering Design, Overall Cost Estimation and Report Compilation
- Resolve Mining Solutions: Mining and Ore Reserve
- ATC Williams: Tailings Disposal
- AQ2: Hydrology and Hydrogeology
- Mine Earth: Hydrology, Hydrogeology and Acid and Metalliferous Drainage and Mine Closure
- Benchmark Mineral Intelligence, Fastmarkets, Wood Mackenzie, Lonestar Technical Minerals: Graphite market and graphite pricing
- Auramet Trading LLC: Financial Modelling

The Updated DFS did not consider an update to the Chilalo mineral resource, which remains as per the 2020 DFS.

1.2 Project Overview

Chilalo is located in the Ruangwa District of the Lindi Region in south-east Tanzania, 100 km north of the border with Mozambique, approximately 180 km west of the coastal port city of Mtwara on the Indian Ocean and 400 km south of Tanzania's largest city, Dar es Salaam as shown in Figure 1.

Figure 1 - Project Location

The Project is situated within the Mozambique belt, which is well known for some of the world's highest grade and coarse flake graphite deposits. Through its wholly owned UK subsidiary, Evolution Energy Minerals UK Limited, Evolution owns 100% of Ngwena Tanzania Limited ('**Ngwena**'), a company incorporated under the laws of Tanzania, which is the holder of the Chilalo Mining Licence and various Prospecting Licences.

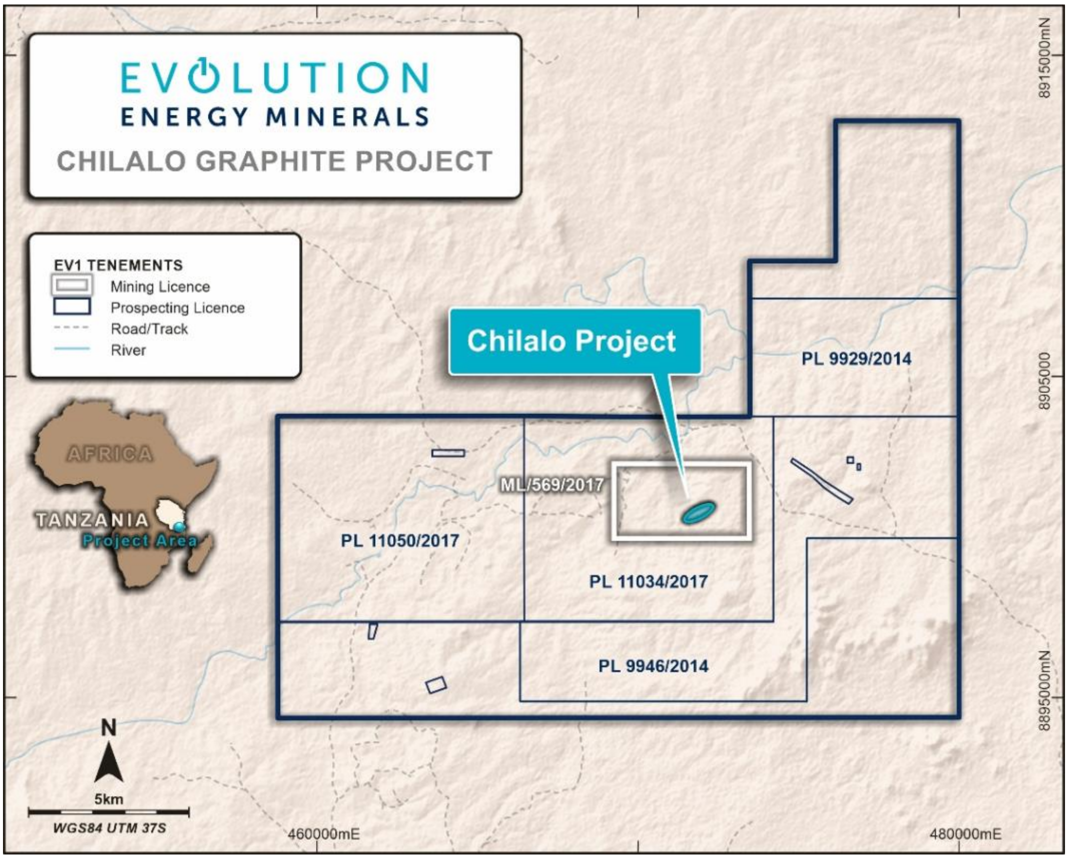
Chilalo consists of five tenements: one Mining Licence and four Prospecting Licences that cover an area of 170.8 square kilometres, as shown in Table 1. The location and details of the Project tenements are shown in Table 1 and Figure 2, respectively.

Table 1 - Project Tenements

Tenement Number	Tenement Name	Expiry Date[1]	Status	Parties	Area (km2)
ML 569/2017	Chilalo ML	14-Feb-27	Granted – 5th Year	Ngwena Tanzania Limited (100%)	9.81
PL 9929/2014	Chikwale	08-Jul-23	Granted – Second Renewal	Ngwena Tanzania Limited (100%)	24.02
PL 9946/2014	Machangaja	08-Jul-23	Granted – Second Renewal	Ngwena Tanzania Limited (100%)	48.50
PL 11050/2017	Chilalo West	13-Mar-24	Granted – First Renewal	Ngwena Tanzania Limited (100%)	48.82
PL 11034/2017	Chilalo	13-Mar-24	Granted – First Renewal	Ngwena Tanzania Limited (100%)	39.65
					170.80

*Pursuant to the Framework Agreement and Shareholders' Agreement ('**Agreements**'), the terms of which have been agreed with the Tanzanian Government (ASX announcement 8 March 2023), a new entity, Kudu Graphite Limited ('**Kudu**') has been incorporated and is the entity in which Evolution and the Tanzanian Government will hold their respective interests. Kudu will also hold the Mining Licence and surrounding Prospecting Licences, with all licences to be reissued with a refreshed term pursuant to the Agreements.*

Figure 2 - Project Location



1.3 Mineral Resources Estimate

In August 2019, CSA Global completed a Mineral Resource estimate for the Chilalo Main and North East deposits of Chilalo (‘**Chilalo MRE**’), reporting a high-grade mineral resource of 20.1Mt at 9.9% total graphitic carbon (‘**TGC**’) for 1,991 Kt of contained graphite. The Chilalo MRE is presented in Table 2 below. For further information on the Chilalo MRE, refer to the Prospectus.

Table 2 - Chilalo Mineral Resource Estimate

Domain	Classification	Zone	Million Tonnes (Mt)	TGC (%)	Contained Graphite (Kt)
High Grade	Indicated	Main	9.2	10.6	982
		Northeast	1.0	9.5	100
		All	**10.3**	**10.5**	**1,082**
	Inferred	Main	7.4	9.5	704
		Northeast	2.3	8.8	205
		All	**9.8**	**9.3**	**908**
	Indicated + Inferred	**All**	**20.1**	**9.9**	**1,991**
Low Grade	Inferred	Main	37.8	3.4	1,282
		Northeast	9.5	4.1	394
		All	**47.3**	**3.5**	**1,677**
High Grade + Low Grade	**Indicated + Inferred**	**All**	**67.3**	**5.4**	**3,667**

The Chilalo MRE was estimated within constraining wireframe solids using a core high-grade domain defined above a nominal 5% TGC cut-off within a surrounding low-grade zone defined above a nominal 2% TGC cut-off. The resource is quoted from all classified blocks above a lower cut-off of 2% TGC within these wireframe solids. Differences may occur due to rounding.

Figures 3 and 4 below show the grade and classification of the Chilalo MRE.

Figure 3 - Chilalo Resource Grade

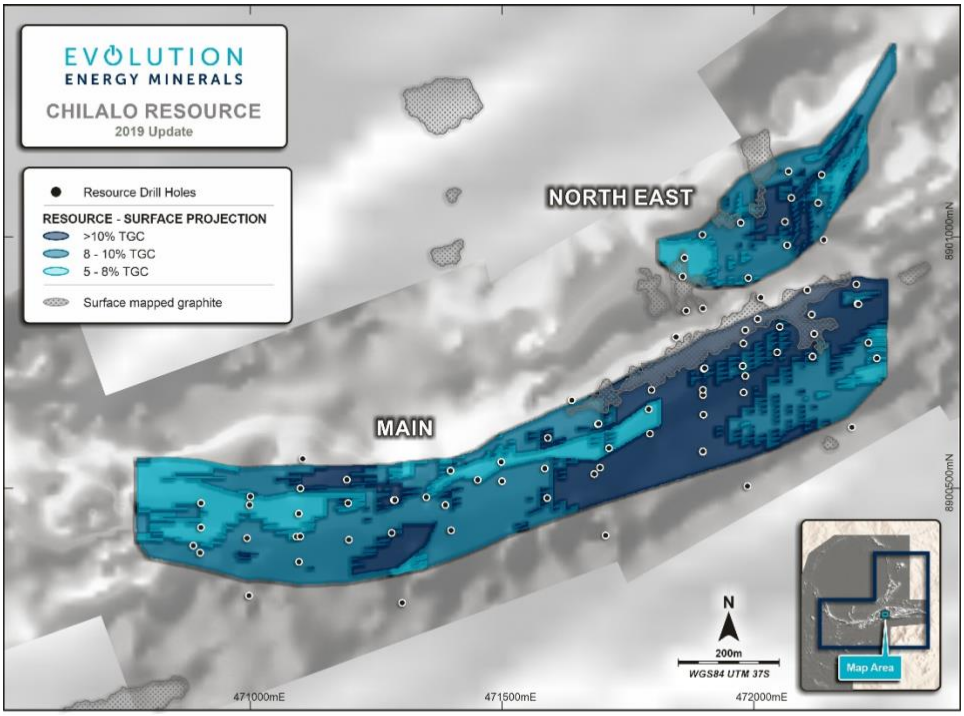
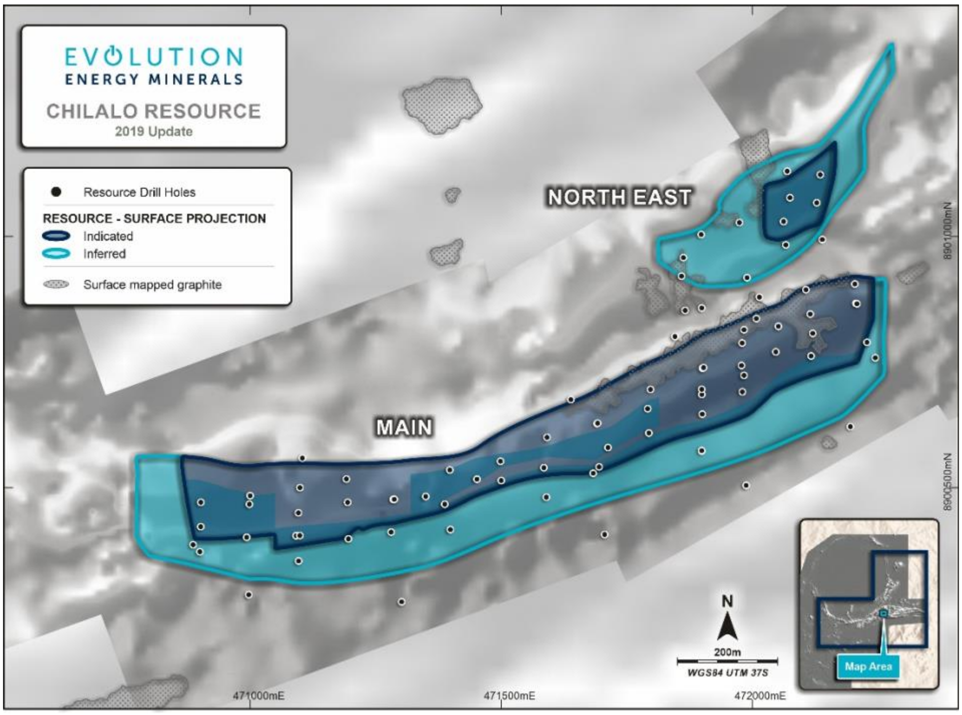


Figure 4 - Chilalo Mineral Resource Classification



1.4 Mining

1.4.1 Open Pit

The Chilalo Project consists of three open pits (Central, North and West) mined with 50 to 60 tonne rigid and articulated dump trucks and matching excavators. The ore boundaries will be defined using best practice grade control methods.

Contractor mining has been assumed for the Life of Mine. The equipment selection is appropriate for this operation's proposed scale and selectivity. The selected mining approach is typical for small to medium-scale open pit mining operations in East Africa.

The geotechnical parameters utilised in the pit and waste rock dump designs are per the recommendations of our geotechnical consultants, Open House Management Solutions (‘**OHMS**’).

Initial Non-Acid Forming (‘**NAF**’) waste generated from mining will be used for constructing the run of mine (‘**RoM**’) pad, a Clean Water Storage Facility (‘**CWSF**’) embankment and a dirty water pond (B), before being used to create cells in the designed WRD locations outside of the pit.

Potential Acid Forming (‘**PAF**’) waste generated from mining will be encapsulated within the waste rock dumps by NAF and covered with a final layer of no less than 5m thickness.

Mining capital costs have been estimated for mobilisation, establishment, clearing and topsoil stockpiling, waste pre-strip for construction purposes, haul road construction and demobilisation.

Mining operating costs were developed by Resolve Mining Solutions ('**Resolve**') based on a detailed mining model and using budget estimates from mining contractors with Tanzanian and graphite experience.

A fixed value of 10% was used for mining dilution in pit optimisations, production scheduling and cash flow model. A grade of 0% TGC was assumed for dilution material. Dilution for tonnes and grade was also calculated through a dilution skin method, and it concluded that the selected dilution was reasonable.

A fixed value of 95% was used for mining recovery in optimisations and production schedule.

1.4.2 Mining Block Models

The resource model is a standard Datamine software model, which includes sub-celling to a minimum block size of 2.5m x 1.0m x 1.0m. This block is likely smaller than could be practically mined with appropriately sized mining equipment, leading to ore loss and dilution.

Global factors for ore loss and dilution have been applied, which is one of the more simplistic approaches and often does not consider the width of the orebody and the edge effects would have higher dilution than the core of the deposit.

1.4.3 Dilution and Ore Loss

Resolve completed a series of simple Selected Mining Unit ('**SMU**') estimates on various practical mining block dimensions to improve the dilution estimate. The concept of the SMU is to select a regular block size that can efficiently be mined while minimising ore loss and dilution, the approach is based on the premise that large equipment cannot mine small blocks.

Table 3 summarises the results of the SMU analysis, including the global estimate used in the 2020 DFS.

Table 3 - SMU Analysis for indicated & Inferred Mineralisation at 5.0% TGC Cut Off

SMU Dimension	Tonnage	%TGC	Dilution	Ore Loss
Resource Model	23.0	9.4	-	-
10 x 10 x 5	25.0	8.2	14%	5%
5 x 5 x 5	24.4	8.6	10%	2%
5 x 5 x 2.5	24.7	7.8	8%	1%

The table shows that overall, the regularisation process does dilute the resource by around 10% but there is minimal ore loss overall. Closer inspections can show that SMU modelling has less impact on the main ore lens but a greater effect on the thinner lenses and the edges. Additionally, the dilution along the edges is the lower grades as opposed to the resource estimate which does not carry any grade.

The 5m x 5m x 5m diluted model was selected for pit optimisation and scheduling as this is a practical mining dimension without being too small but still has acceptable dilution and ore loss. Figure 5 and Figure 6show section 472100mE for the resource model and the SMU model. The figures show that the diluted model retains the higher grades at the core of the ore lenses but generally adds a skin of low grade where the lenses contact the waste.

Figure 5 - Resource Model (undiluted) Section 472100mE

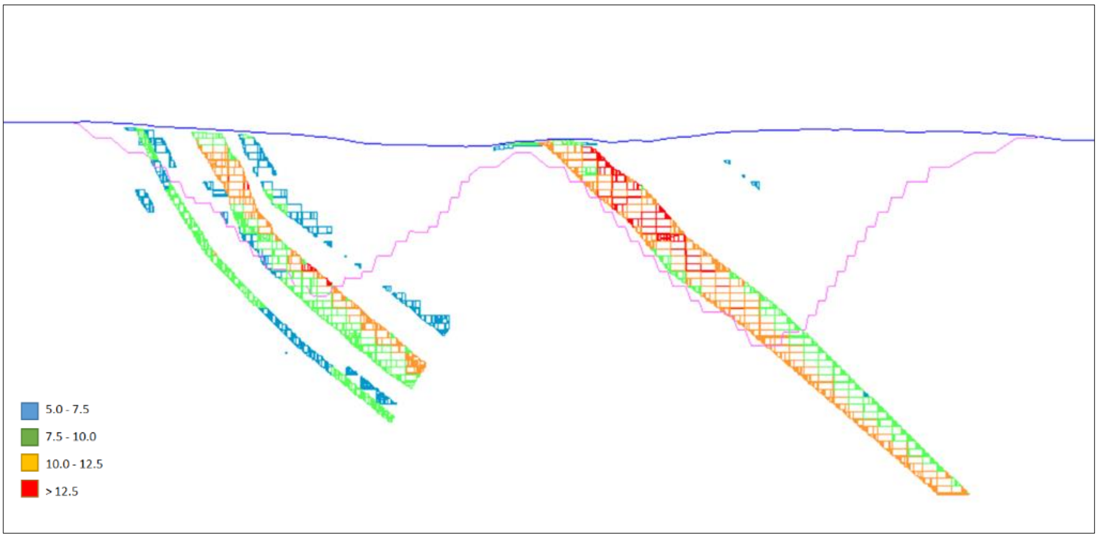
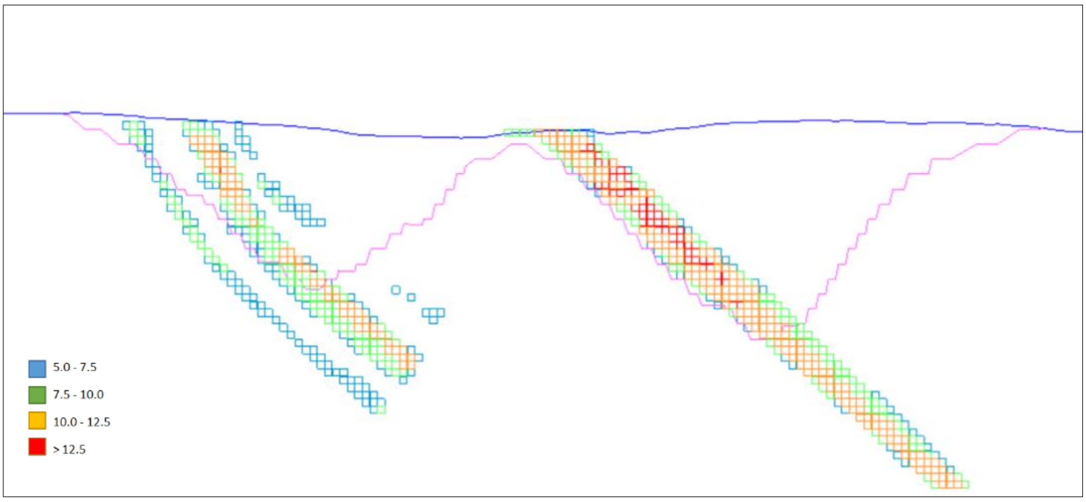


Figure 6 - SMU Model Section 472100mE



The additional benefit to the SMU analysis is that the resultant block model can be used for optimisations and production scheduling with no additional factoring.

1.4.4 Modifying parameters and optimisations

The open-pit optimisations for the Chilalo deposit were completed using the regularised resource block models. Measured, Indicated and Inferred (MII) mineral resources were included in all optimisations as potential mineral inventory, however only the Measured and Indicated were included in the optimisations to determine the Ore Reserve.

1.4.5 *Modifying Parameters*

- ***Exclusion Areas***

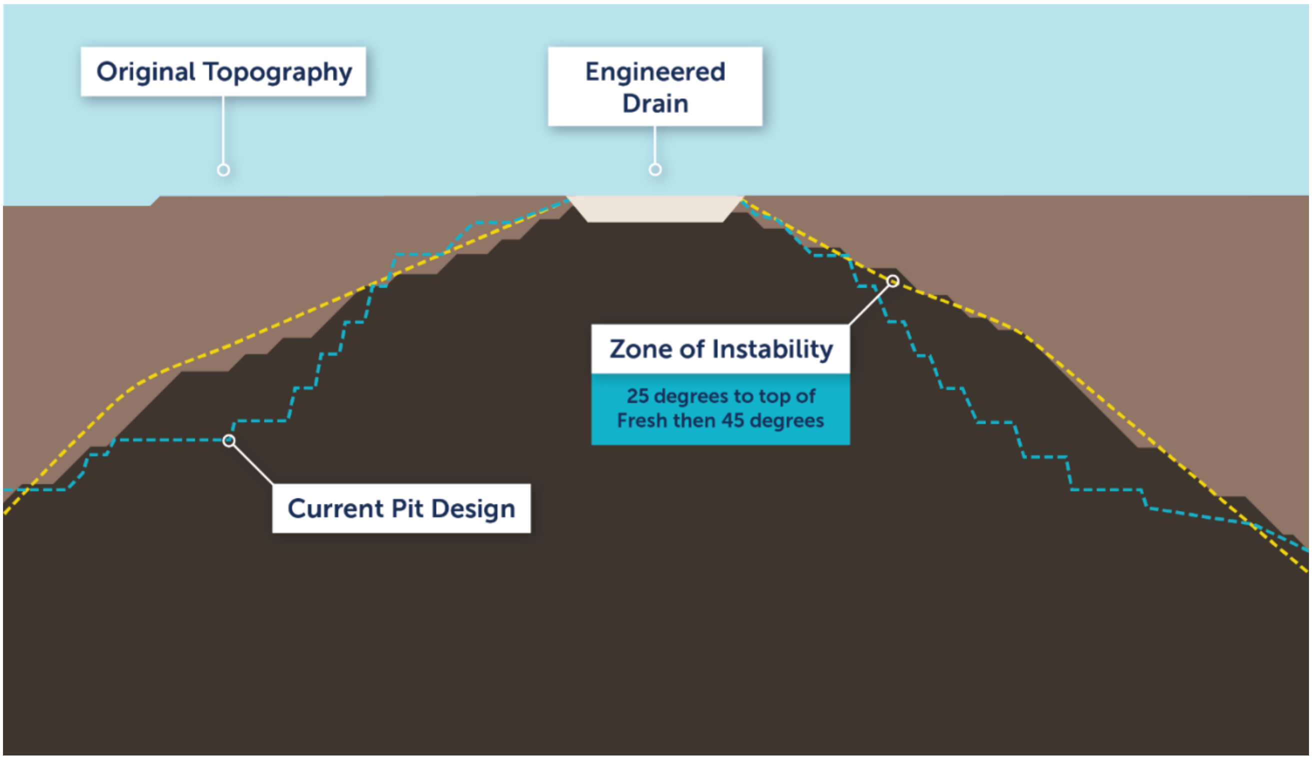
As the Project developed a number of exclusion areas have been identified, predominantly on cultural, environmental or community grounds, which include migration corridors and drainage paths.

The main area affecting the open pits is installing two engineered drains, one between the West and Central pits and a second to the north of the Central Pit. The engineered drain between the West and Central pits must be operational after the completion of all mining activities, and as such must be outside the zones of instability ('**ZoI**') caused by open pit mining.

This ZoI can be estimated as a slope from the drain perimeter down at 25° to the top of fresh rock and then 45° beyond this. No mining can be undertaken within this 'triangle' to ensure the drain remains stable for the long term.

Figure 7 shows the main drain between the West and Central pits along the slopes of the ZoI. This figure clearly shows the pit design is within the zone of instability, which indicates that the drain structure could be potentially unstable at some point in the future if this design was excavated. This ZoI surface must be used as a no-mining surface within the open pit optimisations to ensure the final designs do not cause any instabilities.

Figure 7 - Drain ZOI intersecting West and Central Pits



1.4.6 *Mining Costs*

Eleven African-based mining contractors were invited to submit budgetary pricing (mobilisation, establishment, load and haul, drill and blast, rehandle, rehabilitation and demobilisation) for the Updated DFS. Seven returned submissions and compared against Resolve's First Principals owner mining estimation and the 2020 DFS. All pricing excluded fuel as this will be free issued by Evolution.

Three companies have been shortlisted, with one company selected for input into the mining cost model. In identifying the shortlisted contractors, the Company has taken into account local content laws and regulations.

- ***Non-Mining Costs and Other Parameters***

The non-mining costs, revenue and recovery parameters are as reported in the 2020 DFS. The inclusions are as expected being processing, G&A costs, sustaining capital and additional ore mining costs, expected revenue rates and processing recoveries.

There is no recovery for the Transitional material and the higher recovery for Fresh rock has been used for this material, which is the optimistic case. These parameters are summarised in Table 4. Optimisation Parameters

Table 4 - Optimisation Parameters

Description	Unit	Value
Processing Cost	$/t	24.03
G&A Cost	$/t	6.70
Sustaining Capital	$/t	4.0
Graphite Revenue	$/t	1,500
Transportation Cost	$/t	143
Royalty	%	4.0
Oxide Recovery	%	90.3 (North)
	%	91.8 (Central)
	%	94.5 (West)
Fresh Recovery	%	96.1 (North)
	%	97.5 (Central)
	%	96.1 (West)

The slope parameters utilised in the 2020 DFS were produced by OHMS, were not reviewed by Resolve, included in the optimisation Whittle FXP file and used for this updated mine plan.

1.4.7 *Optimisation Results*

Resolve took the SMU model and has undertaken a new series of optimisations with the modifying parameters as updated in Section 1.3.5.

The nested pit shells produced by Whittle are shown in Table 5 and Figure 8, which shows that the shapes of the expanding shells follow the same sequence as the 2020 DFS pit stages and that the Central pit contains the highest values, which should be targeted early in the mine life. Figure 9 shows that the Central and West pits are no longer connected because of the engineered diversion channel.

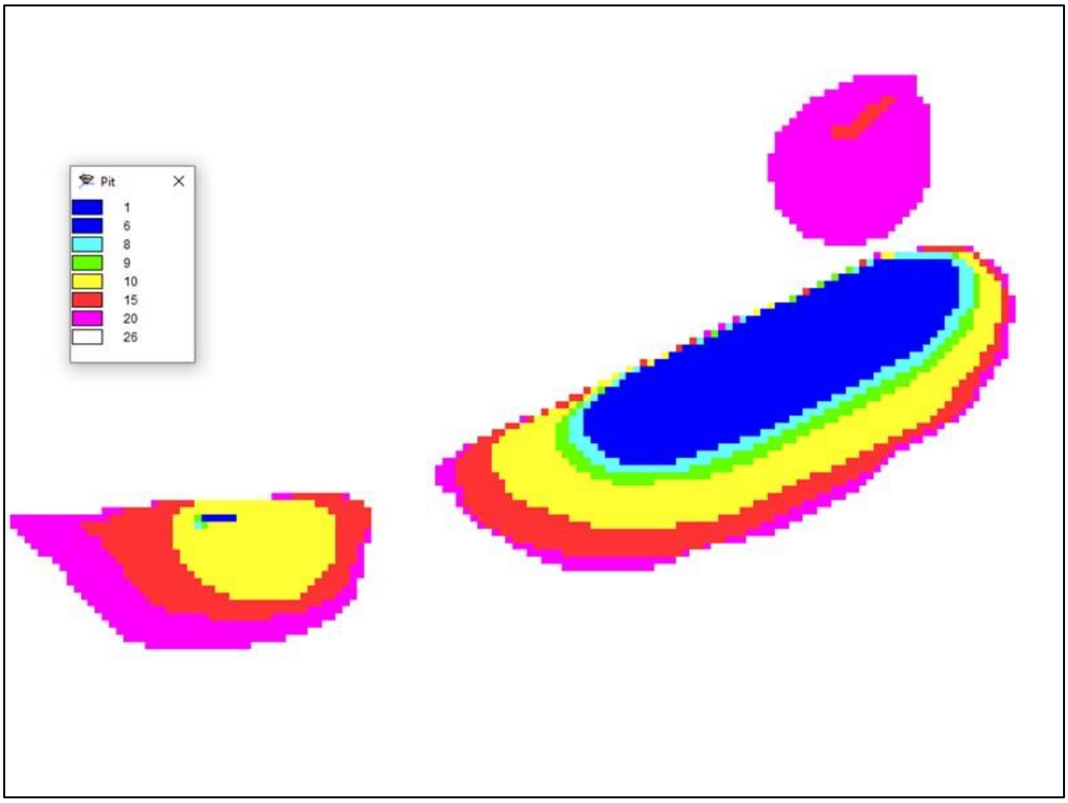
Figure 7 shows the interaction between the engineered diversion channel and the updated optimisation and includes the areas where the pits need to be stepped in to ensure the zone of instability is maintained.

Table 5 summarises the optimisation results for the Indicated Resource only when a practical mining schedule has been applied to generate the specified case.

Figure 8 - Whittle Selected Pit Shells

Shell	RF	Ore (Mt)	Ore (%TGC)	Waste (Mt)	Total (Mt)	Cost ($M)	Revenue ($M)	Cashflow ($M)	DCF ($M)
1	0.40	0.0	14.6	0.0	0.0	-0.3	1	0.6	**0.6**
2	0.42	0.0	14.0	0.0	0.0	-0.8	2	1.4	**1.4**
3	0.44	0.0	13.5	0.0	0.0	-1.3	3	2.2	**2.2**
4	0.46	0.2	13.0	0.2	0.4	-11.1	27	16.1	**15.6**
5	0.48	0.4	12.7	0.7	1.0	-26.8	63	36.7	**34.2**
6	0.50	0.6	12.4	1.2	1.8	-45.9	106	60.5	**54.7**
7	0.52	2.3	12.1	8.0	10.4	-187.5	409	221.6	**159.8**
8	0.54	2.8	12.0	10.0	12.9	-226.0	488	262.0	**178.4**
9	0.56	3.3	11.9	12.3	15.5	-263.3	560	297.2	**196.2**
10	0.58	3.7	11.8	14.7	18.3	-298.6	627	328.5	**208.9**
11	0.60	4.2	11.7	17.6	21.8	-342.6	707	364.3	**221.6**
12	0.62	4.6	11.5	19.0	23.5	-371.2	757	386.1	**228.6**
13	0.64	5.1	11.4	22.3	27.4	-418.0	837	419.1	**239.8**
14	0.66	5.4	11.2	23.9	29.4	-445.7	882	436.8	**244.8**
15	0.68	5.9	11.2	27.3	33.1	-486.8	948	461.1	**250.3**
16	0.70	6.1	11.1	28.3	34.4	-502.6	972	469.8	**252.1**
17	0.72	6.5	11.0	31.5	38.0	-541.3	1,031	489.4	**254.9**
18	0.74	6.7	10.9	33.0	39.7	-561.4	1,060	498.5	**256.8**
19	0.76	7.0	10.8	34.2	41.2	-580.5	1,087	506.3	**258.4**
20	0.78	7.2	10.7	36.4	43.6	-603.1	1,118	514.7	**260.1**
21	0.80	7.4	10.7	37.3	44.7	-616.4	1,136	519.2	**260.8**
22	0.82	7.6	10.6	38.8	46.4	-635.6	1,160	524.8	**261.7**
23	0.84	8.2	10.5	45.2	53.4	-700.5	1,243	542.2	**263.9**
24	0.86	8.4	10.4	46.3	54.7	-713.8	1,259	545.2	**264.1**
25	0.88	8.4	10.4	46.7	55.1	-718.5	1,265	546.1	**264.2**
26	0.90	8.5	10.3	47.7	56.2	-728.2	1,276	547.8	**264.2**
27	0.92	8.6	10.3	47.9	56.5	-731.3	1,280	548.2	**264.2**
28	0.94	8.6	10.3	48.8	57.5	-739.3	1,289	549.3	**264.2**
29	0.96	8.7	10.3	49.9	58.6	-749.0	1,299	550.3	**263.9**
30	0.98	8.9	10.2	52.0	60.9	-769.9	1,322	551.9	**263.6**
31	1.00	9.0	10.2	52.6	61.6	-775.9	1,328	552.2	**263.5**
32	1.02	9.0	10.2	53.0	62.0	-779.9	1,332	552.3	**263.4**
33	1.04	9.1	10.2	53.5	62.6	-784.4	1,337	552.4	**263.2**
34	1.06	9.1	10.2	53.8	62.8	-786.1	1,339	552.4	**263.1**
35	1.08	9.1	10.2	54.0	63.1	-788.3	1,341	552.3	**263.0**
36	**1.10**	**0.0**	**14.6**	**0.0**	**0.0**	**-791.8**	**1,344**	**552.1**	**262.9**

Figure 9 - Final Pit Design



1.4.8 Mine Design

Following on from the resource optimisation, pit designs were completed and defined the mineral inventories for the deposits estimated.

The mine design parameters, which were defined by during the previous studies, are unchanged and based on geotechnical assessment across all pits. These are:

- Operating bench heights, 10m;
- Ramp widths, 17m dual lane and 12m for single lane;
- Ramp gradients maintained at less than 10%; and
- Minimum mining widths, 60m for cutbacks and 30m at pit base.

The geotechnical slope parameters for were defined by OHMS in the CSA Global study as;

- 10m benches with 10.5m berms and 40º batters in Oxide;
- 10m benches with 4.5m berms and 80º batters in Transitional and Fresh in the Southern Wall; and
- 10m benches with 5.25m berms and 70º batters in Transitional and Fresh in the Northern Wall.

1.4.9 *Open Pit Designs*

The updated pit designs are similar in overall tonnage and dimensions as the 2020 DFS pits. The Central Pit is approximately 950 m long, 350 m wide and 170m deep. The final pit is accessed by a single dual-lane ramp, but each cutback can be accessed via an additional ramp on the south wall which is retreat-mined out for the final stage.

The North Pit is connected to the Central Pit but has its own access ramp system. This pit is approximately circular having a diameter of 300m and a depth of 122m. This pit is mined in two stages. The Western Pit is no longer connected to the Central Pit and stands alone with the engineered diversion channel as the separation. The Western Pit is planned to be mined in two stages, however it is likely that these stages may merge to ensure continuous ore supply. The final pit designs are shown in Figure 9, while the individual stages are shown in Figure 10.

Figure 9 - Final Pit Design

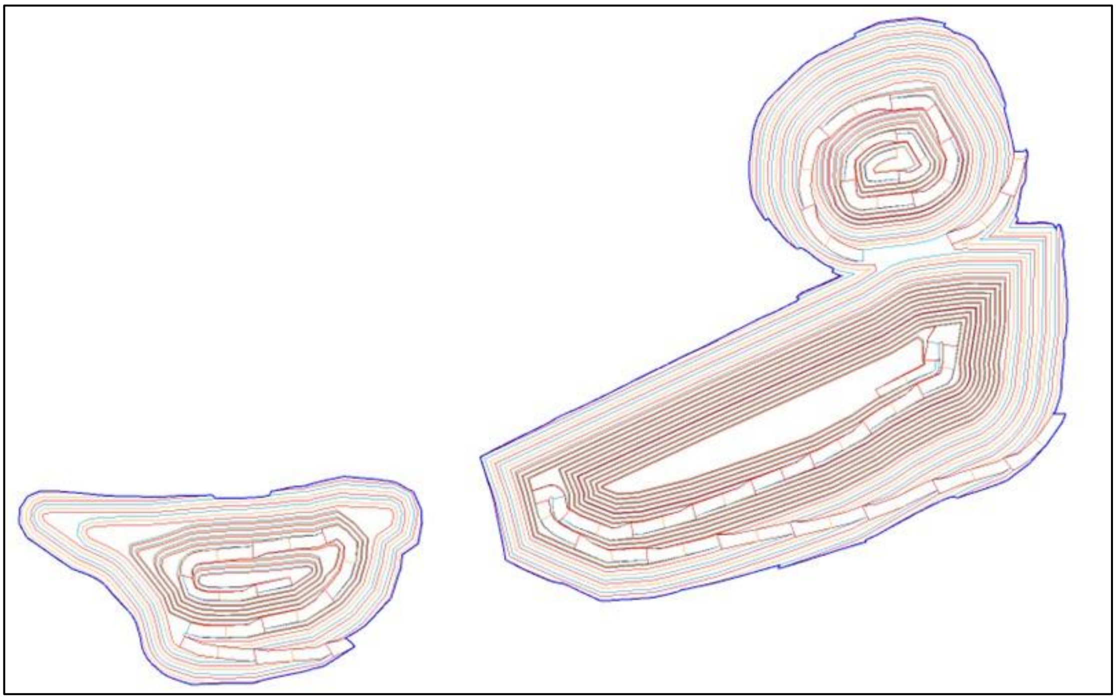
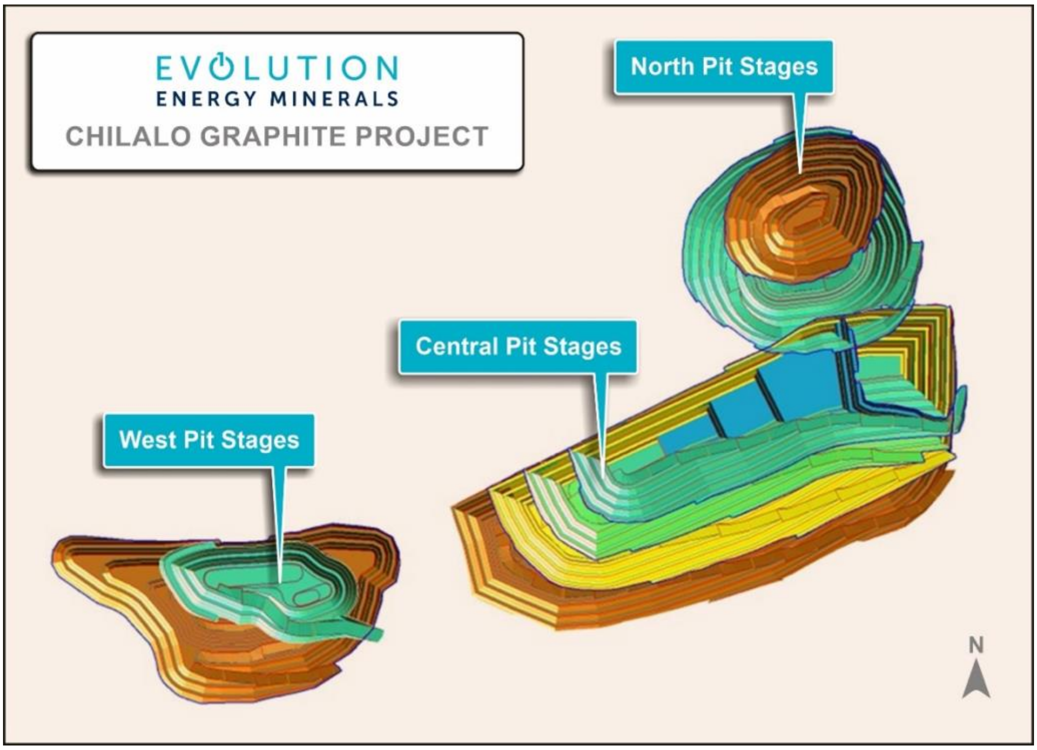


Figure 10 - Pit Stage Designs



1.4.10 *Mining Inventory*

Table 6 summarises the mining inventory within each pit design including a breakdown of the mineral classification of the mill feed.

While the production schedule can include Inferred in the mine plan, and financial modelling can include the production from the Inferred, this material cannot be included in an Ore Reserve and any revenue from this material must be discounted. Using these designs for an Ore Reserve will require a financial evaluation where there is no revenue from Inferred mineralisation but the mining costs remain unchanged, resulting in a poorer outcome.

Table 6 - Mining inventory

Description	Unit	Central	North	West	Total
Mill Feed					
Indicated	**Dry Mt**	5.74	0.71	1.52	**7.97**
	TGC (%)	11.3	9.7	7.7	**10.5**
Inferred	**Dry Mt**	0.16	0.17	0.02	**0.34**
	TGC (%)	11.0	8.4	7.7	**9.5**
Low Grade	**Dry Mt**	6.58	2.23	1.56	**10.37**
	TGC (%)	19.21	2.67	2.87	**24.75**
Mineralised Waste	Dry Mt	11.33	3.72	3.06	**18.11**
Waste (PAF)*	Dry Mt	43.01	9.51	9.02	**61.55**
Waste (NAF)*	Dry Mt	5.74	0.71	1.52	**7.97**
Total	**Dry Mt**	11.3	9.7	7.7	**10.5**

NAF = Non Acid Forming
PAF = Potential Acid Forming

1.4.11 Overburden Dumps and Stockpiles

The 2020 DFS did not include detailed waste dump designs but located a single dump to the north of the open pits which was utilised for mineralized waste, NAF and PAF waste storage. The new designs have been relocated to the south of the open pits at the recommendations from Evolution's environmental and hydrological consultants.

The final dumps are shown in Figure 11, including two NAF and PAF ex-pit dumps, one NAF and PAF backfill (dark blue), the RoM and LG stockpile pads (brown) and a NAF stockpile (light blue) which is used during closure and rehabilitation.

The NAF and PAF dumps have been designed in a number of stages ensuring a NAF outer cell is maintained at all times to ensure encapsulation of the PAF. The NAF outer cell on the dumps has also been designed at the final rehabilitation slope so that no further material movement is required at closure, which also ensures no accidental exposure of the PAF during closure.

1.4.12 Production Schedule

- Processing Rates

  The over-arching production target is the mill feed which is set as 0.5 Mt per year at a grade above 10% TGC.

- Mining Rates

  The mining rate required to ensure continuous mill feed, and the production targets, is determined by the production schedule, however the rate needs to be cognisant of the equipment productivity and shift arrangements.

- Mining Sequence

  The mining sequence is similar to the 2020 DFS, however the western areas were brought forward as the physical properties in the graphite are expected to add value, even at the lower grades. The sequence is:

  - Central Pit stages 1-4;
  - Northern Pit, mined to supply ore as incremental strip ratios increase for the Central cutbacks; and
  - Western Pits;
  - Central stage 5, being highest incremental strip ratio.

- Mining and Processing

  The production plan is summarised in Tables 7 and 8.

  The production schedule shows that 0.5 Mtpa of final product can be achieved once full construction and commissioning is achieved in year two. This production rate can be maintained for the life of mine.

To achieve this annual production, both the processing and mining rates are required to increase steadily over the full mine life. The required mining and processing rates are shown in Figure 11, which illustrates the mining rate increasing to 4 Mtpa in year 8 and then peaking at 5.5 Mtpa when stripping of the final stage in Central is commenced in year 13. Figure 13 shows the mining areas that are scheduled each year.

Figure 11 - Annual total movement

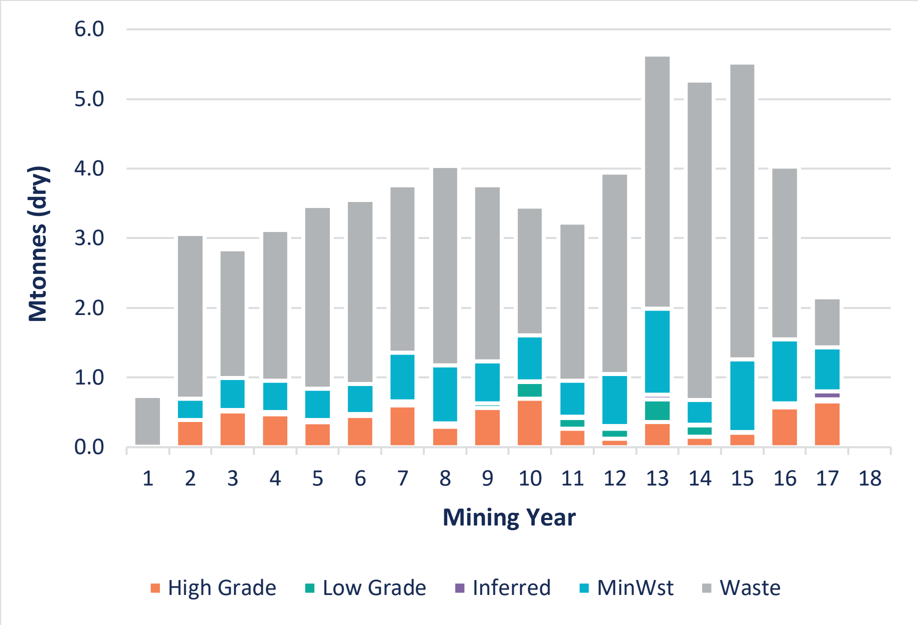


Figure 12 - Annual Total Crushing

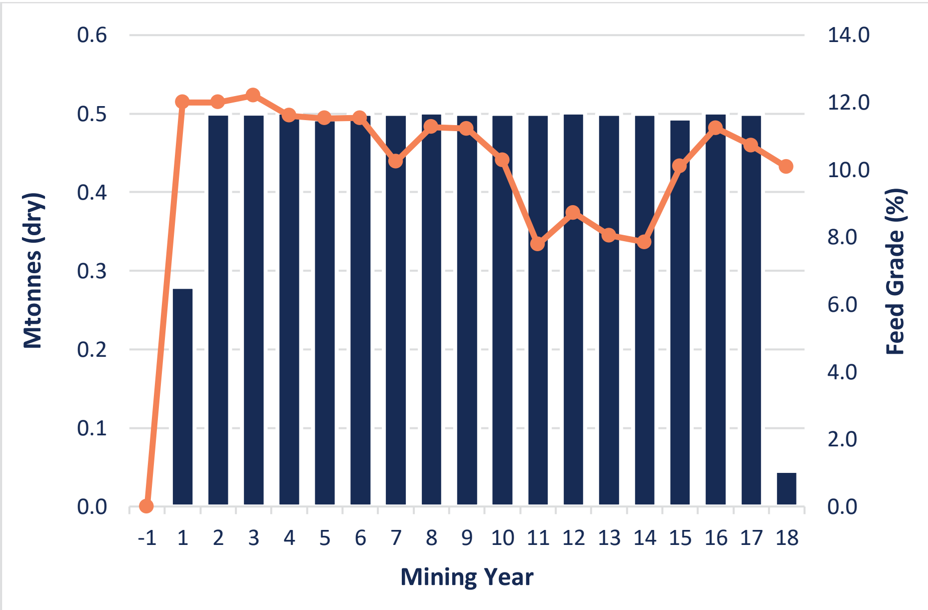
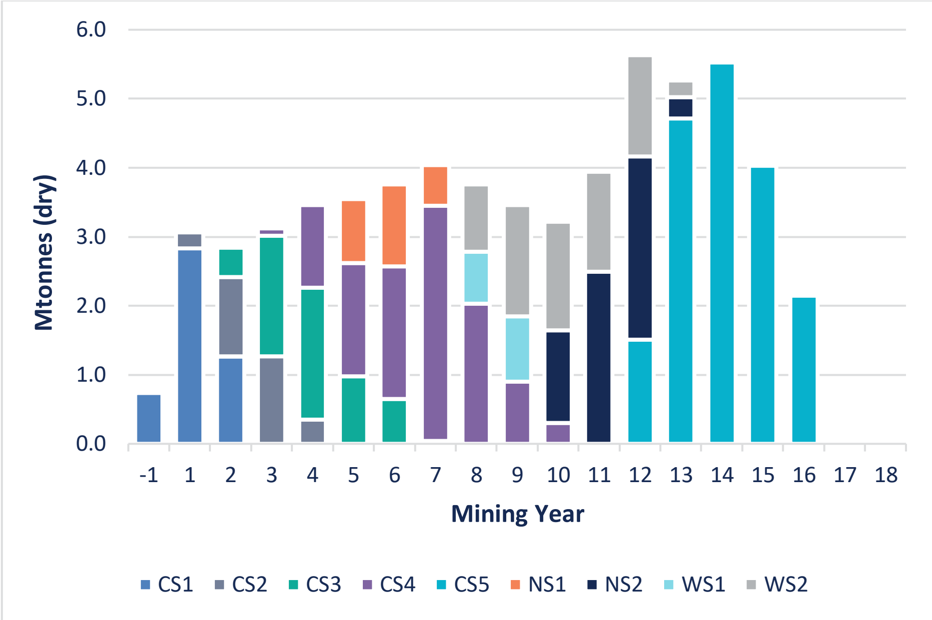


Figure 13 - Annual Total Mining Pit by Area



The schedule shows a consistent mining rate for the first 10 years, which will allow the mining contractor to establish themselves with sufficient equipment and manning to ensure efficient production levels can be achieved. After the first 10 years, when the last stage of Central pit has commenced, there is a need to lift the mining rate by nearly 50%. There is sufficient time before this is required to assess the incremental value that these last years of mining can add if other deposits are available for development, notwithstanding that this last stage is profitable and does add value to the Project.

Table 7 - Annual Mining and Movement Summary

Description	Unit	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	TOTAL
Ore	Mt (dry)	0.00	0.39	0.51	0.47	0.36	0.45	0.60	0.29	0.56	0.69	0.27	0.12	0.36	0.15	0.21	0.57	0.66	0.00	0.00	**6.68**
Inferred	Mt (dry)	0.00	0.00	0.00	0.01	0.03	0.01	0.03	0.04	0.06	0.24	0.15	0.14	0.32	0.17	0.01	0.05	0.03	0.00	0.00	**1.30**
Min. Waste	Mt (dry)	0.00	0.00	0.02	0.02	0.00	0.01	0.03	0.02	0.00	0.01	0.01	0.04	0.07	0.00	0.00	0.00	0.12	0.00	0.00	**0.34**
NAF Waste	Mt (dry)	0.00	0.30	0.46	0.45	0.45	0.43	0.70	0.83	0.60	0.66	0.52	0.75	1.24	0.36	1.05	0.93	0.63	0.00	0.00	**10.36**
PAF Waste	Mt (dry)	0.73	2.37	1.85	2.16	2.63	2.64	2.40	2.86	2.53	1.85	2.27	2.89	3.65	4.58	4.26	2.48	0.71	0.00	0.00	**42.86**
Total Mining	**Mt (dry)**	**0.74**	**3.06**	**2.84**	**3.12**	**3.46**	**3.55**	**3.76**	**4.04**	**3.76**	**3.46**	**3.22**	**3.94**	**5.64**	**5.26**	**5.52**	**4.03**	**2.15**	**0.00**	**0.00**	**61.55**

Table 8 - Annual Processing Summary

Description	Unit	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	TOTAL
Ore Processing	Mt (wet)	-	0.28	0.50	0.50	0.50	0.49	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.49	0.50	0.50	0.04	**8.32**
TGC	%	-	12.00	12.00	12.21	11.61	11.53	11.54	10.24	11.27	11.22	10.29	7.78	8.72	8.05	7.85	10.10	11.24	10.72	10.08	**10.45**
Indicated	Mt (wet)	-	0.28	0.48	0.48	0.50	0.49	0.48	0.47	0.50	0.49	0.50	0.45	0.43	0.50	0.50	0.49	0.48	0.44	0.00	**7.97**
Inferred	Mt (wet)	-	0.00	0.02	0.02	0.00	0.01	0.02	0.03	0.00	0.01	0.00	0.05	0.07	0.00	0.00	0.00	0.02	0.06	0.04	**0.34**
% Inferred	%	0%	0%	3%	4%	0%	1%	4%	6%	0%	1%	1%	11%	13%	0%	0%	0%	3%	12%	89%	4%

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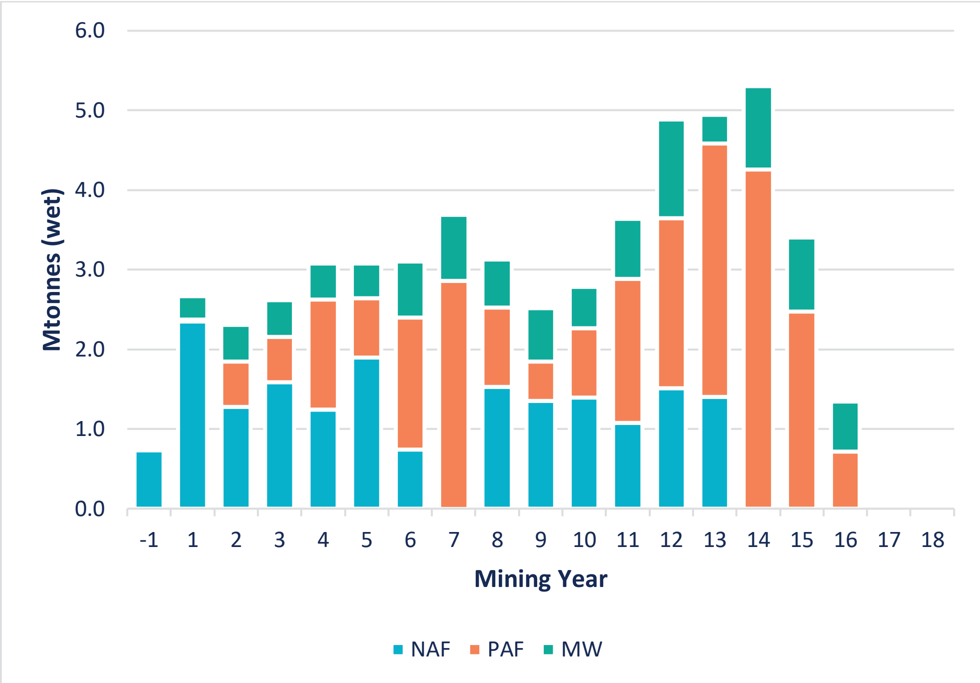
1.4.13 *Waste Management*

The annual waste mined by material type is shown in Figure 14, which includes the mineralized waste. The waste dump management does not separate the mineralized waste from the PAF and is included in those dumps.

The main focus of the waste management is that all mineralised waste and PAF must be covered in NAF prior to mine closure, as this material is likely to leach or oxidise of exposed to the environment long term. As such all dumps have been designed and scheduled to encapsulate the PAF dumps as soon as constructed, with the NAF material being sourced either from the pits being mined or from stockpiles build when excess NAF is mined.

Figure 14 - Annual Waste Mining by Material Type



To ensure that the PAF can be encapsulated, there is a need to stockpile some NAF material that cannot be directly placed into a valid dump. This stockpiled NAF is then reclaimed when sufficient dump area is available. The construction of the NAF and PAF dumps is shown in Figure 15 and Figure 16, where for the NAF dump, the stockpiled material is shown as the grey columns.

PAF encapsulation is key to the overall site environmental management, and this needs to be considered in all mining plans, along with a need to ensure that short term gains do not impact the final closure outcomes. It is therefore necessary that no encapsulation material is wasted, and it is likely that the additional short-term cost of stockpiling NAF will be significantly less that sourcing additional material at the end of the mine life.

Figure 15 - Annual PAF Waste Dump Construction

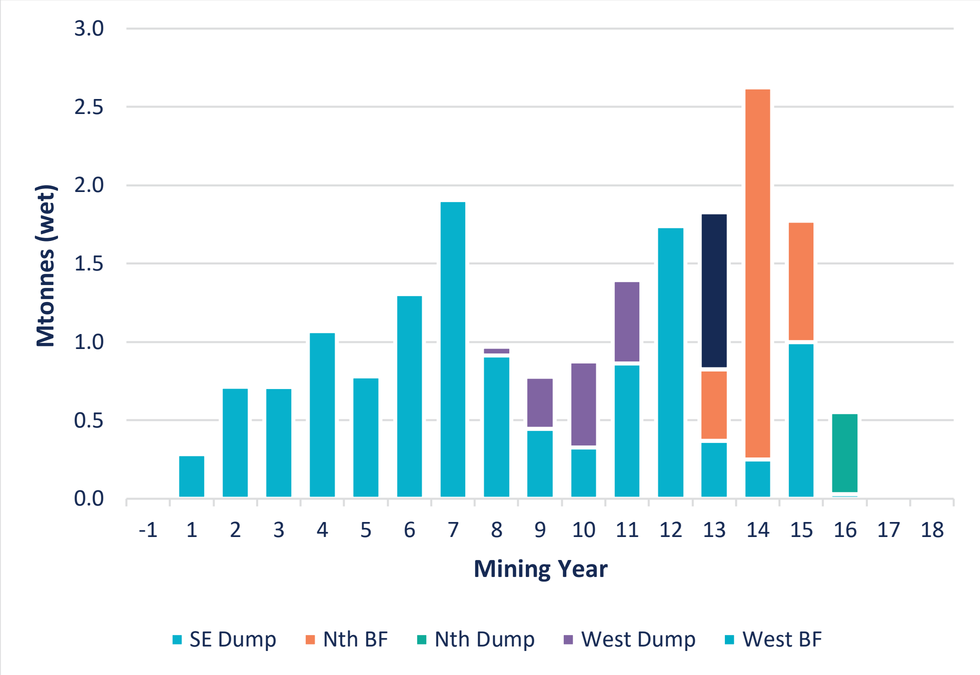
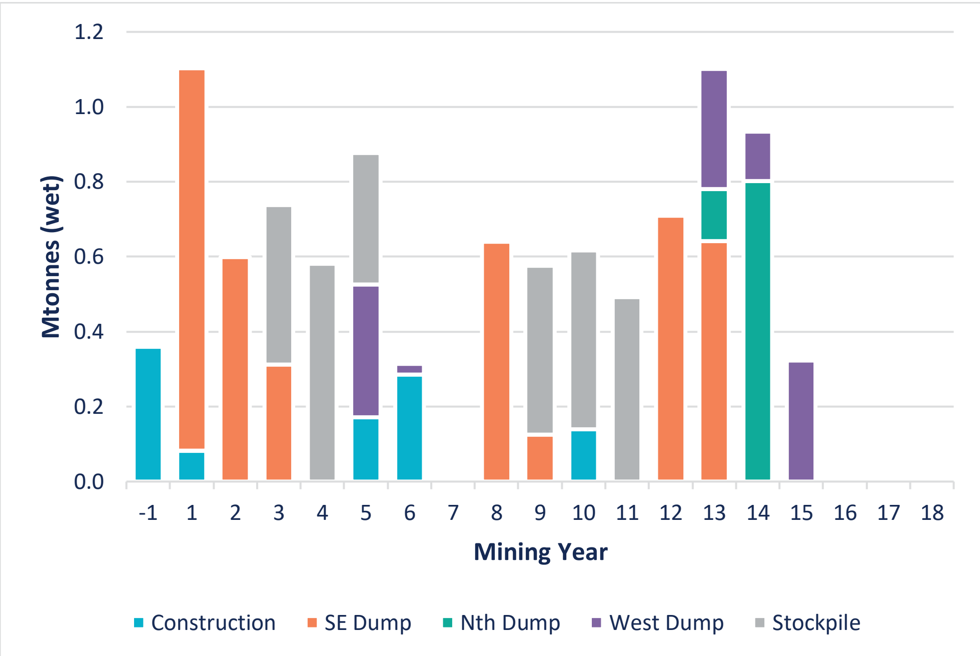


Figure 16 - Annual NAF Waste Dump Construction



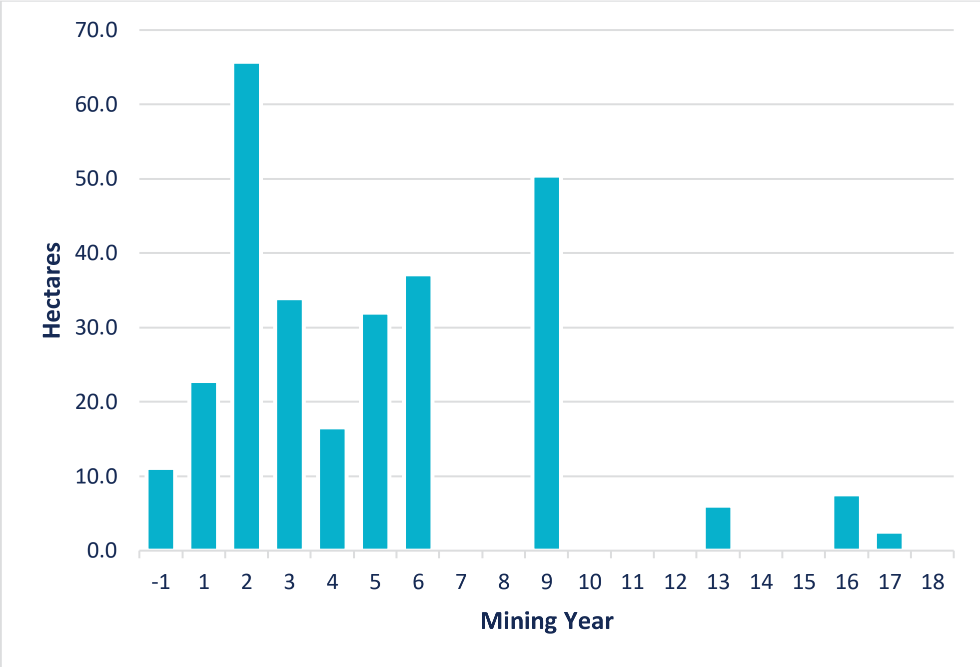
1.4.14 Disturbance Schedule

The total area disturbed by the mining plan is 285 hectares. This includes not only the pits and dumps but also the stockpiles, roads, mine water catchment facilities and the necessary infrastructure to undertake the mining.

Excluded from this disturbance is the plant and associated civil infrastructure along with the administration, power generation and accommodation facilities. Also excluded is the areas that will be inundated behind the water dam embankments.

Clearing and stripping of the mining areas has been planned on an as-required basis and generally stripped 3-6 months prior to the area being needed. The annual clearing area is shown in Figure 17.

Figure 17 - Annual Area Cleared



1.4.15 Mining Cost Estimate

The basis of the mining cost estimate is set out below.

- Accuracy

  For the purpose of this study, a +/-10% accurate operating cost estimate has been targeted to maintain the accuracy levels for the Updated DFS. All supplier quotations were requested to meet these targets.

- Capital Costs

  The total mining capital cost estimate for the project includes only two main categories:

  - Contractor mobilisation and establishment; and
  - Pre-production mining expenses.

  Other capital costs associated with the mining and technical services teams within Evolution are included in the project capital estimates and not included in this mining cost estimate. This would include specialist mining software and hardware, survey equipment (potentially including drones) and the associated office facilities and light vehicles.

1.4.16 Pre-Production Mining

Pre-production mining, including clearing and stripping, commences twelve months prior to plant commissioning. All the operating expenses for this period are classified as pre-production capital. The plant is commissioned after nine months of mining.

The operating costs associated with the pre-production mining up until month 7 of Year 1 are summarised in Table 9. These operating costs include a full complement of management and supervision to support the mining operation as soon as they commence.

Table 9 - Mining Pre-Production Costs

Description	Cost ($M)	Unit Cost ($/t mined)	% of Total
Mobilisation & Establishment	0.71	0.36	9%
Fixed Charges	1.01	0.50	13%
Clear and Strip	0.17	0.08	2%
Drill and Blast	1.05	0.52	13%
Load and Haul Ore	0.05	0.02	1%
Load and Haul Waste	1.29	0.64	16%
Reclaim Waste from Stockpile	0.00	0.00	0
Ore Rehandle to Crusher	0.00	0.00	0%
Dry Tails Rehandle to Main Dump	0.00	0.00	0%
Total Contractor Costs	**4.27**	**2.14**	**55%**
Technical Services Salaries	2.11	1.06	27%
External Consultants	0.10	0.05	1%
Fuel Cost	1.18	0.59	15%
Rehabilitation	0.00	0.00	0
Grade Control Drilling	0.14	0.07	2%
Grade Control Sampling	0.03	0.02	0%
Total Company Costs	**3.56**	**1.78**	**45%**
Total Cost	**7.82**	**3.92**	**100%**

1.4.17 Geotechnical review

OHMS was contracted to perform analyses in assessing the stability of the North pit backfill and Waste Rock Dump, South-East Waste Rock Dump ('**WRD**') and the Zone of Influence.

To determine the stability of the two main WRDs, the South-East and the North pit backfill, material properties for waste rock material were defined, which were used in the 3D Finite Element numerical models.

Material properties for different rock types from previous geotechnical analysis

(LC/20190531/MO6086/B24) and the composition (%) of the WRD from total waste volumes, were used to obtain the material properties for waste rock material. A method proposed by Barton (2016) was used to quantify the shear strength parameters of the waste dump material. Parameters such as normal stress, particle size distribution, porosity, roughness and residual friction angle, were considered.

Slope and dump stability was assessed using the RS3, three-dimensional, finite element software package from Rocscience. Three-dimensional wireframes supplied, represents the topography, geological solids, pits, waste dumps, phreatic surface and weathering profile were used to construct the models.

The mining sequence is represented in 4 steps, namely:

- Step One – Mining the North and Central pits

  The aim of modelling in this step is to assess the stability of each of the two main pits, as well as to test the stability of the saddle between the north and final stage of the central pit.

- Step Two – Backfilling the North pit

  Backfilling of the northern pit was conducted to assess whether the backfill is sufficient in preventing the failure observed in Step 1, especially with the introduction of water.

- Step Three – Construct the North dump

  The main objective of Step 3 is to assess whether the construction and placement of the north dump has a detrimental effect on the saddle between the north dump, and the central dump.

- Step Four – Construct Southeast dump and mine West pit

  The main objectives of this step in the model were to assess whether the introduction of the south-eastern dump will have a detrimental effect on the central pit stability, and to assess the effect that mining the western pit has on the factor of safety of the central pit, if any.

Each mining step/stage aims to investigate a particular set of circumstances. For each mining step, three iterations of the same model were assessed. An initial model was run without a phreatic surface or weathering profile, a second model included a phreatic surface, and a third model included both a phreatic surface, and a weathering profile. This was done in order to understand the effect weathering and water has on the stability of the open pit slopes.

The safety factors for all four mining steps, are relatively high and stable conditions are assumed. However, where water and weathering are introduced in Step 1, deformation is expected in the bottom of the North pit with a Factor of Safety <1.0. However, backfilling will provide confinement of the pit walls and deformation will, therefore, not be a factor.

The outcome of the open pit stability modelling can be seen in the table below.

Table 10 - Pit Stability Modelling

Mining Step	Dry, Non-Weathered	Wet, Non-Weathered	Wet, Weathered
1	3.8	0.8	0.8
2	3.9	3.1	2.8
3	3.7	2.9	2.7
4	4.0	4.0	3.0

The factors of safety for the dumps are depicted in the table below.

Table 11 - Safety factor for waste rock dumps

Dump	Achieved Factor of Safety
North Dump	6.4
Southeast Dump	4.0

The damage anticipated in the zone of influence can be characterised by several slight fractures inside building; visible external cracks; doors and windows might stick slightly. Width of cracks are anticipated to remain < 5mm.

A conservative 65m exclusion zone around the periphery of the pit was determined to be the location of anticipated failure.

1.4.18 Ore Reserve

The Updated DFS has produced an Ore Reserve estimate prepared under the guidelines of the 2012 JORC Code of 8.0 Mt containing 836 Kt of contained graphite. The Ore Reserves are estimated from their respective Mineral Resources after consideration of the level of confidence in the Mineral Resource and taking account of material and relevant modifying factors. No Inferred Mineral Resources have been included in the Ore Reserve.

Table 12 - Chilalo Project Ore Reserve Estimate

Deposit	JORC classification	Tonnes (Mt)	Grade TGC (%)	Contained Graphite (Kt)
Chilalo	Proven	-	-	-
	Probable	8.0	10.5	836
Total	**Total**	**8.0**	**10.5**	**836**

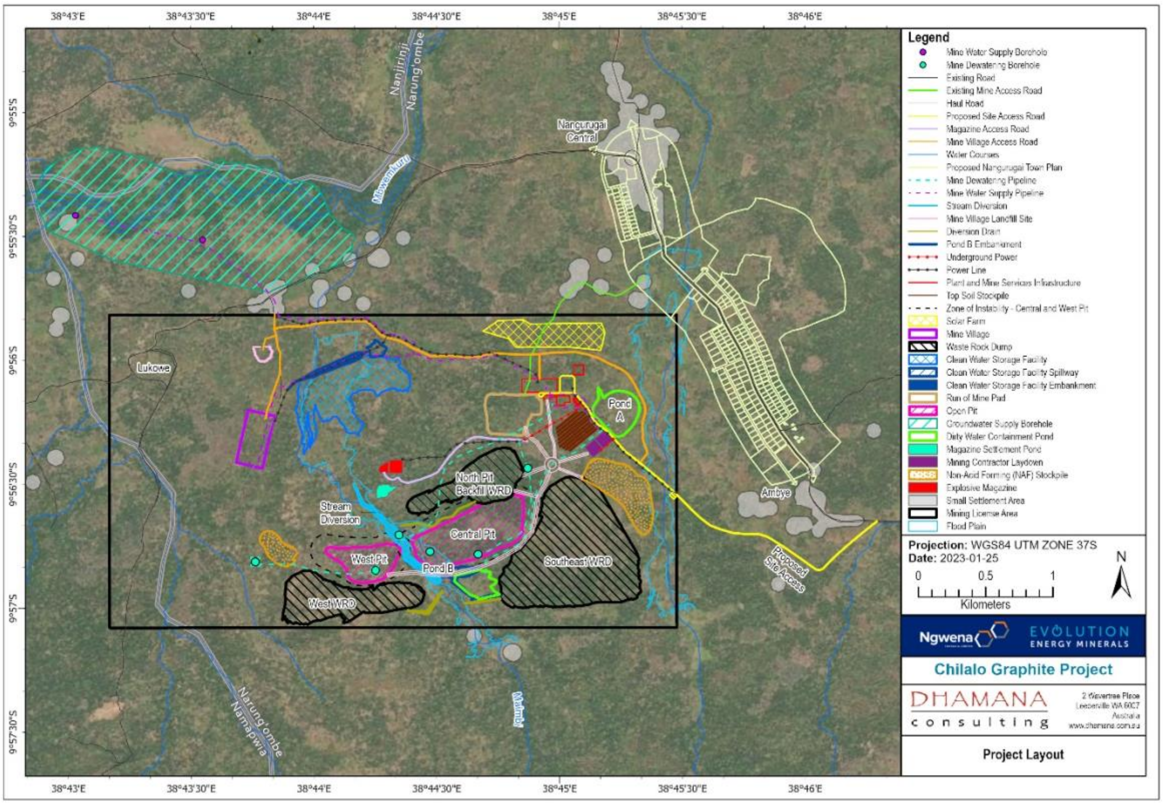
The economic viability of the project for the estimation of Ore Reserves does not require the full financial modelling expected for the project feasibility as the economic hurdles for viability are not as restricted as those for equity raising or borrowing.

A simple cost and revenue, with earnings before interest and tax (EBIT) can provide sufficient evidence for estimating an Ore Reserve.

A simple cash flow model using the current non-mining capital and operating costs that were supplied by Evolution from the most recent estimates and financial modelling, added to the updated mining capital and operating costs were sued to undertake the economic evaluation an average sales price of US$1,615 per tonne of concentrate. For further information on the Ore Reserve, refer to Annexure B.

1.4.19 Site Layout

Figure 18 - Site Layout



1.5 Metallurgy and Processing

1.5.1 DFS Testwork

Approximately two tonnes of drill core was used to form global master composites as well as establish variability composites.

The master composites were either Fresh or Oxide ore composites with samples coming from all three areas of the resource (North, Central and West). The samples were selected based on consultation with the CSA Global geological consultant and included consideration of sample representivity, appropriate cut off grades, location within the likely pit shells, mineralisation continuity, mining widths, lithology, weathering, internal waste dilution and spatial representivity within the pits.

The variability composites were formed by splitting the three resource areas into fresh and oxide zones and preparing six individual composites representative of resource area and weathering.

Table 13 - Variability Testwork - Flake Size Distribution

Mesh size	Microns	North Oxide	North Fresh	Central Oxide	Central Fresh	West Oxide	West Fresh	Weighted Average[1]
% of Feed		2%	7%	9%	62%	5%	15%	100%
+20	> 850	2.7	0.6	-	0.6	0.7	1.2	0.7
+32	500 – 850	12.9	8.8	5.1	10.8	7.0	9.6	9.8
+50	300 – 500	20.3	18.0	28.3	20.7	18.1	19.9	20.6
+80	180 – 300	20.9	23.5	30.7	27.7	27.5	27.2	26.9
+100	150 – 180	4.9	5.6	8.5	6.1	6.3	6.3	6.3
-100	< 150	38.3	43.4	27.4	34.1	35.9	35.9	35.8

1. *Weighted by contribution to life of mine feed to the plant.*

Optimisation included variations in polishing times and attritioning times, grinding media size, reagents, alternative equipment and the use of Chilalo site water. Samples from each variability composite were also taken for petrographic analysis/investigation. The petrography program was designed to quantify the number of large flakes present in the ore for each of the variability samples and to understand the extent to which the coarse flakes were liberated, split, thin or composited.

In 2019, the Beijing General Research Institute of Mining and Metallurgy ('**BGRIMM**') carried out a peer review of the testwork and the flowsheet. BGRIMM's view was that the flowsheet was well suited to flake size preservation.

Subsequent to the 2020 DFS, minor changes have been made to the flow sheet, focused on maximising the proportion of coarse flake graphite, including exchanging the secondary crusher from a cone crusher to a horizontal shaft crusher, the addition of a scalping screen ahead of the rod mill to recover coarse, high-grade graphite before it enters the grinding circuit, and a high rate thickener, two additional plate and frame filters and two centrifuges to enable the dry stacking of tailings and elimination of the tailings storage facility. Whilst not confirmed by testwork, these minor changes have been recommended by CPC and equipment manufacturers.

The testwork program included a pilot plant campaign conducted by SGS Lakefield on 27 tonnes of near surface weathered material collected from trenches. One of the purposes of the pilot plant campaign was to confirm whether the proposed flowsheet and lab scale results would be achievable at pilot scale and as such what scale-up might be achievable in the commercial operation. Table 14 below shows the results of the pilot plant campaign alongside the SGS lab results on the same material.

Table 14 - Pilot Plant vs Lab tests

<table>
<tr><th>Mesh Size</th><th>SGS – Pilot Plant</th><th>SGS – Lab Test</th></tr>
<tr><td>+32</td><td>16.3</td><td>14.5</td></tr>
<tr><td>+50</td><td>24.0</td><td>21.8</td></tr>
<tr><td>+80</td><td rowspan="2">18.9</td><td rowspan="2">29.4</td></tr>
<tr><td>+100</td></tr>
<tr><td>-100</td><td>40.8</td><td>34.5</td></tr>
</table>

The pilot plant results, and the lab results are in good agreement, further validating estimated commercial plant performance.

1.5.2 Flake Size Distribution

Following the pilot plant validation of the proposed flowsheet and laboratory results, the financial model included the variability testwork results in Table 13 for each location within the ore body.

Table 15 shows the flake size distribution for Chilalo flake graphite concentrate.

Table 15 - Weighted Average Flake Size Distribution for Chilalo Flake Graphite Concentrate

Mesh Size	Microns	Mass Dist. %
+20	> 850	0.7
+32	500 – 850	9.8
+50	300 – 500	20.6
+80	180 – 300	26.9
+100	150 – 180	6.3
-100	< 150	35.7

In addition to discussions with potential customers, Evolution has considered pricing from numerous independent sources including Benchmark Mineral Intelligence, Fastmarkets, Lone Star Tech Minerals and Wood Mackenzie.

1.5.3 Expandable Graphite Processing

Numerous end users and three independent laboratories evaluated the use of Chilalo flake graphite (in various mesh sizes) to produce expandable graphite and to determine how Chilalo expandable graphite would perform when compared to other expandable graphite producers and products.

The Company has identified a range of international companies with demand for multiple grades of expandable graphite.

Evolution has signed a binding offtake agreement with Yichang Xincheng Graphite Co Ltd ('**YXGC**'), for the sale of 30,000 tpa of coarse flake graphite for a minimum of three years. YXGC is a global leader in the manufacture of high-value expandable graphite and associated high-value graphite products, such as graphite foil. The offtake agreement covers over 50% of Chilalo's production for the first three years and represents over 70% of forecast concentrate revenue over the same period.

Evolution and YXGC have worked closely together over a long period of time, with Chilalo's graphite having been the subject of extensive product qualification with YXGC since 2015. The product qualification work undertaken with YXGC demonstrated that Chilalo produces a premium quality coarse flake concentrate, which is suitable for the production of graphite foils, fire retardants and other high-value products such as bi-polar plates used in green hydrogen batteries.

As per the arrangements agreed prior to the 2020 DFS, the DFS also assumes that the Company's offtake partner (YXGC) will toll treat graphite concentrate into expandable graphite for sale into western markets. The Company has assumed conservative sales ramp-ups for the sale of expandable graphite that has been toll treated.

1.5.4 Micronised Graphite Processing

Micronised graphite is a processed form of natural or synthetic graphite, produced by fine grinding flake graphite concentrate into specific micron particle size distributions. This process allows smaller mesh sizes (-100 mesh or -200 mesh) to be used as raw material feedstock, creating a high potential margin for producers. The key requirements of micronised graphite are achieving a range of micron particle size distributions ('**PSD**') and PSD axis variances to meet the various specifications and performance metrics for targeted applications.

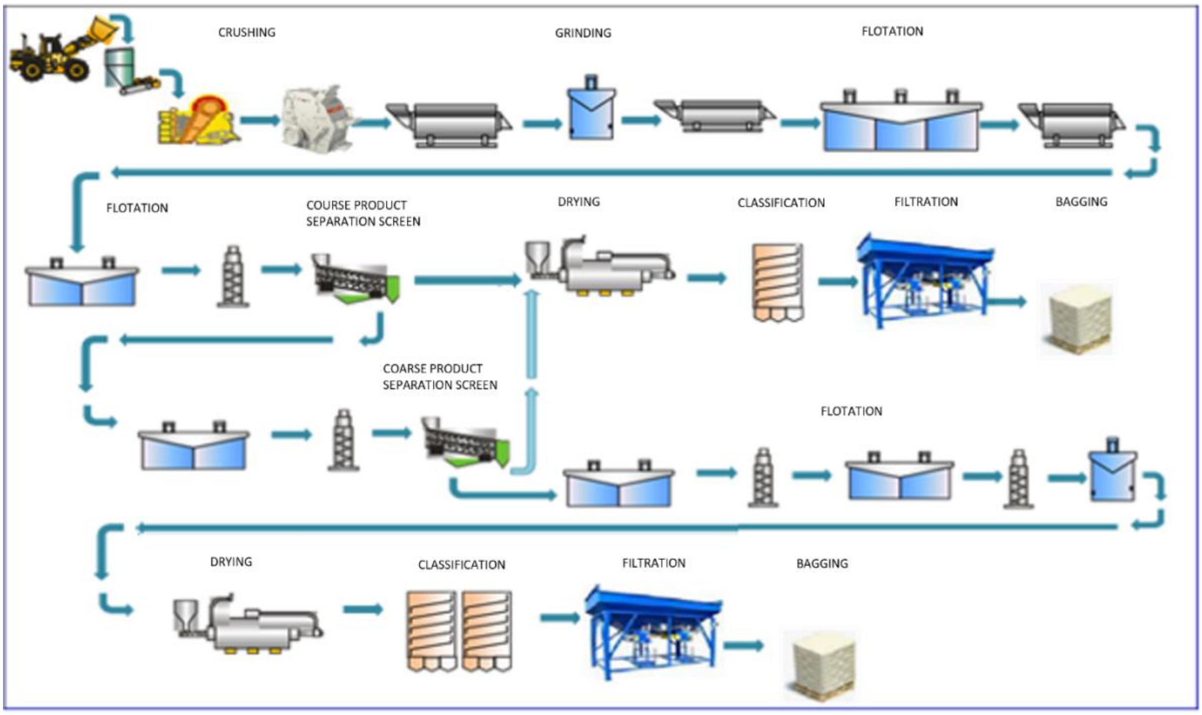
The Company will produce standard purity micronised graphite using micronising equipment that will be installed in the first year of operations and will come online in the second year of operations. The same conservative sales ramp-ups are assumed for the sale of micronised graphite.

1.6 Process Plant and On-Site Infrastructure

1.6.1 Flowsheet

Set out below in Figure 19 is a simplified flow sheet for the Chilalo process plant.

Figure 19 - Simplified Flow Sheet



1.6.2 *Process Plant*

The process plant has been designed to process RoM ore into various saleable graphite concentrates. The process plant will process 500,000 tonnes of ore per annum to produce approximately 50,000 tonnes of graphite concentrate annually over the life of mine.

The key criteria for equipment selection are cost, suitability for duty, reliability, and ease of maintenance. The plant layout will provide easy access to all equipment for operating and maintenance requirements whilst maintaining a compact footprint to minimise construction costs.

The key documents that were developed and updated to define the process plant design include:

- Process design criteria
- Process flow diagrams
- Mass balance
- Mechanical equipment list

The process plant will include a two-stage crushing circuit to deliver the product to a fine ore bin. Ore will be reclaimed from the bin and delivered to a two-stage milling circuit after passing through a scalping screen to recover concentrate grade material prior to milling, to better preserve coarse graphite. Oversize from the scalping screen feeds the primary rod mill equipped with a trommel screen. Rod mill trommel and scalping screen undersize will combine in the rod mill discharge hopper where it is pumped to the rougher flash cell.

The rod mill is equipped with a product screen that works in a closed circuit with the rougher flash flotation cell in between to recover liberated coarse graphite. Rougher flash flotation cell tails feed the rod mill product screen. Rod mill product screen oversize joins scalping screen oversize to feed the rod mill. The undersize from the rod mill screen reports to the secondary ball mill discharge hopper.

The ball mill discharge hopper pumps to the ball mill cyclones which operate in a closed circuit with the secondary ball mill. The overflow from the ball mill cyclones reports to the rougher scavenger cells, and the underflow reports to the ball mill for further grinding.

The rougher flash and rougher scavenger flotation concentrates will feed the primary cleaner polishing mill feed tank and then undergo nine stages of cleaner flotation, four stages of polishing, and three wet screening stages to produce separate high purity coarse and fine graphite concentrates.

Coarse and fine graphite concentrates will be filtered and dried separately using and individual plate and frame filter, and rotary drum dryer for each train.

Dry graphite concentrate will be screened into various product sizes using plansifter screens and bagged into either 1 tonne or 25kg bags for shipping.

Flotation tailings are collected in the tailings hopper where it is pumped to the tails thickener for dewatering. Thickener overflow is used as process water in the plant. Thickener underflow is de-slimed via a set of deslime cyclones. The de-slime cyclone overflow reports to the tails centrifuges and the underflow reports to the tails filter presses for further dewatering. Filter and centrifuge discharge cake is transferred to dry stacking facility. Filtrate and centrate return to tails thickener to improve water clarity prior to returning to the process water tank.

The processing plant design for the DFS has been based on the process design criteria, determined from the test work and confirmed with pilot plant work. The project FEED has built upon and optimised the 2020 DFS process plant using operational graphite experience. While the general concept of the plant remains the same, a confirmatory pilot run using the latest flowsheet would add additional certainty.

The flowsheet uses proven metallurgical processes based on industry norms and specific vendor test work that will optimize recovery, enhance coarse graphite flake preservation, and minimize operating costs.

Equipment selections have been based on fit for purpose duties, reliability, commonality, and ease of maintenance.

The layout of the plant has been optimised to improve operability, ease of maintenance access and to minimise capital costs. In the flotation area, flat configuration, BGRIMM XCF self-pumping flotation cells have been selected, eliminating several concentrate pumping stages, reducing capital expenditure and operating expenditure, making the circuit more reliable, compact, and eliminating concentrate pumping bottlenecks.

Annual design throughput rates for the processing plant have been set at 500,000 tonnes per year of open pit ore with a production of approximately 50,000 tonnes per year of dry graphite concentrate.

The processing plant layout reflects the sequential nature of the processing operations with run of mine ('**RoM**') input at one end of the facility and concentrate production and concentrate bagging at the other end.

The processing facility has been optimised to improve the design:

- Selection of a horizontal shaft impactor for the secondary crushing duty. The higher reduction ratio of this unit is expected to produce a better feed to the rod mill and enhance the flake protection benefits of the rod mill scalping screen and rougher flash flotation cell.

- A rod mill scalping screen has been introduced ahead of the rod mill to allow liberated graphite flake to bypass the rod mill and reduce over-grinding.

- The rougher flash flotation cell has been integrated with the rod mill circulating load. This allows it to operate at higher density (+50% solids w/w) and treat coarser particles, to recover as much coarse graphite as possible without over grinding.

- Flat configuration, self-pumping BGRIMM XCF flotation cells have been included within the circuit. These cells can forward graphite concentrate to the next flotation stage, without the need for additional pumps and hoppers.

- The integration of the coarse graphite separation screens (Rotaspirals) has been greatly simplified, such that screen undersize gravitates to the next flotation stage, which densifies the concentrate to 25-30% solids w/w, ready for regrinding and attritioning. This eliminates the need for multiple dewatering cyclone stages and the lamella thickener in the previous design.

- The tailings circuit has been enhanced from a conventional tailings dam system to a dry stacked tails system. This includes a tailings thickener, two plate-and-frame tailings filters, and two decanter centrifuges for a robust tails handling system that can deal with potential high slime content.

- Allowances have been made to retrofit a system to utilize waste heat from the offgas produced by the power plant as a supplementary energy source for the product dryers.

- The number of products within the product bagging area have been simplified from eight to five.

- The key criteria for equipment selection were suitability for duty, reliability, and ease of maintenance. The plant layout will provide ease of access to all equipment for operating and maintenance requirements whilst maintaining a compact footprint to minimise construction costs.

Processing Route

The processing facility route will comprise:

- A two-stage closed circuit crushing from 500 mm ROM ore top size, to P80 of 8.2 mm circuit product size.
- Primary grinding in a closed-circuit rod mill, with a scalping screen upstream, and a product screen and rougher flash flotation cell downstream to generate a P80 of 1500 µm. Closed circuit secondary grinding in a ball mill followed by cyclones to generate a P80 of 500 µm.
- Scavenger flotation, regrinding of rougher/scavenger concentrate in polishing mill.
- Coarse cleaning and regrind milling of concentrate.
- Screening with Rotaspiral trommel screens of the coarse cleaner product into two size fractions with the +500 µm fraction reporting to the coarse filter feed tank and the -500 µm fraction reporting to the first fine flotation stage.
- Two stage cleaning in cleaners 1 and 2 followed by regrinding the fine cleaner 2 concentrate followed by screening with a Rotaspiral trommel screen of the concentrate into two size fractions with the +300 µm fraction reporting to the coarse filter feed tank and the -300 µm fraction reporting to the cleaner 3 feed.
- Two stage cleaning in cleaners 3 and 4 followed by regrinding the cleaner 4 concentrate and screening with a Rotaspiral trommel screen of the concentrate into two size fractions with the +150 µm fraction reporting to the final cleaner concentrate hopper where it is pumped to fines filter feed tank. The -150 µm fraction then reports to the cleaner 5 feed.
- Two stage cleaning in cleaners 5 and 6 followed by regrinding the cleaner 6 concentrate, followed by a final cleaner 7.
- Final stage cleaning in cleaner 7 Jameson flotation cell. Final fine concentrate is collected in cleaner 7 concentrate hopper together with screen 3 oversize to feed fines filter feed tank.
- Dewatering of the graphite concentrate in coarse and fine plate-and-frame pressure filters.
- Concentrate drying in coarse and fine rotary dryers.
- Dry screening with plansifter screens of graphite concentrates into saleable size fractions.
- Tailings thickening in a conventional high-rate thickener, followed by deslime cyclones to remove problematic slimes from the tails filter feed.

- Tailings plate-and-frame pressure filters for dewatering the deslimed tails.
- Centrifuge decantation for dewatering the slimes.
- Tailings filter and centrifuge cake discharging to a concrete bunker, ready for truck loadout via a front-end loader ('FEL') to the dry stacking facility.
- Reagent mixing, storage, and distribution facilities.
- Water and air supply, storage, and distribution facilities.

Crushing and Screening Circuit

The crushing circuit will be a conventional two stage crushing circuit with a single toggle jaw crusher as the primary crusher and an impact crusher as the secondary crusher. The secondary crusher will be in closed circuit with a vibrating double deck screen. Product from the crushing circuit will be conveyed to a fine ore bin.

RoM ore will be trucked from the mine and stockpiled on a RoM pad. An FEL will load ore into a nominal 112 tonne capacity ore bin fitted with a 500mm static grizzly feeder. The feeder located at the discharge of the ore bin will forward ore to a single toggle jaw crusher with a feed opening of 914mm by 610mm operating at a closed side setting of 90mm and powered by a 75 kW motor.

The primary crusher discharge conveyor will forward crushed ore to the product screen via the product screen feed conveyor. The product screen feed conveyor will be fitted with a rotating belt magnet at the head chute to remove magnetic contaminants from the ore stream.

The product screen will be a 1.87m wide by 4.90m long multi-flow double deck vibrating screen. The upper deck will consist of rubber panels with a square aperture of 30mm and the lower deck will consist of polyurethane panels with a square aperture of 15mm.

Oversize from each deck will be directed to the secondary impact crusher via the secondary crusher feed conveyor. The secondary crusher will be NP1110 or equivalent (Trio APS4054) and operate with a gap setting of 20mm. It will be powered by a 132 kW motor. The secondary crusher feed conveyor will have provision for a static magnet and will be fitted with a metal detector to remove magnetic contaminants and detect metallic non-magnetic contaminants for manual removal.

Product screen undersize material (P80 of 8.2 mm) will be directed to an 880 tonne live capacity fine ore bin fitted with two variable speed reclaim belt feeders. When full, the fine bin will provide a nominal 14 hours of flotation feed (based on 62.5 tph average feed rate).

To minimise dust emissions, the RoM bin will be fitted with dust suppression sprays that activate automatically on the dumping of a load of ore and other critical dust emission points will also have dust suppression sprays.

Grinding and Classification Circuit

Primary grinding will be carried out in an overflow discharge rod mill which will operate in a closed circuit with a product screen and flash flotation cell. The primary mill feed conveyor discharges onto the scalping screen before feeding the mill. The scalping screen oversize together with rod mill screen oversize feed the rod mill. The undersize from the rod mill screen will report to secondary mill hopper. Mill product plus scalping screen undersize feed flash flotation. Rougher flash tail will feed the rod mill screen. Rougher concentrate will report to the flotation circuit.

The variable speed mill feed conveyor will reclaim ore from the fine ore bin and will be fitted with a belt weigh scale. The duty reclaim feeder speed will be adjusted to maintain a set mass throughput measured on the belt weigh scale. The mill feed conveyor will feed a 1.2m x 3.6m single deck scalping screen fitted with 5mm slotted polyurethane panels. The scalping screen oversize gravitates to a 2.2 m diameter (inside shell) by 3.4 m EGL (effective grinding length) rod mill fitted with a variable speed 185 kW drive motor which will draw 145 kW.

Primary mill discharge will gravitate to the rod mill discharge hopper where it will combine with the scalping screen undersize and be pumped to feed the flash flotation cell. Flash flotation will be carried out in one 8m^3 YX-8 BGRIMM or equivalent type of cell. The scalping screen and rougher flash cell will recover fast floating, coarse graphite with minimal over-grinding, and the flash concentrate will report to the flotation circuit via the rougher concentrate tank. Tailings from flash rougher cell will gravitate to the rod mill screen feed box. The screen oversize will return to the rod mill for further grinding.

Rod mill screen undersize will report to the secondary ball mill discharge hopper where it will be pumped to the secondary ball mill cyclones. There will be total of three 500mm cyclones (one in duty and two standby) installed. The cyclone underflow will be reground in a 2.2m diameter (inside shell) by 3.6m EGL overflow ball mill fitted with a variable speed 200 kW drive motor which will draw 145 kW. Secondary ball mill cyclone overflow gravitates to the rougher scavenger cells.

The primary grinding area will be serviced by a vertical spindle, centrifugal, clean up slurry pump.

Flotation Overview

A conventional flotation process will be used to recover graphite concentrate. The flotation circuit will consist of rougher scavenger flotation followed by multiple stages of cleaning, regrinding, and screening.

Wet Rotaspiral trommel screens are included in the process plant to screen out and preserve the coarse graphite flakes as they are liberated within the flotation process. The plant will include three 1.6m diameter x 4.0m long Rotaspiral trommel screens fitted with square aperture woven-wire cloths, nominally in 500, 300, and 150 µm aperture, to recover coarse, high-grade graphite as it is produced within the circuit. This is expected to help maximise coarse flake preservation. Rotaspiral screens have been recommended over more conventional wet screening technology such as high frequency screens, as Rotaspirals are naturally suited to operating with woven wire screen cloths, and the square apertures are better suited for screening graphite flakes than the slotted polyurethane apertures typically fitted on high frequency screens.

The flotation circuit is designed in flat configuration using BGRIMM XCF self-pumping flotation cells. The concentrate and tails move counter current between the cells with final tails reports to the tailings hopper and concentrate reports to the coarse and fine filter feed tanks.

The rougher scavenger and most of the cleaning cells will consist of flat configuration, U type conventional cells with self-pumping mechanism on the first cell of each bank to automatically pump concentrate up-stream. A Jameson contact flotation cell will be installed in the final cleaning duty to recover the fine graphite.

Flotation reagents, including emulsified diesel collector and methyl isobutyl carbinol (MIBC) frother, will be dosed throughout the circuit as required to optimize the grade and recovery of the graphite concentrate.

Flotation circuit tailings will be sequentially thickened and dewatered using a combination of a conventional high-rate thickener, deslime cyclones, plate-and-frame pressure filters, and centrifuge decanters to generate a spadable tails product. The cake will be dry stacked, and the recovered water will be used as process water throughout the plant.

Rougher-Scavenger and Primary Polishing Circuit

The secondary ball mill cyclone overflow will feed the rougher scavenger circuit. This will consist of a bank of four 8m³ capacity conventional cells in series. The rougher flash and rougher-scavenger concentrates will report to the polishing mill feed tank where it is pumped to primary cleaner polishing mill to be cleaned prior to Cleaner Flotation. The primary cleaner polishing mill will consist of a 2.2m diameter (inside shell) by 3.4m EGL overflow ball mill fitted with a variable speed 185 kW drive motor which will draw 75 kW when fully charged with 15mm, SG = 3.6, alumina-ceramic cyclpeb media. Higher power draws may be targeted by filling the mill with higher SG, zirconia-ceramic media, however an economic trade-off may be necessary. Steel media is not recommended due to the galvanic interaction with graphite, leading to excessive media consumption rates. Polishing mill discharge will be pumped to the coarse cleaning circuit. The scavenger tailings will report to the tailings hopper.

Coarse Cleaner Circuit

The coarse cleaning circuit will consist of a regrind mill, two banks of coarse cleaners (coarse cleaner 1 and 2) and a coarse graphite separation screen. The coarse cleaner cells 1 and 2 will each consist of four 8m³ capacity conventional flotation cells in series. The regrind mill will be a BGRIMM GJM10-D vertical stirred mill consisting of two 5m³ cells each driven with a 90 kW motor and will nominally draw 63 kW with a charge consisting of 4mm, SG = 2.8 ceramic beads. The concentrate from coarse cleaner 1 will pass through coarse cleaner 2 and then report to regrind mill 1, while the tails from coarse cleaner 2 moves counter current and returns to coarse cleaner 1 before reporting to the tailings hopper. The discharge from regrind mill 1 will be pumped to the coarse graphite separation screen 1. The separation screen will be a 1.6m diameter x 4.0m long Rotaspiral trommel screens fitted with 500 µm square aperture woven-wire cloth. Undersize from the first coarse graphite separation screen gravitates to cleaner 1 and oversize is pumped to the coarse filter feed tank via the coarse cleaner final concentrate pump.

Fine Cleaner Circuit

The fine cleaning circuit will consist of three regrind mills, seven banks of cleaner cells and two coarse graphite separation screens. Cleaner 1 will consist of four 8 m^3 capacity conventional cells in series. Cleaner 2 and Cleaner 3 will consist of four 4m^3 capacity conventional cells in series. Cleaner 4 will consist of four 2m^3 capacity conventional cells in series. Cleaner 5 and Cleaner 6 will consist of two 2 m^3 capacity conventional cells in series and the cleaner 7 will consist of one 6.^{3m3} Jameson high grade cell.

The second, third, and fourth regrind mills will be a BGRIMM GJM10-D 2x90 kW, a GJM7.5-S 1x90 kW, and a GJM5-S 1x90 kW vertical stirred mills respectively. The second and third coarse graphite separation screens will be wet Rotaspiral trommel screens, common with the first coarse graphite separation screen.

The feed to the cleaning circuit will report to cleaner cell 1 launder. The cleaner 1 concentrate will gravitate to cleaner cell 2 launder and the cleaner 2 concentrate will gravitate to regrind mill 2. Regrind mill 2 product reports to the cleaner 2 concentrate hopper and is pumped to coarse graphite separation screen 2. The concentrate will be sized over a 300 µm screen with the oversize reporting to the coarse filter feed tank via the coarse cleaner final concentrate pump and undersize will gravitate to feed cleaner 3. The tailings will gravitate from cleaner 2 to cleaner 1 and then to cleaner 1 tails hopper.

The undersize from screen 2 feeds cleaner cell 3. The concentrate from cleaner 3 will gravitate to cleaner cell 4 launder by and after being cleaned, the cleaner 2 concentrate will gravitate to regrind mill 3. Regrind mill 3 discharge reports to cleaner 4 concentrate hopper where it is pumped to the coarse graphite separation screen 3. The concentrate will be sized over a 150 µm screen with the oversize reporting the cleaner 7 concentrate hopper to be pumped to fine filter feed tank, and undersize will gravitate to feed cleaner 5. The tailings will gravitate from cleaner 4 to cleaner 3 from where will flow to cleaner 3 tails hopper. The tails will then be pumped to cleaner 2 launder to pass through extra cleaning stages via cleaner 1 and coarse cleaners.

Cleaner 5 will be fed from screen 3 undersize. The concentrate from cleaner 5 gravitates to cleaner 6 launder and after being cleaned, the cleaner 2 concentrate will gravitate to regrind mill 3. Regrind mill 4 product feeds cleaner cell 7. The tailings will gravitate from cleaner 6 to cleaner 5 from where will flow to cleaner 4 launder to pass through all the cleaning and coarse cleaning cells.

Cleaner 7 will be a Jameson Z1200-1 or equivalent cleaning cell. The concentrate will be collected in cleaner 7 concentrate hopper where it is pumped to fines filter feed tank. The tail is pumped back to the head of cleaner 6 cells to pass through cleaning and coarse cleaning stages. The Jameson cleaner cell 7 will be equipped with a recirculation pump to maintain feed pressure to the Jameson cell downcomer (nominally 150 kPa).

The flotation area will be serviced by two vertical spindle centrifugal slurry pumps for clean-up.

Reagents will be added to flotation cells via dosing pumps. Diesel will be used as a collector and added to rougher flash cell, coarse cleaner cells, and cleaner cells. Frothing agent (Polyfroth H28) will also be added to rougher flash and rougher scavenger cells and coarse cleaners and cleaner cells.

Manual sample points will be provided to assist in ensuring the metallurgical targets for the flotation circuit are met. Sampling will provide analyses for the following process streams:

- Flotation feed
- Rougher concentrate
- Final concentrate
- Rougher Scavenger tailings
- Coarse Cleaner tailing
- Final tailings

Concentrate Filtration

The coarse filter feed tank has a live capacity of 65 m^3 allowing a total storage of 4 hours based on concentrate production rates. The fine filter feed tank has a live capacity of 65m^3 allowing a total storage of 4 hours based on concentrate production rates.

The fine and coarse filter feed pump will feed separate fine and coarse plate and frame filters. Moist concentrate cake discharged from the respective filters will feed separate fine and coarse dryers. The filtrate from each filter will gravitate to their respective filtrate tanks from where it will be pumped to the process water tank. The filtrate tanks will have a sloped bottom with a drain valve to periodically drain any settled solids to the area sump pump, to be returned to the filter feed tank.

Concentrate Drying

Filter cakes from the concentrate filters are transferred from the concentrate filter cake hoppers to the dryers via the dryer feeders. There are two similar dryer duties – Coarse Product and Fines Product. There is a hopper and metering feeder at the inlet to each dryer to control the feed rate. Discharge from the dryers is stored in dried product bins and transferred to the product bagging plant by a mechanical conveying system.

The diesel fired rotary dryers will reduce the moisture content of the concentrate to less than 0.5%. The dried solids from each dryer will be conveyed into separate fine dryer product bin and coarse dryer product bin.

Concentrate Dry Processing

The dried product will be sized over a number of plansifter screens, and each size fraction will be stored in one of five product bins.

Fine concentrate will be conveyed from the fine dryer product bin and distributed between two off fine product sieve screens. The fine sieve screens will size the concentrate into three streams, a +180 µm fraction, a +106 µm fraction and a -106 µm fraction. Each fraction will be transferred to separate product bins and bagged.

The coarse concentrate from the coarse dryer will be conveyed from the coarse dryer product bin and feed a coarse product sieve screen. The coarse product sieve screen will separate the coarse flake into three streams, a +500 µm fraction, a +300 µm fraction and a -300 µm undersized coarse fraction. The +500 µm and +300 µm fractions will be transferred to separate product bins for bagging. The -300 µm fraction will gravitate back to the fines dryer discharge conveyor for feeding to the fine product sieve screen.

If different graphite concentrate product sizes are required, screen decks can be reconfigured to suit customer requirements.

Concentrate Bagging

The bagging plant will be a semi-automatic system that will fill Bulka bags to 1,000kg each. The bag filling system will be automated however the bag will be manually positioned by the operator. Once a bag is filled it will be removed on a pallet by a forklift and stored in the concentrate storage shed. Each bag of concentrate will be sampled for sale purposes and assays of the concentrate will be produced in the on-site laboratory for operational records and forwarding to off-take customers.

A 25kg paper bagging plant will be capable of packaging up to 25% of the total production into 25kg paper sacks. The plant will have a manual filling spout and weighing system, an automatic bag sewing system, a conveyor type motorized bag flattener, and a conveying system to assist with manual palletising. The 25kg sacks will be arranged on to pallets in one tonne allotments and wrapped in plastic with a semi-automated wrapping system.

Tailings Disposal

Final tailings will be pumped from the tailings hopper to the tails thickener. The thickener will be a 12m diameter high-rate thickener, which will increase the solids percentage from 14% to 45% solids w/w. The thickener underflow will gravitate to the underflow hopper where it is pumped to dewatering cyclones. A pinch valve will regulate the flow rate of the thickener underflow to maintain the density set point. Thickener overflow will gravitate to the tails thickener overflow standpipe to be pumped to the process water tank.

The Tailings deslime cyclones will receive the tailings thickener underflow. There will be a series of twelve 100 mm cyclones with 8 in duty and 4 in standby operating at a nominal pressure of 100 kPa to achieve a cut-point P80 of 25 µm.

Cyclone overflow gravitates into the tails centrifuge feed tank, where it is pumped to two identical Decanter centrifuges. One centrifuge will operate continuously to dewater the fine tails particles, the second will operate in semi-standby mode as required (50 or 60% of time spent operating). Centrifuge cake moisture content will be around 40% which will be discharged onto a cake transfer conveyor into a bunker/dump truck and transported to a dry stacking facility. Centrate will gravitate back to tails thickener to overflow into thickener overflow standpipe.

The cyclone underflow gravitates into the tails filter feed tank where it is pumped to tails filter presses. The tails filter cake is discharged into a bunker and manually loaded into tipper trucks by an FEL. The trucks will then transport the dewatered tails to be co-disposed with PAF mine waste. The filtrate, and wash water return to the tails thickener. Each filter press is to be sized to be capable of handling 100% of the duty.

The tails area is equipped with a sump pump to collect all the spillage and send to tailings hopper.

Reagents (Flocculant and Coagulant) will be dosed to tails thickener to help with thickener load settling and thickening process.

Grinding Media and Reagent Management

The following process additives will be necessary to operate the processing facilities:

- Steel grinding rods
- Steel grinding balls
- Ceramic grinding media
- Diesel
- Frother

Grinding media and reagents will be received at site, mixed, and dosed as outlined in Table 16.

Table 16 - Grinding media and reagent management

Process Additive	Packaging	Mixing	Dosing
Steel Rods	Drums		Hoist and rod charger
Steel Balls	Drums		Hoist and kibble
Cylpebs	1,000kg Bag		Hoist and kibble
Attrition Beads	1,000kg Bag		Hoist and kibble
Diesel	Solution Bulk	Diesel emulsification tank	VSD metering pumps
Frother	1000 IBC		VSD metering pumps
Flocculant	25kg Bag	Flocculant Mixing Tank	VSD metering pumps

Reagents Storage

Sufficient stocks of reagents will be stored at the plant to ensure that supply interruptions due to port, transport or weather delays do not restrict production.

Raw Water

Raw water will be sourced from a water catchment between the plant and the camp and supply a 1000m^3 capacity Raw Water Tank at the plant. Approximately 600m^3 of the Raw Water Tank capacity will be reserved for fire water.

In the event the water catchment runs dry, bore water will be pumped from the Camp Bore Water Tank to the plant Raw Water Tank. The Camp Bore Water Tank is supplied from the bore field.

One of two raw water pumps arranged in a duty-standby configuration will draw raw water from the plant Raw Water Tank, above the fire water reserve, to feed the following demands:

- Plant Gland water tank
- Fire Water ring main
- Crushing circuit
- Flotation cells 5, 6, 7 and screen 3
- Tails Filter press water tank
- Coarse and Fine concentrate filters
- Reagent mixing

The plant Gland Water Tank is fed from raw water tank. One of two gland water pumps arranged in a duty-standby configuration will draw water from the gland water tank to feed low flow gland seals on the slurry pumps in the process plant.

Firewater

Firewater for the processing plant will be drawn from the Raw Water Tank fire water reserve. Suctions for other water services fed from the raw water tank will be at an elevated level to ensure a fire water reserve always remains in the raw water tank.

The fire water pumping system will contain:

- An electric jockey pump to maintain fire ring main pressure;
- An electric fire water delivery pump to supply fire water at the required pressure and flowrate; and
- A diesel driven fire water pump that will automatically start in the event that power is not available for the electric fire water pump.

Fire hydrants and hose reels will be placed throughout the processing plant, fuel storage and plant offices at intervals that ensure complete coverage in areas where flammable materials are present.

Process Water

The Raw Water Tank will overflow to a 320 m^3 capacity Process Water Tank. The main source of process water is from the Tails Thickener overflow and fine and coarse concentrate filter filtrates. One of two process water pumps arranged in a duty standby configuration will draw from the base of the process water tank to feed process water to the following demands:

- General 25 mm NB service points throughout the plant
- Grinding area dilution water
- Flotation area dilution water
- Flushing water for the tailings' lines.

Potable Water

Bore water from the Camp Bore Water Tank will be pumped into the Plant Water Treatment Feed Tank which will feed a Plant Water Treatment System which includes filtration, reverse osmosis and sterilisation stages.

Treated plant potable water is stored in Plant Potable Water Tank where it is pumped to the plant ring main which supplies plant potable water demands including buildings and safety showers. One potable water pump will feed water services around the processing facility. A diesel potable water pump will provide back up to the potable and safety shower circuit in the event of power failure or shutdown of the potable water pump.

Bore water from the Camp Bore Water Tank feeds the Camp Water Treatment

System. Treated camp potable water is stored in Camp Potable Water Tank where it supplies the camp by gravity.

Air Services

The compressed air system will generate filtered and dried compressed air for plant and instrument air usage. The compressed air system will consist of two compressors, one receiver and filter in a duty/standby arrangement. The instrument air receiver is supplied from the plant air receiver via an integral air dryer and filter in a duty/standby arrangement.

The plant air will supply service points throughout the plant. Plant air will be filtered and dried in a refrigerated drier before being directed to instrument air receiver. Instrument air will be reticulated to instruments throughout the plant from this air receiver.

Drying compressed air for tailings and concentrate filtration will be generated by dedicated air compressors and stored in dedicated air receivers for each system. For the tails filters, there will be two duty air compressors and four air receivers. For the coarse and fine concentrate filters, each will have a duty compressor and air receiver (although a central manifold will allow both to be operated together in tandem).

Two blowers (duty/standby) will be installed to supply low pressure air to the flotation cells.

1.6.3 Process Plant Commissioning

Commissioning will occur progressively and carried out in several phases, following the traditional approach adopted for a project of this nature and size. These phases are:

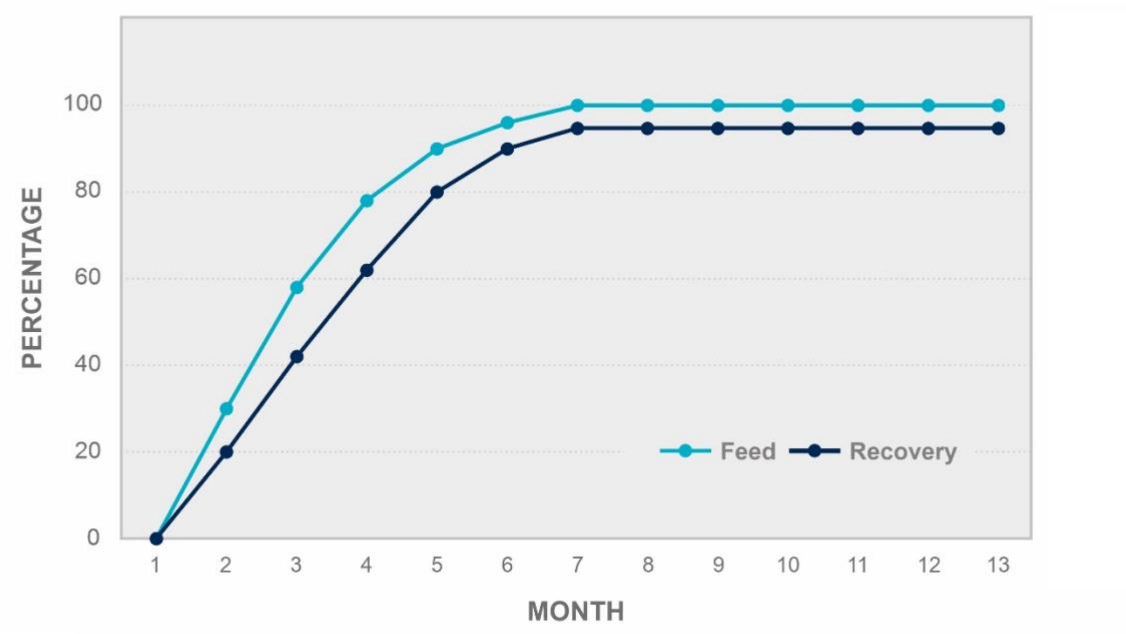
- Plant and equipment installation (construction) verification
- Dry commissioning
- Wet commissioning
- Ore commissioning

A commissioning plan will be developed describing the plan for starting up the project process facilities, define the various stages of commissioning and identify responsibilities for activities conducted during those stages. The plan will include a preliminary schedule and personnel/manning structure and will outline the methodology to be followed. This forms a reference document to assist with project scheduling, as well as preparation for commissioning.

Evolution will be responsible for the preparation of the commissioning plan and conducting all stages of commissioning including ore commissioning, optimizing and ramp up with the assistance of Chilalo Operations team. This phase forms an important part of plant familiarisation and training for the plant operators.

Equipment vendor representatives will be present to verify and sign-off respective tests of the supplied equipment.

Figure 20 - Chilalo Processing Plant Ramp-up



The cyan coloured line represents the ramp-up to plant capacity whilst the difference between the cyan and the blue coloured lines represents graphite not recovered or recovered but not within targeted specifications (approximately 9%).

1.6.4 *On-Site Infrastructure*

- Power

The Project is estimated to have a maximum demand of 5.4MW, with an average power demand of 4.6MW. Including the camp demand, the total site average power is estimated to be 4.8MW with an annual energy consumption of 38.2GWh. The plant demand profile is relatively flat as it is a 24/7 mining operation.

The mine will be operational for 8,000 hours of the year (91% utilisation). For the remaining 760 hours of the year, the plant is in a maintenance/shutdown period and the power demand during this time is estimated to be approximately 1.3MW. Maintenance shutdowns can be scheduled during any part of the year and will involve shutdowns during daylight hours.

The power requirement will be met by utilising a specialist power provider who will provide the applicable power generating equipment and solar plant input to provide power under a Build Own Operate and Maintain arrangement.

- Plant Hybrid Power Station

The normal operation for a power station is to operate with N number High-Speed generators operating at the estimated plant average. The average power demand at Chilalo Mine is estimated to be 4.8MW and this will require 4 diesel generators (1.2MW continuous power rating) and 6 installed for N+2.

Dual fuel high speed generators operate with a diesel/gas blend of about 70-80%/20-30%. Gas conversion can be undertaken for common OEM models of diesel generator sets. The advantage of dual fuel generators is that it provides some fuel security in the event of a disruption to the gas supply chain. LPG gas delivery will have gas storage on site, however, it is important that 100% redundancy is provided in the generation fuel.

A microgrid controller will be integrated into the generator control system to control the thermal generators, Solar PV, and battery energy systems and manage the spinning reserve on the system. Spinning reserve is important in ensuring that the Solar Hybrid network system maintains a stable voltage and frequency at all times and does not cause a disruption to supply. The microgrid controller will account for events such as cloud cover which can cause a significant drop in Solar PV output up to 80% drop within 30 seconds depending on the size of the solar plant.

The spinning reserve at the power station is assumed to be operating at 80% of the solar PV output and the maximum capability of the generator sets for the purpose of spinning reserve is assumed to be the Prime power rating of the generator units.

The planned solar contribution will have a PV energy of 7,416MWh/pa (20%) with an estimated annual production of 10,509MWh.

Battery Energy Storage System (‘**BESS**’) will provide quick dynamic responses in the event of a drop in the Solar PV output. This is achieved by minimising and smoothing out the voltage and frequency dips caused by fluctuating Solar PV output during major cloud events. The BESS solution has become more favourable in recent years with the increased technology and decreased cost of batteries. Although the cost of batteries has decreased in recent years (approximately $300k per MWh), the inclusion of Battery systems increases the costs and return on investment of the solar PV.

Other areas that require power, including the accommodation village, mining contractor area water bores and CWSF pump, Pond A pump will have dedicated generators with standby capacity.

- Site Power Distribution

Processing plant power at 415 V will be distributed throughout the site to plant motor control centres and infrastructure facilities via buried cable. Accommodation power at 415 V will feed the main camp distribution board supplied by the camp provider.

- Fuel Storage and Dispensing – Processing Plant

The fuel (and gas) storage will be located adjacent to the power station. It will be constructed using a horizontal fuel tank within a bunded area. It will be supplied, installed and maintained by the Fuel supplier. Diesel fuel and gas will be delivered to the site by road tankers, where it will be discharged into the storage tanks. There will be a single-point loading facility with reticulated pipework to transfer diesel fuel / gas to the tanks.

Fuel for the plant generators and plant dryers will be pumped from the tanks using dedicated pumps. Fuel supply to the remote generators will be done using a trailer mounted fuel tank and bowser. Fuel meters will be installed on filling and feed points to account for fuel usage.

The installation of concrete pads to accommodate the fuel storage tanks has been allowed for in the capital cost.

- Fuel Storage and Dispensing – Mining

The Mining fleet fuel storage be constructed similar to the process plant, using a horizontal fuel tank within a bunded area and supplied, installed and maintained by the Fuel Supplier. Diesel fuel will be delivered to the site by road tankers where the fuel will be discharged into the storage tanks. There will be a single-point loading facility with reticulated pipework to transfer diesel fuel to the tanks.

Fuel for the mining equipment will be issued to a service truck. Fuel meters will be installed on filling and feed points to account for fuel usage. The storage tanks will have a fuelling point that will service Evolution mobile plant and light vehicles.

The installation of concrete pads to accommodate the fuel storage tanks has been allowed for in the capital cost.

- Water supply

The water balance study has shown that the mine's demand (maximum of 26 L/s for process and dust suppression) can be met by supplies from:

  - Existing open pit dewatering bores;
  - In-pit dewatering sumps to remove surface and rainfall ingress;
  - input from CWSF;
  - Return flow from Pond A; and
  - A borefield installed into the Mbwemkuru paleochannel.

To reduce surface water inflow and the potential for flooding, diversion of surface flow around the open pits is planned to be in place from start of mining.

During periods of low rainfall, the Mbwemkuru borefield will be equipped to make up supply shortfall. The borefield has been shown to produce sufficient yield to replace other sources for extended periods if required.

- Concentrate Storage

The concentrate storage shed at site, which will abut the bagging plant, is a dome shaped construction with dimensions of 24 metres long by 30 metres wide by 9.4 metres high (dome height) capable of holding approximately two weeks of production.

Evolution will be allocated 3,000 square metres of undercover storage area within the logistics contractor's bonded warehouse which is sufficient to store approximately 5,000 tonnes of finished products (10% of annual production) if they are stacked to a height of three bags. This allows the Company to retain a 'safety stock' of packaged product across all flake sizes, in order to be positioned to respond to unplanned customer orders that require immediate delivery readily.

- Mining Facilities

The mining facilities comprise the mining contractor's compound. A joint Evolution and Contractor office, associated buildings, workshop, washdown and mining equipment associated with these facilities will be supplied by the mining contractor. The mining contractor's facilities (office, workshops and ablutions) will be placed in a security fenced compound located southeast of the processing plant.

- Accommodation

A 65 person container style, temporary accommodation camp will be used for the initial earthworks and construction.

A more permanent 86 man construction camp, will house camp construction contractors, mining and catering staff during the construction. The construction camp will be maintained beyond construction for a period of five years to house the mining contractor, power station, security and camp/catering staff. After five years the construction camp will be phased out and replaced with additional accommodation for the permanent camp.

The permanent camp accommodation will house Evolution staff, VIP and other visitors with a capacity of 130.

The 130-person permanent camp accommodation capacity has been determined as that required for the estimated operations workforce. The estimate covers variability in estimates of workforce numbers, staff turnover, the requirements for visitors and the need to accommodate extra personnel for maintenance shutdowns.

1.7 Clean Water Storage Facility

ATC Williams was engaged to design an earth embankment to dam the Maimbi

River, to form a CWSF that will supplement the plant's process water requirements. The storage capacity is circa 1 Giga Litres.

The dam has been designed to last for perpetuity as a year-round water supply for local inhabitants.

Design of the CWSF, Pond A and Pond B meet the relevant Australian National Committee on Large Dams guidelines for Dams (water) are listed below.

- Australian National Committee on Large Dams - May 2012 – Guidelines on Consequence Categories for Dams.
- Australian National Committee on Large Dams - May 2019 – Guideline for Design of Dams and Appurtenant Structures for Earthquake.
- Australian National Committee on Large Dams - March 2000 – Guidelines on Selection of Acceptable Flood Capacity for Dams.

As per Government Notice No. 237 02/08/2013 (Regulations) ATC Williams looked at the Criteria for the Categorisation of the dam and has determined that the dam has a risk rating of "Low" and is a Category "C" facility in accordance with the Second Schedule [Regulation 11(1)] of the Water Resources Management Act.

ATC Williams also reviewed the Dam Safety Guidelines April 2020 which set out what should be included in a feasibility report (shown below).

- As a geotechnical investigation was done for the previous TSF, the geological data and laboratory tests have been interpreted for the CWSF embankment design. More detailed test work will be undertaken during the detailed design phase.
- A seismic report will be undertaken at the detailed design stage.
- The hydrology has been largely covered with the Dam Break, spillway design undertaken by AQ2's surface water modelling.

The inflow flood is the flood to the reservoir from unregulated part of the catchment, plus discharge from upstream reservoirs and inter-basin transfer. The design inflow flood and design earthquake is based on the consequences' categories, as shown in Table 17.

Table 17 - Design with consequences category

Dam Classification	Design Inflow Flood	Design Earthquake
Very High Risk "A"	Annual Exceedance Probability between 1/10000 and Probable Maximum flood (PMF)	Annual Exceedance Probability of 1/10000 of Maximum Credible Earthquake (MCE)
High Risk "B"	Annual Exceedance Probability between 1/1000 and 1/10000	Annual Exceedance Probability between 1/1000 and 1/10000 of MCE
Low Risk "C"	Annual Exceedance Probability between 1/100 and 1/1000	Annual Exceedance Probability between 1/100 and 1/1000 of MCE
Very Low Risk "D"	Annual Exceedance Probability of 1/100	Annual Exceedance probability of 1/100 of MCE

1.8 Hydrology and Hydrogeology

The mine site is located in an area of relatively high, but very seasonal rainfall (the wet season runs from the end of November to April) and an area of low groundwater potential in and around the ore body. As a result, groundwater inflow into the open pits is low (<3.5 L/s), although wet season pumping of rainfall and surface water inflow (from localized pit area catchments) is likely to be necessary.

1.8.1 Mine Dewatering

Pit dewatering is proposed by:

- Pumping of three low yielding dewatering bores already installed outside of the proposed open pits (estimated maximum of 2.4 L/s); and
- Sump pumping, from the base of the three different sub-pits (average 28 L/s during the wettest month of January for an average rainfall year).

Yield from dewatering bores will be directed to either the process plant via Pond A. Impacted yield from sump pumping of open pits will be directed to Pond B. This will permit settling sediment from stormwater before bleed pumped to process plant storage / evaporation Pond A.

Groundwater inflow and stormwater dewatering infrastructure will be required to manage water entering the pit. Three dewatering bores are to be located just outside of the pit footprint, fitted with pumps and associated pipeline infrastructure. These bores serve to assist in maintaining water levels within the pit below the water table to allow mining to occur. Dewatering from inflow to bores will be transferred via pipeline to the process plant for use in the process water circuit.

Additionally, runoff will enter the pit via direct rainfall and the draining of external catchments following rainfall events. This runoff is proposed to be removed via multiple pipelines and pump systems located in the pit sumps and will be directed to Pond B for settling of sediment, where it will contribute to the process water supply.

1.8.2 Surface Water Management

Surface water management measures include diversion drains, flood bunding, sediment basins as well as clean and dirty water containment facilities. Surface water management infrastructure has been designed to prevent flooding of mine operations and pollution of surface water resources following large rainfall events.

Where possible, clean water will be diverted around mining infrastructure and released to the CWSF. Sediment-laden water with similar quality to streams (including runoff from capped waste rock dumps) will be diverted to sediment basins, ultimately released to the CWSF once sediment has been removed. Potentially contaminated surface water will be directed to two dirty water containment ponds (Pond A and Pond B), where it will be abstracted and reused in the processing plant and for dust suppression on the mine site.

Four surface water diversions were identified to reduce the volume of clean water entering the dirty water containment ponds that need to be managed. The following diversions were assumed (refer Section 5):

- Diversion A – diverts the main drainage line between the West and Central Pit, with flow continuing to the CWSF.
- Diversion B – reduces inflow to Central Pit.
- Diversion C – drains water which would pond against the Western WRD.
- Diversion D – reduces inflow to Pond B.

Diversion A is proposed to be implemented prior to Central stage 5 commencing to divert an upstream catchment of 4.4 km2 (from the south) in-between the Central and West Pit to the CWSF before controlled release to the environment. The channel is expected to be approximately 0.6 km in length with flow depths not exceeding 1 m. The smaller diversion drains (Diversion B to D) divert external runoff along the northern edge of Central pit, southern edge of Western WRD and southwestern edge of the SE WRD back to the catchment to flow along natural paths. All flow from the diversion drains will report to the CWSF, where testing can be undertaken prior to controlled release to the natural environment.

1.9 Offsite Infrastructure and Logistics

1.9.1 Road Access

Access to the Project from the city of Mtwara (approximately 240km), is via a bitumen road to Nanganga (148km), from which there is an unsealed road of approximately 60km from Nanganga to the village of Ruangwa. A Government approved project to upgrade the road from Nanganga to Ruangwa is continuing, with the road being progressively sealed with bitumen and expected to be completed in Q3 2023. From Ruangwa, there is an unsealed road of 26km to the Project.

Access to the Project from Dar es Salaam (approximately 638 km) uses the existing national road network which passes through the towns of Nangurukuru, Lindi and Mingoyo before connecting with Nanganga. With the exception of two sections of the road – Nanganga to Ruangwa (60 km) mentioned above being bituminised and Ruangwa to Chilalo (26 km) – the entire road from Dar es Salaam is bituminised.

Figure 21 - Existing and Proposed Road Upgrades

Design of the road from Ruangwa to the mine has been completed. This road has been designed in accordance with the standards of the Tanzanian Rural and Urban Roads Agency and will be suitable for regular traffic of trucks and large low-bed semi-trailer trucks.

A major intersection will be constructed for the mine access road and the road from Ruangwa to ensure a clear view of activities for vehicles and pedestrians. A major road will be constructed from this intersection to the mine site which will be used to access the plant site for construction and then in operations to transport bagged graphite product from site and to bring in reagents, spares, diesel and other consumables.

This road will accommodate two-way traffic be unsealed and have a design speed of 60km/h.

1.9.2 Air access

At Mtwara there is a commercial airport from which daily passenger flights to and from Dar es Salaam take place. The Mtwara Airport has two runways, the longest of which is asphalt surfaced and is capable of receiving commercial aircraft. A private air strip at Nachingwea, located approximately 50km from Chilalo, and accessible by a good quality gravel road, is also available for air freight and chartered passenger aircraft.

1.9.3 Product Transport and Shipping

Graphite concentrate produced at Chilalo will be transported by truck to the international port of Dar es Salaam, a distance of approximately 638 km, which is predominantly by sealed bitumen road. The Company had previously planned to truck Chilalo product to the Mtwara Port, from where shipping was proposed, however, a detailed investigation of the shipping alternatives has confirmed that Chilalo graphite will be trucked to, and shipped from, the Dar es Salaam Port.

In 2021, an expansion project undertaken by the Tanzanian Ports Authority increased the capacity of the Mtwara Port from 400,000 tonnes per annum to 750,000 tonnes per annum. Whilst smaller feeder vessels could be used to trans-ship through Dar es Salaam (from Mtwara), it is currently more cost effective to truck to and ship directly from Dar es Salaam.

Evolution continues to monitor shipping through the Mtwara Port and while an increase in activity has been observed over the past 12 months, there is currently insufficient containerised shipping utilising the Mtwara Port to support the Project's shipping requirements.

1.10 Product Marketing

1.10.1 Offtake agreements

As described in section 1.4.3, Evolution has signed a binding offtake agreement with YXGC, for the sale of 30,000 tpa of coarse flake graphite for a minimum of three years. YXGC is a global leader in the manufacture of high-value expandable graphite and associated high-value graphite products, such as graphite foil. The offtake agreement covers over 50% of Chilalo's production for the first three years and represents over 70% of forecast concentrate revenue over the same period.

1.10.2 Chilalo Product

The Company has a distinct signature in its Chilalo resource, possessing specific metallurgical and chemical attributes ideally suited for foils, fire-retardants, engineered products, lubricants, and thermal drilling fluids. The Chilalo resource has proved that it can be processed, using standard flotation, to achieve 95% to >99% C as well as achieving higher than average coarse flake fractions. These attributes are expected to produce a high-value product suitable for high-tech and higher priced applications.

The Chilalo process plant will have the screening capability to produce up to six different standard mesh size products at one time and with the interchangeability of screen decks, it will have the capacity to meet customer's expectations irrespective of their mesh size requirements.

The Company will offer two base range carbon purities with the ability for additional processing to meet customer-specific and market mesh size specifications. The Company will also seek to produce and qualify a high-purity (>99% C) product once commercial production of the base range products has been achieved.

1.10.3 Graphite Pricing

Evolution subscribes to pricing data and forecasts from Fastmarkets, Wood MacKenzie and Benchmark Mineral Intelligence. Graphite analysts face some significant challenges in arriving at the price for each flake graphite product (eg. based on mesh size and purity):

- It is potentially misleading to ascribe a single price to a particular flake graphite product (eg. +895, or +80 mesh, 95% C) given not all graphite meeting those characteristics is the same. Graphite sales require qualification and if flake graphite can qualify into value-added products, it is likely to sell for higher prices than graphite that has not qualified for such products. This challenge is acknowledged by these analysts; and

- Graphite pricing is intellectual property of customers and as such, they are generally unwilling to disclose pricing to analysts without a non-disclosure agreement.

Evolution forms its graphite pricing assumptions through a combination of the data provided by the above analysts, combined with its own discussions with customers and other experienced market advisors. Evolution's belief is that, given Chilalo graphite has qualified and been determined suitable for high-value applications, it will attract a premium to the analyst's prices given they represent an 'average' price of all graphite at the quoted specification.

1.10.4 Expandable Graphite and Foil

Numerous end users and three independent laboratories have evaluated the use of Chilalo flake graphite (in various mesh sizes) for the production of expandable graphite and to determine how Chilalo expandable graphite would perform when compared to other expandable graphite producers and products. Evaluations have consistently concluded that Chilalo flake graphite, using two different intercalation / oxidation compound formulas, meets the performance characteristics for graphite foils and fire-retardants. Due to its unique chemistry markers, Chilalo flake graphite meets critical parameters that are required for fire-retardant manufacturers.

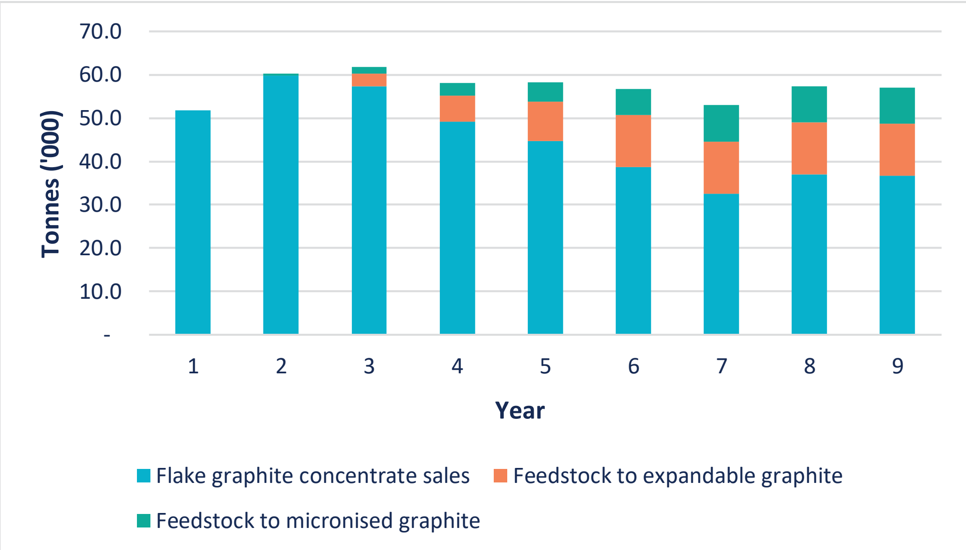
Furthermore, the Company's offtake partner YXGC who is a world leader in the production of graphite foil has confirmed Chilalo graphite has very favourable characteristics making it ideal for foil applications.

The Company has identified multiple western foil and fire-retardant customers with demand for expandable graphite. Fire-retardant customers do not purchase flake graphite concentrate, they buy expandable graphite. Rather than selling graphite concentrate to a Chinese expandable graphite manufacturer who then makes substantial margins upgrading it into expandable graphite for fire-retardant customers, Evolution proposes to engage YXGC as its processing agent for a fee.

Importantly, this opportunity requires no capital investment, leverages from existing processing expertise and provides the Company with immediate access to the lucrative and rapidly growing value-added markets.

The Updated DFS is based upon pricing between US$5,990 and US$6,901 FOB per tonne for expandable graphite dependent on the flake size of the feedstock (either +50 or +80 mesh). Pricing was based on recent transactions and information provided to the Company by an independent consultant with relevant expertise in the expandable graphite market. The DFS assumes first shipment to occur 24 months after the commencement of operations, and a conservative sales ramp-up (see Figure 22)

Figure 22 - Graphite sales profile - increasing volumes to high-value applications



1.10.5 Micronised Graphite

The strategy to pursue micronised graphite has a number of advantages:

- Natural flake graphite feedstock to produce micronised graphite is -100 mesh, 95% C, which is the low value proportion of Chilalo's flake graphite product suite;
- Micronisation equipment is relatively low capital cost (even so, it is proposed as a second phase following commissioning of the main Chilalo plant); and

- Significant value uplift is achievable (weighted average sales price for standard purity micronised graphite based on Evolution's targeted product mix increased to US$2,922/t FOB Port compared with significantly lower prices for selling -100 mesh concentrate).

Evolution has identified a large number of micronised graphite customers and the detailed technical specifications of the five standard products sought by customers. Whilst contract size is relatively small in comparison, the substantial uplift in value has the potential to increase margins significantly.

Evolution has conducted micronisation equipment product trials with a milling equipment supplier that provides a fully automated, programmable processing system that can achieve up to a ~1.5% improvement in finished product purity. The preferred milling system achieves a yield of ~ 95% on average from the original feedstock with the ability to achieve five industry-standard micronised grades to meet market specifications.

The Updated DFS assumes that a micronisation unit capable of producing ~8,000 tonnes of micronised graphite (based on the targeted product mix) is funded out of cash flows, with construction commencing at the beginning of year 1 (i.e. 12 months after construction of the main plant is complete allowing sufficient time for calibration and commissioning).

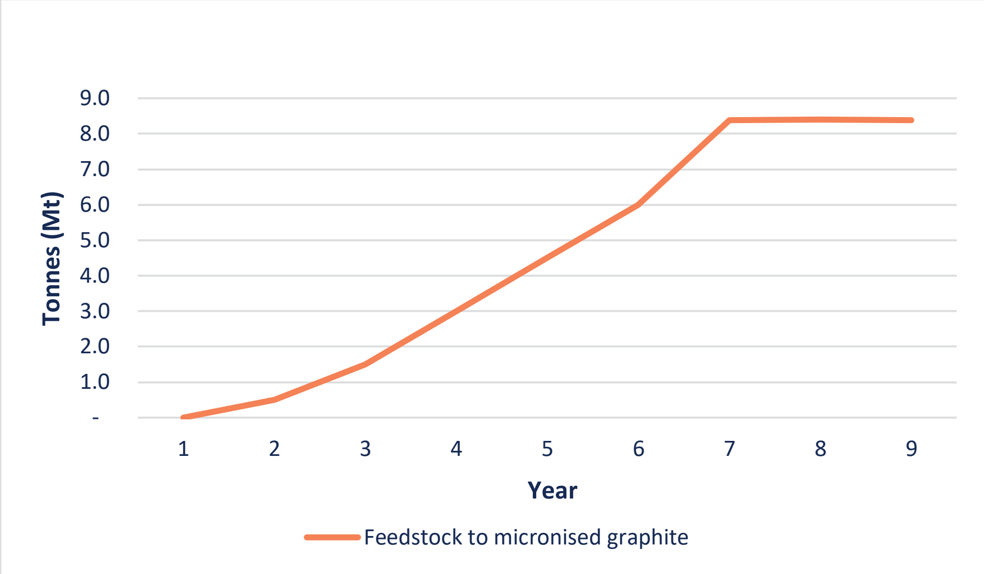
The Updated DFS has assumed a ramp-up of micronised graphite sales aligned with conservative qualification timeframes such that the 8,400 tonne production level is not reached for seven years, see Figure 23 below. Capital and operating costs for the Updated DFS have been provided by the equipment manufacturer.

The Company has worked with an independent consultant with over 15 years' experience in the micronised graphite industry, with pricing being based on recent transactions. The fine milling equipment preferred by the Company for micronised graphite production is capable of producing all five targeted products. Table 18 shows the targeted product mix within the five standard micronised graphite products and the average sales price assumed for the Study.

Table 18 - Standard Purity Micronised Graphite - Product Mix and Average Sales Price

Product	Price (US$/t)	Product Mix	Average Sales Price (US$/t) FOB
Product 1	1,658	40%	663
Product 2	2,538	10%	254
Product 3	3,699	35%	1,295
Product 4	4,218	10%	422
Product 5	5,769	5%	288
Average Sales Price			**2,922**

Figure 23 - Micronised graphite feed ramp up (tonnes by year)



1.11 Capital Estimate

The capital cost estimate includes all costs prior to the commencement of production including mine development costs.

In general, the approach is as follows:

- The engineering of the process plant associated infrastructure and the procurement of equipment will be performed by a competent engineering company which will deliver detailed construction drawings and adjudicated equipment selections approved for purchase.
- Equipment will be purchased by Evolution with expediting, quality control and logistic control undertaken by the appointed engineer.
- Construction management will be performed by Evolution utilising experienced construction management personnel.
- Construction will be undertaken by local and regional contractors on either a fixed lump sum or rates basis.
- The mine establishment will be executed by a mining contractor under direct contract with Evolution.

The estimate includes all the necessary costs associated with process engineering, design engineering and drafting, procurement, construction and construction management, commissioning of the process facility and associated infrastructure, mining establishment, first fills of plant reagents and consumables, spare parts and working capital required to design, procure, construct and commission all of the facilities required to establish the project.

The estimate is based upon preliminary engineering, quantity take-offs, budget price quotations for major equipment and bulk commodities. Unit rates for installation were based on market enquiries specific to the project and benchmarked to those achieved recently on similar projects undertaken in the African minerals processing industry.

The estimate is quoted in December quarter 2022 United States Dollars to a level of accuracy of ±15%. It is based on Owner's costs for the Project being inclusive of salaries, messing and accommodation, flights, equipment hire, communications and project insurances. Owner's Costs are included in the capital cost estimate.

The capital cost estimate is summarised in Table 19.

Table 19 - Pre-Production Capital Cost Estimate

Description	US$M
Direct Costs	
Earthworks	2.8
Concrete	3.3
Structural	7.4
Platework	2.3
Mechanical	18.5
Pipework	3.2
Electrical equipment	7.5
Buildings	0.9
SMP Installation	7.8
Civil construction	0.8
Freight	4.7
E&I construction	5.3
Building Installation	1.2
Total Direct Costs	**65.5**
Indirect Costs	
Spares	0.8
Camp and messing	7.4
Mining pre-production	8.0
Other owner's costs[1]	29.5
Contingency	8.4
Total Indirect costs	**54.2**
TOTAL	**119.7**

1. Includes Owner's project management, engineering and procurement, Relocation Action Plan execution, clean water storage facility, access roads, owner's equipment, insurances, business systems and other pre-production owner's costs.

1.11.1 Sustaining Capital Estimate

The sustaining capital cost estimate captures the requirement for capital expenditure over the project's life that is not covered in this estimate. These sustaining capital costs are summarised in the table below and are estimated to an accuracy of ±15%.

Table 20 - Sustaining Capital Estimate

Description	US$M	Year of expenditure
Road upgrades	0.5	1-17
Livelihood restoration plan	0.9	1-3
Micronised graphite mill	3.4	2
Camp upgrades	2.8	1 & 4
Power plant waste heat recovery system	0.7	2
Maimbi stream diversion channel	0.3	6
Site access roads and maintenance	1.7	6
Process water storage (Pond A)	3.3	6
Mine water storage (Pond B)	0.5	1
Western pit protection drains	0.1	7
Progressive rehabilitation costs (see section 1.14)	42.4	1-17
Post closure rehabilitation costs (see section 1.14)	1.8	17-18
Total Sustaining Capital	**58.4**	

1.12 Operating Cost Estimate

1.12.1 Flake Graphite Concentrate

Owing to the expectation regarding the discovery of numerous additional graphite deposits at surface, it is unlikely the mine will go to the depths currently proposed in the life of mine model (~180 metres). As a result, the Company is publishing the average operating costs over years 1-9.

Mining costs are based on a contractor mining scenario, product logistics costs have been quoted from a reputable Tanzanian logistics contractor and CPC Engineering has provided the operating costs for the process plant.

Table 21 - C1 Operating Costs FOB Dar es Salaam (avg years 1-9)

Description	US$/t
Mining Costs	227
Labour	96
Process Plant Variable Costs	65
Process Plant Fixed Costs	59
Power	91
Logistics	175
G&A	60
TOTAL	**773**

As described in the Opportunities section, there is scope for an improvement in operating costs from additional exploration. There are numerous near-mine high-conductance targets which have the potential to contribute towards a material reduction in mining costs.

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1.13 Value added products

1.13.1 Micronised graphite

The DFS assumes that fine milling equipment, buildings and services and associated packaging systems are installed from the beginning of the second year of operations.

The additional capital cost for micronised graphite equipment, buildings and services is US$3.4M. Equipment and packaging equipment has been quoted by the equipment supplier whilst CPC Engineering has provided the cost estimate for the building and services. An allowance has also been included for ensuring the micronisation production is ISO certified.

The operating costs for the Company's micronised graphite production are US$435 per tonne of micronised graphite. This includes labour, power, parts, overheads and packaging of the micronised graphite, product logistics within Tanzania and sales and marketing agent fees. Micronised graphite pricing in the Updated DFS is FOB Port and therefore, sea freight from Tanzania to Europe or USA is not included.

The operating costs of the fine milling equipment and associated packaging have been provided by the equipment supplier and are based on their experience with other micronised graphite manufacturers who use their equipment.

1.13.2 Expandable graphite

Due to leveraging off the processing agent's plant capacity, the expandable graphite strategy pursued by Evolution requires no capital cost.

The operating costs of the Company's expandable graphite production are US$604 per tonne of expandable graphite excluding the internal transfer price of purchasing the graphite feedstock from the mine. This includes the following:

- Sea freight from Tanzania;
- Customs clearance, fees and charges and inland transportation to the processing agent's facility;
- All-inclusive processing and packaging costs to produce and package expandable graphite to Evolution customer's required specifications;
- Inland transportation from the processing agent's facility to port, customs clearance, fees and charges; and
- Sales and marketing agent fees.

Expandable graphite pricing in the Updated DFS is CIF China and includes a sea freight cost of US$3,039 per container.

The processing costs above are quoted on the basis of producing a +99% LOI expandable graphite product. The inland transportation costs have been quoted by the processing agent's shipping agent. The processing agent's margin is expected to be the additional expandable graphite produced in addition to the graphite concentrate supplied (i.e. given one tonne of graphite concentrate produces greater than one tonne of expandable graphite due to the additional mass of the intercalation/oxidation compounds, the processing agent will keep the excess above one tonne as a fee).

1.14 Financial Analysis

Set out in Table 22 are the key financial results of the Updated DFS.

Table 22 - Key financial results

Physicals	Unit	Life of mine
Mine life	Years	17
Total plant feed	Mt	8.3
Annual plant feed	ktpa	500
Average head grade	TGC %	10.6%
Average graphite concentrate production[1]	ktpa	52
Steady state expandable graphite sales[2]	ktpa	12
Steady state micronised graphite sales[2]	ktpa	8
Project Financials	**Unit**	**Life of mine**
NPV_8 (post-tax)	US$M	338
IRR (post-tax)	%	32%
Payback period (post-tax)	years	3.3
Pre-production capital cost (incl. contingency)	US$M	119.7
Average annual EBITDA	US$M	82
Average sales price (FOB) per tonne of concentrate	US$	1,614
Operating costs per tonne of concentrate[3]	US$	773
Operating margin per tonne of concentrate[3]	US$	841

1. Some graphite concentrate is assumed to become feedstock into expandable graphite and micronized graphite.
2. See Figure 23 for conservative sales ramp-up to steady state by year 7.
3. Based on average operating costs (first 9 years), C1, FOB Dar es Salaam Port.

1.14.1 Sensitivity Analysis

In addition to determining the expected financial outcomes, a series of sensitivities were performed for changes in the weighted average sales price, feed grade of processed ore, operating costs and development and sustaining capital costs. The results of the sensitivity analysis are displayed as a spider chart in Figure 24 and Figure 25.

Figure 24 - Sensitivity Analysis - NPV (US$m)

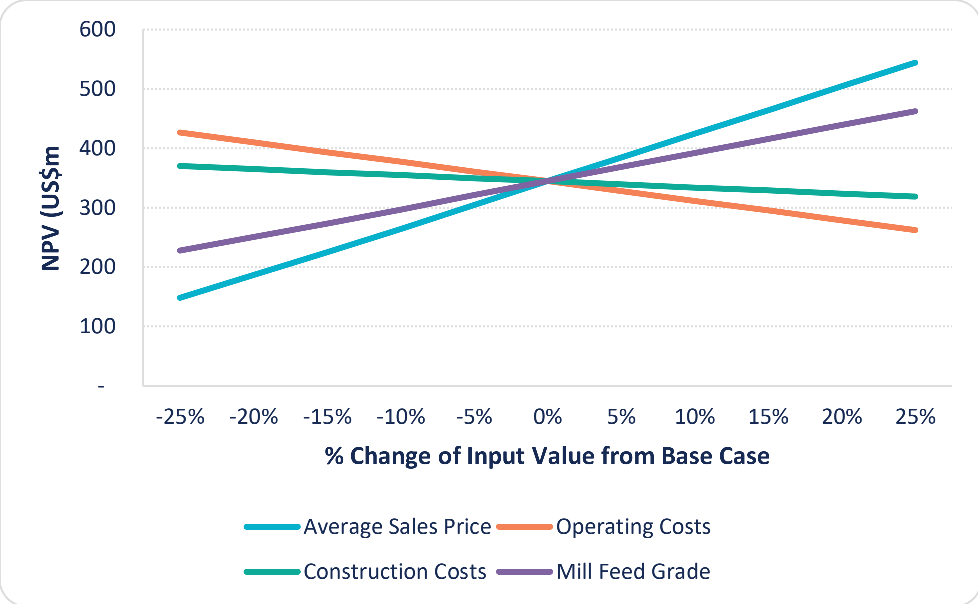
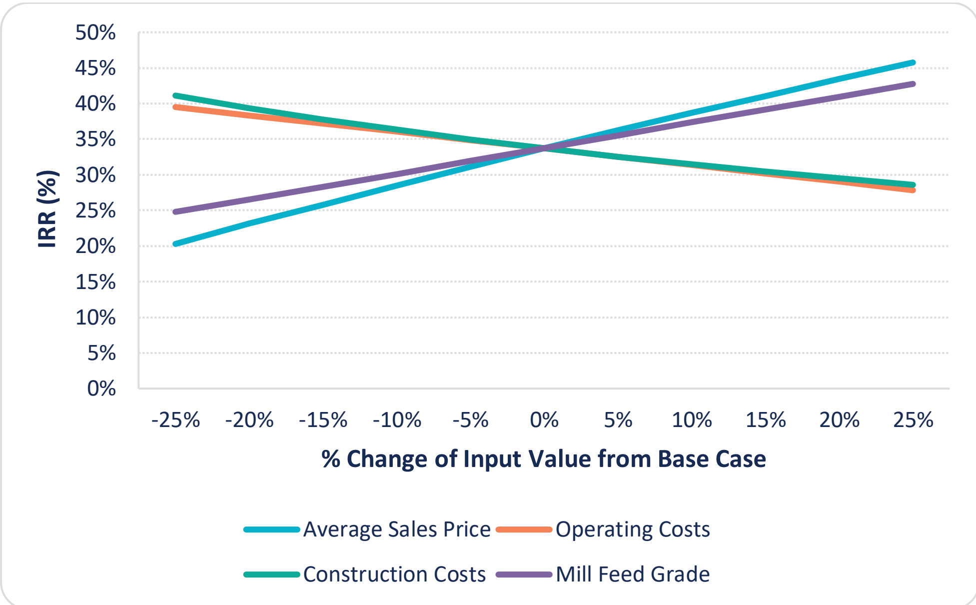


Figure 25 - Sensitivity Analysis - IRR (%)



The potential for near-mine exploration to reduce operating costs has been identified as a high- conviction opportunity to improve the Project’s economics.

Sensitivity analysis was also conducted on the post-tax NPV for a range of discount rates as shown below.

1.14.2 Taxes

Financial modelling has assumed a royalty rate of 3%, a corporate income tax rate of 30%, an export clearance fee of 1% and a local government community development levy of 0.3%.

1.15 Mine Closure

A specialist environmental consulting firm has compiled a separate conceptual Mine Closure Plan ('**MCP**'), which will guide rehabilitation and closure activities. This MCP has been developed to support the environment and social impact assessment ('**ESIA**') for the Project. Evolution proposes to revise the MCP at the commencement of the Project and will update the MCP every four years during the life of the Project as closure planning progresses. Closure costs for the planned life of mine disturbance are shown in Table 23 below (note that these costs are high level and are based on a conceptual mine closure plan).

Table 23 - Closure cost estimate

Domain	US$M
Open pit	0.1
Landforms	22.6
Processing infrastructure	4.7
Non-process infrastructure	0.1
Water infrastructure	0.1
Roads, hardstand and borrow pits	-
Total direct costs	**27.6**
Closure and post closure management	2.0
Post closure monitoring and reporting[1]	1.5
Fixed costs	3.5
Total indirect costs	**7.0**
Contingency	9.6
Total estimate	**44.2**

1. All costs except this amount (plus contingency) are incurred in rehabilitation throughout the mine life.

The closure cost estimate assumes that progressive rehabilitation will be undertaken throughout the life of the Project and that the remaining closure works will be completed at the end of mine life. The current mine plan incorporates a cost for progressive rehabilitation of the waste rock dump, 90% of which is expected to be completed during operations on an ongoing basis. The progressive rehabilitation is considered to be an operational requirement in order to mitigate any closure-related risks and to manage the water balance for the Project.

The Company recognises that the sale of plant and equipment at the cessation of mining and processing operations is often undertaken by mining companies as a means of providing funding for mine closure costs, however any such sale of plant and equipment has not been assumed in the financial analysis of the Project.

The MCP has been guided by the following:

- The International Finance Corporation ('**IFC**') Environmental Health and Safety Guidelines for Mining;
- The International Council on Mining and Metals Toolkit;

- The Australian Government Leading Practice Sustainable Development Program for the Mining Industry – Mine Closure (2016); and
- The Western Australia Department of Mines and Petroleum Guidelines for Preparing Mine Closure Plans.

1.16 Funding

Since May 2022, the Company has been working with Auramet International (‘**Auramet**’), its advisers with respect to securing an optimal financing solution for the Chilalo Project. Auramet is a leading financial advisor to the resources sector, with significant experience in Africa and has completed numerous project finance agreements for companies operating in the resources industry.

The initial phase of the engagement with Auramet entailed sending an information memorandum to potential debt financiers, who then conducted preliminary due diligence. Numerous parties responded with an expression of interest and with the DFS now complete, the Company expects to increase its engagement with those interested parties, with a view to appointing a syndicate of financiers to conduct more extensive due diligence and provide the Company a credit approved term sheet.

The Company’s major shareholder is ARCH Sustainable Resources Fund LP (‘**ARCH SRF**’) which holds 24.7% of the Company’s issued and outstanding shares. ARCH SRF is advised by ARCH Emerging Markets Partners Limited, a specialist investment advisory firm with deep experience in emerging markets, private equity, asset management and ESG. ARCH acquired a 24.7% interest in Evolution when it subscribed, as a cornerstone investor, in the Company’s initial public offering in November 2021 (‘**IPO**’) and retained that interest when it participated in a placement that was completed in October 2022 (‘**Placement**’). ARCH’s position as a supportive cornerstone investor is expected to be an important component of any financing arrangements for the development of Chilalo.

The Framework Agreement and Shareholders Agreement for the ownership, development and management of Chilalo (together, the ‘**Agreements**’) are in a form that has been agreed with the Tanzanian Government. The Agreements, among other things, confirm the Tanzanian Government’s 16% non-dilutable free carried interest shareholding and commitment to jointly develop Chilalo. The Agreements also specify the rights and obligations of the parties as shareholders of Kudu Graphite Limited, the Tanzanian entity in which Evolution and the Tanzanian Government hold their respective equity interests. Evolution recognises that financiers require certainty around the operation of the Tanzanian Government’s free carried interest and the completion of the Agreements is a key requirement for project finance. The Company is awaiting notification of the formal public signing ceremony with respect to the Agreements, which, at this stage is expected to take place in March 2023.

The Company has signed a binding offtake agreement with YXGC for the sale of 30,000 tpa of coarse flake graphite from its Chilalo Project for the first three years of operation (‘**Offtake Agreement**’). The Offtake Agreement covers over 50% of Chilalo’s production for the first three years and represents over 70% of forecast revenue over the same period.

While the Company could sign an offtake agreement for the sale of its fine flake graphite, owing to the exceptional testwork results associated with using Chilalo fine flake graphite to produce coated spherical graphite and other high-value products, and ensuring that there is sufficient fine flake graphite available to supply feedstock into micronised graphite and to support anode qualification programs, it has elected to retain maximum flexibility with its fine flake material and not entered into offtake arrangements.

With the DFS complete, key agreements with the Tanzanian Government in place, the existing offtake agreement for coarse flake graphite from Chilalo, and a supportive cornerstone investor, the Company is well positioned to secure the finance required for the development of Chilalo.

1.17 Permitting and Approvals

In assessing and managing environmental and social risks, IFC Performance Standards and the Equator Principles are recognised as the global standard for resources companies and have been adopted by financial institutions globally as a pre-requisite for project finance.

Evolution has completed a comprehensive suite of environmental and social studies, together with accompanying documentation that seeks to align with IFC Performance Standards and the Equator Principles. Finalisation of regulatory, risk management documentation has formed an important part of the DFS. In addition to such documentation, the Company has developed a comprehensive suite of management plans that are central to the DFS. These documents and plans are set out below.

1.17.1 Mining and Exploration

The Company received its mining licence in February 2017. The Mining Licence has a term of 10 years and unless the holder of a mining licence is in default, has failed to produce commercial quantities of minerals, has not developed the mining area with due diligence or in compliance with applicable safety and environmental regulations, a mining licence is renewable for a further 10 years. In addition to the Chilalo Mining Licence, the Company holds title to five Prospecting Licences surrounding the Mining Licence, which cover an area of approximately 161km^2.

Pursuant to the Framework Agreement currently in the process of being finalised with the Government of Tanzania, upon incorporation of Kudu Graphite Limited, the entity that will hold the Mining Licence and surrounding Prospecting Licences, all licences will be reissued with a refreshed term.

1.17.2 Environmental Approvals

In March 2016, the Chilalo Graphite Project was issued an Environmental Certificate (EC/EIS/2308) by the National Environment Management Council (‘**NEMC**’) of Tanzania. Issue of this certificate followed a review of the ESIA for development of the Project.

In 2019, following a review of the ESIA against the IFC Performance Standards on

Environmental and Social Sustainability ('**IFC, 2012**') additional studies were undertaken and the ESIA was updated. The 2019 ESIA was approved by NEMC on 16 March 2020. In order to comply with Tanzanian regulations that require projects to be reregistered if development has not commenced within three years, an application was made to NEMC on 04 November 2022 to reregister the Project.

Furthermore, FEED studies to optimise the Project commenced in 2022. A revision of the ESIA to accommodate the results of the FEED studies is underway. Several additional ESIA supporting studies were consequently commenced in 2022, to accommodate the changes resulting from the FEED investigation, including:

- A biodiversity assessment, including updated wet and dry season baseline surveys for both terrestrial and aquatic flora and fauna;
- An ecosystem goods and services assessment;
- Development of an updated air quality monitoring plan, including dust fallout and gaseous emissions monitoring;
- Development of an updated noise monitoring plan;
- Re-initialisation of surface water and groundwater baseline monitoring;
- Development of geochemical source terms to inform the contaminant load modelling and acid mine drainage studies;
- Updated surface water and groundwater management technical studies;
- Updated mine closure studies;
- A climate change risk assessment;
- An updated archaeological and cultural heritage survey, including the development of an appropriate cultural heritage management plan and chance find procedure;
- An updated socio-economic baseline survey of Project affected parties;
- A health impact assessment; and
- Calculation of greenhouse gas emissions from the Project.

It is envisaged that the ESIA revision will be submitted to NEMC for acknowledgment by the end of the second quarter of 2023.

Upon completion of the revised ESIA, the project's existing Occupational Health, Safety, Environment and Social Management ('**OHSES**') Plan will be updated to reflect any changes to the Project risk and impact profile. Currently, the OHSES Plan includes the following individual plans:

- Terrestrial Biodiversity Management Plan;

- Aquatic Biodiversity Management Plan;
- Air Quality Management Plan;
- Site Water Management Plan;
- Acid and Metalliferous Drainage Management Plan;
- Noise Management Plan;
- Vibration Management Plan;
- Hazardous Substances and Dangerous Goods Management Plan;
- Domestic and Hazardous Waste Management;
- Cultural Heritage Management Plan;
- Social Impact Management Plan;
- Corporate Social Responsibility Strategy;
- Stakeholder Engagement Plan; and
- Emergency Preparedness and Response Plan.

1.17.3 Relocation and Compensation

The 2022 Relocation Action Plan (‘**2022 RAP**’) was undertaken in compliance with the requirements of IFC Performance Standards 5 on Involuntary Resettlement (IFC, 2012). The 2022 RAP compensation schedules were approved by the Chief Valuer in August 2022, and the first round of compensation payments were then made to Project affected parties. Remaining compensation is expected to be paid on commencement of construction. Wherever possible, in-kind replacement has been offered in compliance with IFC, 2012.

Extensive studies were undertaken as part of the 2022 RAP process, including:

- Resettlement host site suitability studies;
- Development of a livelihood restoration plan;
- Compilation of a vulnerable people’s plan;
- Architectural studies for replacement housing design;
- Town planning and site layout for the replacement housing site; and
- Socio-economic baseline surveys.

1.18 *Stakeholder engagement*

Stakeholder engagement has formed an essential component of all ESIA and RAP studies undertaken to date. It has served as a platform for interested and affected parties to be informed of the Project and provided stakeholders with the opportunity to present their views and raise issues and concerns that require further assessment.

Below in Figure 26 is a diagrammatic timeline indicating when stakeholder engagements have taken place and the purpose thereof, since the commencement of the Project.

Figure 26 - Timeline of key stakeholder engagement activies

2015 Consultations towards the announcement of the Project and the ESIA related studies which followed

- 2016: Graphex Mining Limited acquires Ngwena Tanzania Limited and the Chilalo Project.
- 2016, March: The NEMC of Tanzania issues an environmental certificate for the Project.
- 2016, April: The resettlement action plan (RAP) was completed.
- 2017, February: The mining licence for the Project was granted.
- 2018, September: The pre-feasibility study results were announced.

2019 Consultations towards the updating of studies and the revised ESIA

- 2019, Updated environmental and social baseline studies were undertaken, and a revised ESIA was submitted to NEMC for approval.
- 2019, July: The Project RAP was updated.
- 2020, January: The definitive feasibility study (2019) results were announced.
- 2020, March: The updated ESIA for the project was approved by NEMC.

2021 Consultations towards further updating of environmental studies and preparation to revise the RAP

- 2021, November: Evolution commences additional environmental studies and preparation of a revised RAP on the Project that will ensure it complies with GIIP, in particular the IFC PS.

2022 Consultations to further inform the RAP revision and to engage on an inconvenience grant

- 2022, January – May: First and second round engagements on the RAP revision process are undertaken. An inconvenience grant was paid to project affected people in April 2022.
- 2022, June – August: Engagement with Project affected parties on RAP entitlements and first round of compensation payments to be made in terms of Tanzanian legislation.
- 2022, August: The Chief Valuer of Tanzania approves the compensation schedules and Tanzanian RAP process is completed. First round of compensation payments completed.

To further the Project's aim to meaningfully engage stakeholders, an overarching stakeholder engagement management plan was developed in 2022 and is currently being implemented. The 2022 stakeholder engagement management plan addresses the following:

- Principles and company commitments to stakeholder engagement.
- An identification and analysis of stakeholders relevant to the Project.

- Multiple methods to be utilised for engagement with stakeholders.
- Grievance resolution mechanisms.
- Procedures for monitoring, reporting and evaluation of stakeholder engagement activities.

Consultation to date has been undertaken with a broad range of stakeholders as outlined in Table 24.

Table 24 - Stakeholder Engagement

Stakeholders		Roles/Contribution
Central Government	Ministry of Minerals	Responsible for issuing a Mining License for the Project.
	Ministry of Water and Irrigation.	Enforce laws and regulations for water quality and utilisation, and responsible for issuing water licences in respect of the Project.
	National Environment Management Council	Enforcement of laws and regulations for environmental management and protection, as well as pollution control. Responsible for issuing of environmental certificate for the Project.
Local Government	Lindi Regional Council	In charge of regional community welfare, investment development, environmental management and security.
	Ruangwa District Council	Ensures sound environmental practices are undertaken during Project development and conducts environmental monitoring from time to time.
	Mbwemkuru Ward Council	Responsible for Ward administration, community development, social welfare, environment and land management.
	Nangurugai Village Council	Responsible for people's welfare and village development. Responsible for ongoing liaison with the Project.
Project Affected Persons	Lukowe and Ambye Hamlets in Nangurugai Village	Community members located in the footprint of the Project area and may directly be economic or physical displacement.

1.19 *Project Implementation*

In formulating the Project Implementation Plan and targeting the shortest possible construction period, priority was given to the utilisation of resources that are familiar with working in Tanzania without compromising safety, quality or schedule. The implementation plan also focuses on the work required to enable construction personnel and contractors the full access they require to do their work.

The design and implementation of the Project will comply with applicable laws and regulations. Where Tanzanian laws and regulations do not cover a specific situation, equivalent industry standards will be applied.

1.19.1 *Contracting Strategy*

An Engineering and Procurement ('**EP**') contract is proposed for the engineering design and procurement component, with EV1 placing equipment and contract orders based on the EP recommendations and an owner managed site construction. The EP style contract allows EV1 greater input into the design and selection of the process equipment. Further details of the proposed approach are as follows:

- The EP contract is a separate contract that is either fixed price or an incentivised time and materials contract.
- All equipment orders are placed by EV1, but the EP contractor completes the design, tender process and recommendation for award.
- All site services contracts are placed and managed by EV1 project personnel, with design, tender and award recommendations developed by the EP contractor.

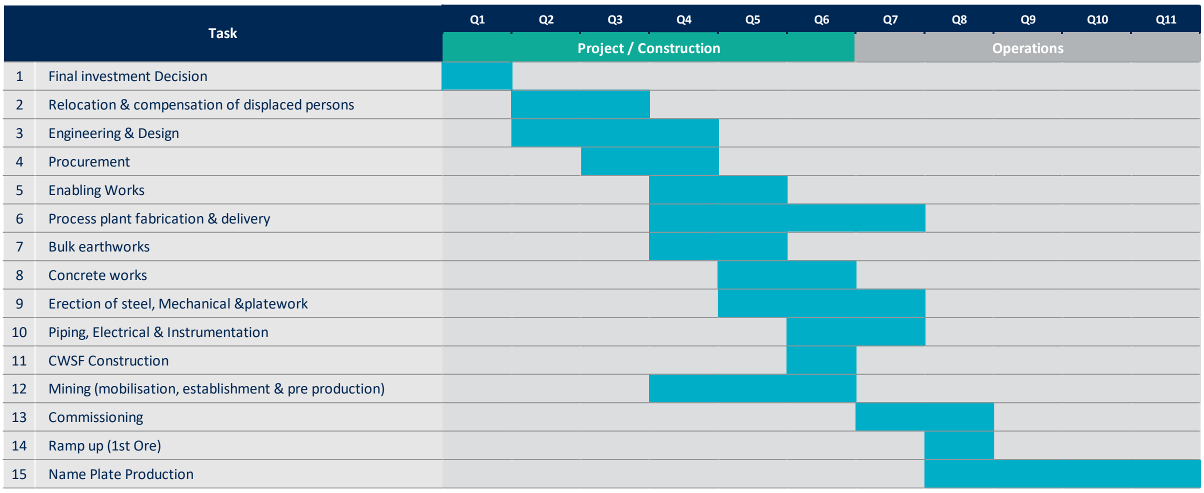
A summary of the contracting strategy for other key contracts include:

- The power requirement will be met by utilising a specialist power provider who will provide the applicable power generating equipment to provide power on a Build Own Operate and Maintain arrangement.
- Bulk earthworks will be done on a unit pricing contract.
- The pre-fabricated administration buildings will be procured directly via a stand-alone supply contract and constructed on site using local labour supervised by the building supplier.
- Catering and management for the accommodation villages will be operated under a contract arrangement.
- Site access road upgrade will be a unit pricing contract with the tender seeking bidders to identify savings if they are also awarded the bulk earthworks contract.
- The CWSF will be done on a unit pricing contract with an external laboratory engaged for quality assurance and ongoing inspections.

1.19.2 *Schedule / Timetable*

Should the Company reach final investment decision, commissioning is expected to begin in Q7 from commencement, as shown in the development schedule in Figure 27.

Figure 27 - Development Scheduele



ANNEXURE B – Update Ore Reserve estimate

Overview

This updated Ore Reserve estimate is reported in accordance with the JORC Code and ASX Listing Rules and provides a summary of information and Table 1 JORC Code commentary to support the updated Ore Reserve estimate for the Chilalo Graphite Project.

1.1 Material assumptions and outcomes from the updated DFS, including economic assumptions

Appropriate studies for the development of the Project have been undertaken by Evolution and a number of suitably qualified independent consultants, experts and contracting firms. Front-end Engineering Design has been completed, which has underpinned the Updated DFS. The Updated DFS completed by Evolution is for a processing facility of 500ktpa ROM throughput, producing a coarse flake graphite product. This production scenario forms the basis of this updated Ore Reserve estimate.

Chilalo graphite has a distinct signature, possessing specific metallurgical and chemical attributes ideally suited for foils, fire-retardants, engineered products, lubricants, and thermal drilling fluids. As flake graphite is not an exchange-traded commodity the Prices are negotiated directly between buyer and seller. Independent information regarding graphite pricing and market supply/demand is therefore difficult to come by as it's treated as the intellectual property of suppliers and customers. Flake graphite is not a commoditised or homogeneous product. It comes in many different sets of specifications, each with unique characteristics. As a result, there are wide-ranging uses of the different mesh sizes and purity levels of flake graphite. The physical and chemical properties of each flake graphite 'signature' are unique from one mine to another. Potential customers will therefore require graphite suppliers to qualify their products directly with customers. This process begins with customer test work on laboratory samples. These attributes are expected to produce a high-value product suitable for high-tech and higher priced applications. The market studies done by Evolution have utilised price estimates for Chilalo product from several independent sources including Benchmark Mineral Intelligence, Fastmarkets and Wood Mackenzie. Pit optimisations have been carried out using a fixed graphite price and set of parameters agreed between Evolution and Resolve Mining Solutions. Selling costs include government royalties, other royalties and transporting costs.

The geotechnical parameters for the Project have been based on the updated Chilalo Geotechnical Report supplied by Open House Management Solutions (**OHMS**) geotechnical consultants. The report represents the geotechnical and stability assessment of pit slopes, engineered drains, waste rock dump construction and face angles for Chilalo. The specified parameters have been used in both the optimisation and design of the Chilalo open pit and waste rock dumps.

1.2 Criteria used for classification, including classification of Mineral Resources on which Ore Reserves are based and confidence in modifying factors

Classification of the Mineral Resource estimates was carried out considering the level of geological understanding of the deposit, quality of samples, density data, and drill hole spacing. The Mineral Resource estimate has been classified in accordance with the JORC (2012) Code using a qualitative approach.

The Mineral Resource has been classified as an Indicated Mineral Resource for those volumes where in the Competent Person's opinion there is adequately detailed and reliable, geological and sampling evidence, metallurgical testing result data and supported by geophysical electro-magnetic modelling data, which are sufficient to assume geological, mineralisation and quality continuity.

The Mineral Resource has been classified as an Inferred Mineral Resource where the model volumes are, in the Competent Person's opinion, considered to have more limited geological and sampling evidence, metallurgical testing result data and supported by geophysical electro-magnetic modelling data, which are sufficient to imply but not verify geological, mineralisation and quality continuity.

Petrographic and metallurgical data supports the classification of the Chilalo deposit as an Industrial Mineral Resource.

The Ore Reserves have been classified according to the classification of the Mineral Resource and the status of the Modifying Factors. The status of the Modifying Factors is generally considered sufficient to support the classification of Probable Reserves. As there is no Measured material in the Resource Model, Indicated Resource is considered for the Ore Reserve. None of the Inferred Resource is included in the Ore Reserve calculation, all the inferred Resource is reported as waste. Analysis on the main economic assumptions within the cash flow model indicate that the Project produces a positive discounted cash flow (DCF) in terms of all operating costs, the current graphite price estimate and selected modifying factors.

1.3 Mining method selected and other mining assumptions, including mine recovery factors and mining dilution factors

The Chilalo open pit mine is planned as a conventional truck and shovel operation, using 40-50t articulated trucks and matching excavators. Operations include drill and blast activities for the majority of the open pit mining. Contractor mining has been assumed for the life of mine. The equipment selection is appropriate for the proposed scale and selectivity of this operation. The selected mining approach is typical for a small to medium scale open pit mining operation.

The geotechnical parameters utilised in the pit design are as per the OHMS recommendations.

Pit ramps have been designed with the following characteristics;

- The dual lane ramps are 17m wide to allow for safe passage of the selected trucks with an allowance for a bund wall on the open side of the ramp and a drain on the inner side.
- The single lane ramps are 12m wide can be used for mining last benches and goodbye cuts.
- Gradient of 1:10 is practicable with the proposed mining fleet.
- Ramps exit the pit crest in the direction of both the ROM and waste rock dumps.

Minimum mining width of 30m is maintained for the cutback designs, however minimum 20m of mining width is maintained on normal benches. The waste dump will be progressively rehabilitated to reduce the amount of PAF (Potentially Acid Forming) waste rock exposed throughout the operation.

Dilution for tonnes and grade was calculated through regularisation of the resource model into a standard mining unit of 5m x 5m x 5m resulting in a 10% dilution and 2% ore loss which was concluded as reasonable.

1.4 Processing method selected and other processing assumptions, including recovery factors applied and allowance made for deleterious elements

The Chilalo deposit has been subject to various metallurgical test work programs since the initial drill programs were carried out in the last quarter of 2014 to generate samples for metallurgical test work. From the initial drill programs, sampling and compositing was undertaken to generate representative samples to assess the ore's amenability to beneficiation by froth flotation and to identify the nature, flake size and occurrence of the graphite in a selection of drill core samples and flotation products. This testwork program was completed by SGS (Perth) and managed by BatteryLimits with the results supporting the process design and engineering for the 2015 PFS.

Further programs of work were initiated in 2016 and 2017 on samples generated since the PFS was completed, aimed at producing bulk concentrate samples for marketing and additional preliminary testing of oxide ore.

In addition, during 2016 a testwork program was undertaken by Suzhou with a focus to produce coarse flake graphite with grades greater than 85% TGC.

In addition, during 2018 a further series of tests were undertaken to optimise coarse flake size recovery. In 2018/2019 a new drill program was undertaken to complete a DFS level testwork program and included additional variability sample from new areas of the expanded resource and a further 40t bulk sample was taken from a series of trenches within the main central zone of the ore body. The key focus of the program included;

- Compilation of global ore body representative samples.
- Testwork program to enable robust flow sheet optimisation in terms of maximise flake size preservation and recovery.
- Production of process engineering input data.
- Variability sample testwork from new areas of the expanded resource.
- Demonstrate robust flowsheet from a bulk sample operation run.
- Generate sufficient product and tailings for additional vendor or downstream testwork and market samples.

A representative testwork program demonstrates that the ore of the Chilalo Graphite Project is favourable to the production of a high-grade graphite product. Results from the metallurgical programs of the Chilalo Graphite Product highlighted the ability to produce grades in excess of 95% TGC.

Metallurgical processing recoveries as based on the test work conducted on samples taken from North, Central and West pit areas. Recoveries used for the optimisation, schedule and cash flow model are shown in Table 1.

Table 1 - Metallurgical Recovery

Item	Unit	Value
Metallurgical Recovery North Pit Oxide	%	90.3
Metallurgical Recovery North Pit Fresh	%	96.1
Metallurgical Recovery Central Pit Oxide	%	91.8
Metallurgical Recovery Central Pit Fresh	%	97.5
Metallurgical Recovery West Pit Oxide	%	94.5
Metallurgical Recovery West Pit Fresh	%	96.1

Evolution will offer two base range carbon purities with the ability for additional processing to meet customer-specific and market mesh size specifications in the future. It is not commercially feasible or economic to have a wide range of carbon purities. Evolution will also seek to produce and qualify a high-purity (>99% LOI) product once commercial production of the base range products has been achieved.

Evolution engaged CPC Engineering to complete a Front-End Engineering Design for the processing facility. The information gathered for the FEED included revalidation of all the pricing obtained for the 2020 DFS. The 2020 DFS estimate has therefore been updated and includes all the necessary costs associated with process engineering, design engineering and drafting, procurement, construction and construction management, commissioning of the process facility and associated infrastructure, mining establishment, first fills of plant reagents and consumables, spare parts and working capital required to design, procure, construct and commission all of the facilities required to establish the Project. The estimate is based upon preliminary engineering, material take-offs, budget price quotations for major equipment and bulk commodities. Unit rates for installation were based on market enquiries specific to the Project and benchmarked to those achieved recently on similar projects undertaken in the African minerals processing industry. The estimate is quoted in United States Dollars (US$) to a level of accuracy of +/-15% based on the available data. The Company considered a single stage 500 ktpa processing schedule. The LoM schedule and cost model has been completed on 500 ktpa processing schedule and demonstrated the financial viability of the Chilalo Graphite Project.

The proposed processing plant will include a two-stage crushing circuit that will deliver product to a storage bin. Ore will be reclaimed from the storage bin and delivered to a two-stage milling circuit. The primary rod mill will operate in closed circuit with a screen. The undersize from the mill product screen will report to a rougher flotation cell for recovery of coarse fast floating graphite. The rougher tail will report to the secondary ball mill operating in closed circuit with cyclones. The undersize from the ball mill cyclones will report to the scavenger cells. The rougher and scavenger concentrate will undergo various stages of cleaning regrinding and screening. Coarse and fine graphite concentrate will be filtered and dried separately. Dry graphite concentrate will be screened into various product sizes and bagged for shipping. Flotation tailings will report to the tailings hopper thickener and then be filtered and centrifuged into a low moisture 'cake' capable of being stored safely with other mine waste. Design throughput rates for the processing plant have been set at 500ktpatpa of open pit ore with production of approximately 50ktpa of graphite. An effective utilisation of 91% has been used for design purposes. Inclusion of an intermediate crushed ore bin and installed standby equipment will enable this utilisation to be achieved.

1.5 Basic cut-off grade applied

The Mineral Resource is reported for blocks above a cut-off grade of 2% TGC. The Ore Reserve hasn't used a particular cut-off grade for Indicated Resource.

The cut-off between ore and waste has been determined by net value per block calculated using the total recovered graphite recovered along with all operating costs to the point of sale including processing, product haulage, crusher feed, general and administration, ore differential, sustaining capital, selling costs, and grade control costs. This cut-off grade is approximately equivalent to 5% TGC. The blocks with potential for inclusion into Ore Reserves first had to achieve a block grade greater than or equal to this cut-off grade as well as a resource category status of Measured or Indicated.

Project economics from the total Project have been considered at the end of the full Project iteration to confirm that the cut-off criteria support economic operations for the Project.

1.6 Optimisation methodology

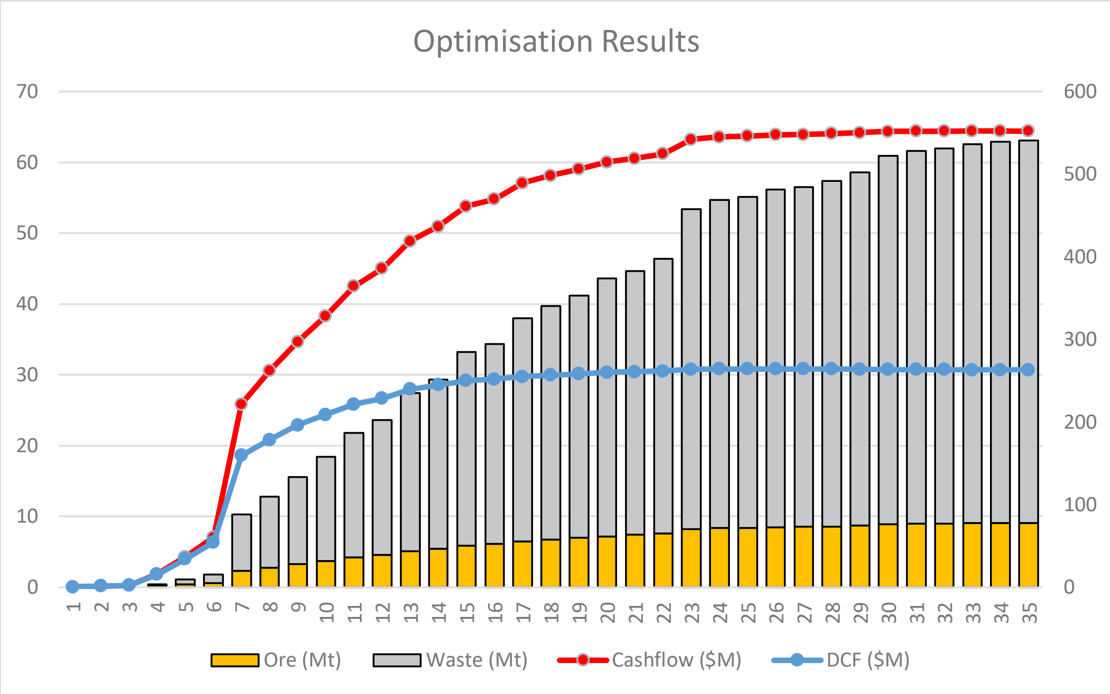
Whittle™ software has been used to generate a series of economic Pit shells for this deposit using the regularised mining block model and input parameters as agreed by Evolution and Resolve Mining Solutions.

Inferred Mineral Resource is not considered in the pit optimisation. Positive net value method is applied to identify the ore. A mining and production schedule was completed with Inferred Mineral Resource treated as waste and concluded that conversion of Inferred Mineral Resource to processed product is not required for the overall financial viability of the Chilalo Graphite Project.

Using the selected parameters, a set of nested pit shells were produced by the Whittle optimisation software. The pit shells were used to determine trends in mineralisation and/or higher-grade areas which offer a best-case scenario for grade and discounted cash flow (**DCF**).

Figure 1 demonstrates the tonnages mined, the DCF and undiscounted cash flow for the various optimisation pit shells.

Figure 1 - Chilalo Optimisation



Pit shells 25 with a Revenue Factor (RF) of 0.88 was chosen as the ideal pit shell. This shell maximises both the discounted cash flow and the recovery of the currently defined Indicated Resource while applying the selected optimisation parameters. Table 2 summarises the optimisation output.

Table 2 - Optimisation Output

Item	Unit	Outputs
Shell	No.	25
Revenue Factor		0.88
Total Mined	Mt	55.1
Waste Mined	Mt	46.7
Strip Ratio	t:t	5.6
Total RoM Feed	Mt	8.1
Indicated Resource in the RoM Feed	Mt	8.1
Percentage of Indicated Resource in the Feed	%	100.0%
Inferred Resource in the RoM Feed	Mt	0
Percentage of Inferred Resource in the Feed	%	0.0%
RoM Feed Grade	%	10.4%
Operating Costs	US$M	718
Revenue	US$M	1,265
Cash Flow	US$M	546
DCF	US$M	264

1.7 Pit Design, Mining Schedule, Cost Model and Sensitivity Checks

Pit Design

Detailed pit designs were completed on updated mining models which form part of the Ore Reserve estimation. The pit design had to achieve a positive cash flow result in order to move into Ore Reserve status.

A realistic pit design has been prepared based on the results of the optimisations and incorporating appropriate wall angles, geotechnical berms, minimum mining widths, and access ramps appropriate for the equipment selected.

Material within the pit designs has been estimated by intersecting the pit design with the detailed aerial surveyed topographical surface within the mining block models.

North and West pits were designed with a starter pit and cut back into the final pit. Central pit has a starter pit and 3 cutbacks into the final pit. Figure 2 shows the Final Pit and Stage designs. Figure 3 shows Final Pit, Waste Dump and RoM Pad locations.

Figure 2 - Chilalo Pit Design

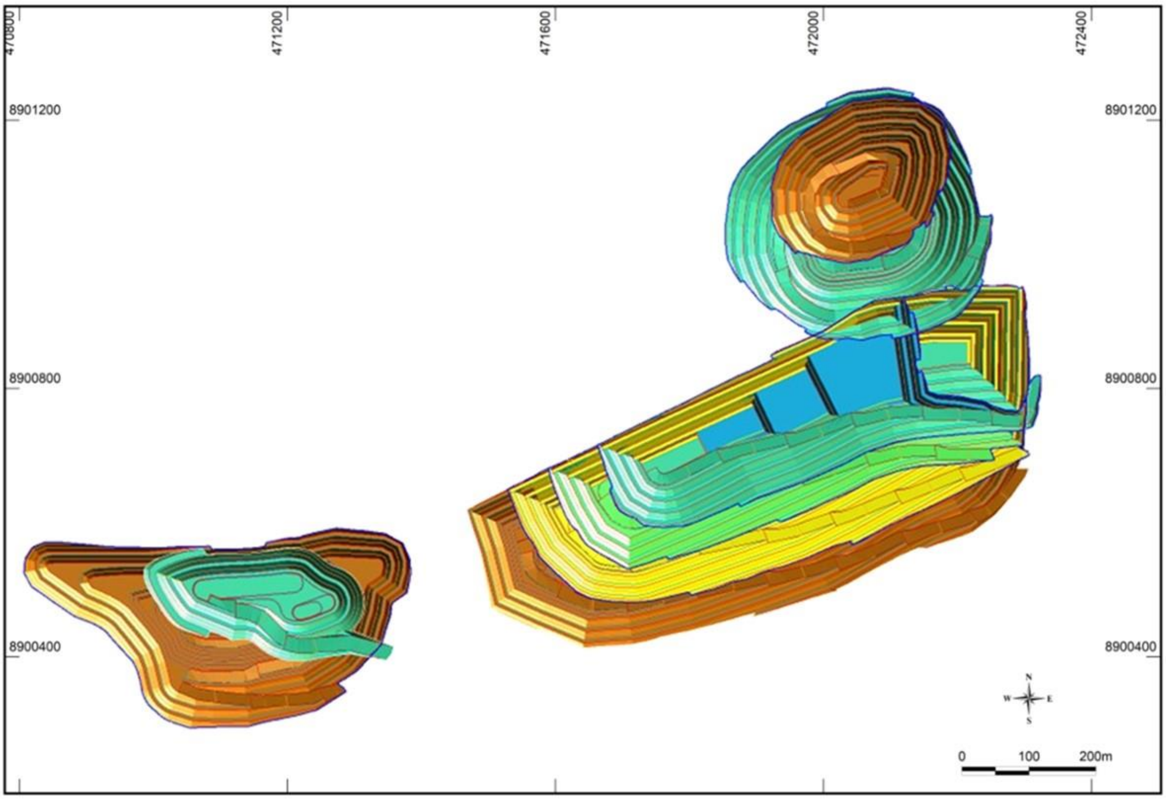
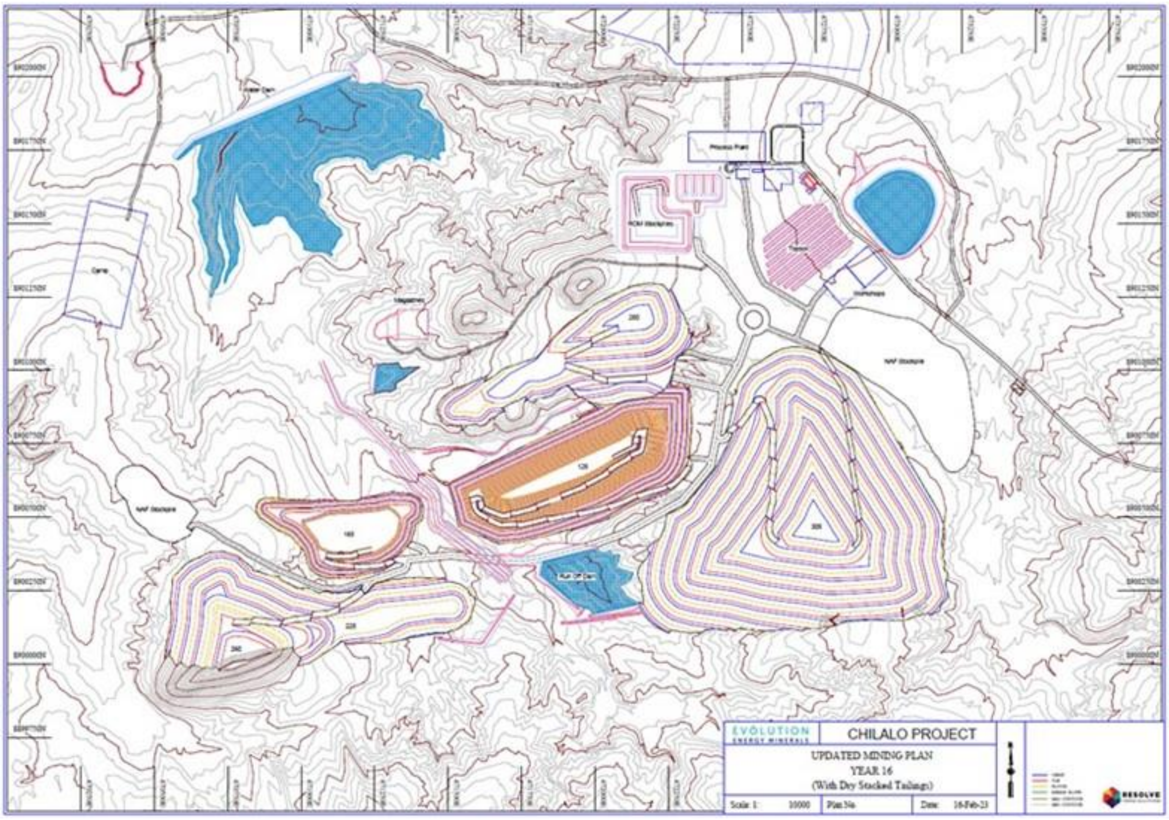


Figure 3 - Final Pit, Waste Dump and RoM Pad Designs



The pit design volumes came close to the selected Whittle shell. Table 3 shows the comparison of Whittle shell with the pit design.

Table 3 - Pit Design and Whittle Comparison

	Total mined	Waste	RoM Feed	Average Grade
	(Mt)	(Mt)	(t)	%
Final Pit Design	61.5	53.6	8.0	10.5
RF 0.88 Optimisation	57.5	48.8	8.6	10.3
Variance	7%	10%	-7%	2%

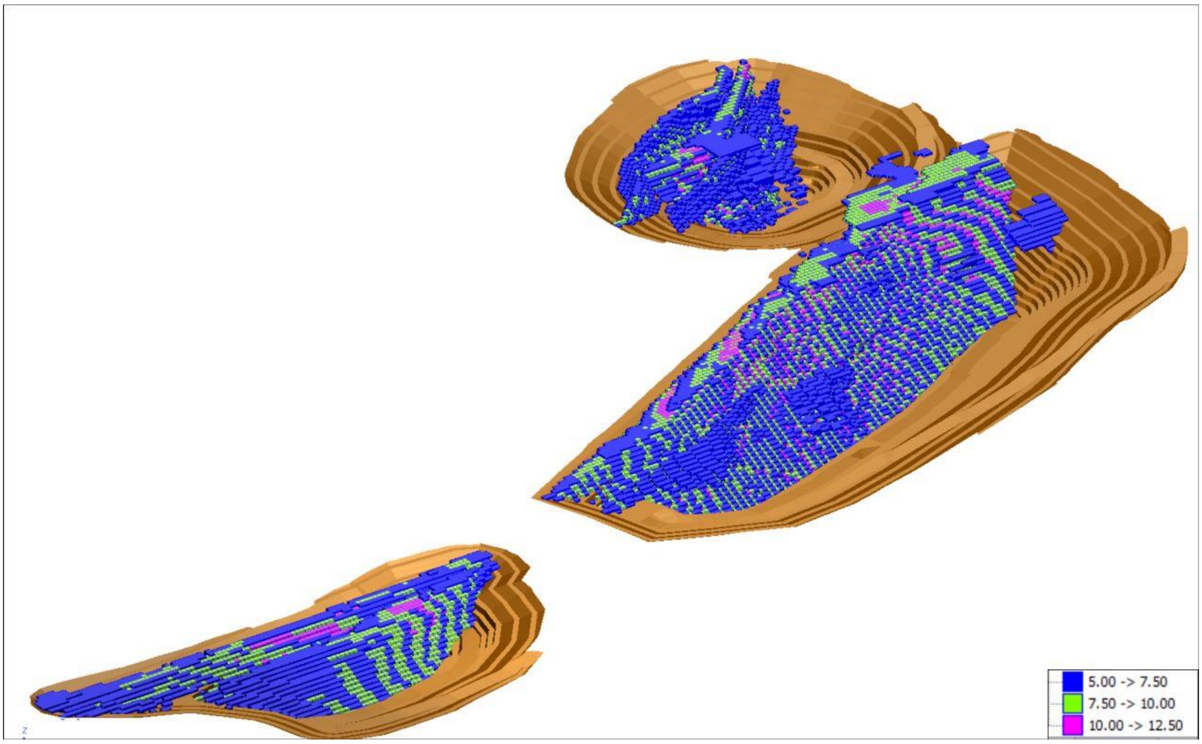
LoM Schedule

MineSched™ software was used to produce the following schedule on a monthly basis. Mining rates were applied to suit Evolution's proposed processing schedule of 500 ktpa RoM Feed. The schedule was completed with Inferred Mineral Resource treated as waste.

No additional mining losses were added to the schedule as mining recovery and mining dilution are included in the regularised mining block model.

The RoM Feed is divided in to four grade bins to achieve consistent Feed grade and maximise the cash flow. Figure 4 shows the RoM Feed within the Pit. Central Pit has been prioritised due to better grade and lower strip ratio.

Figure 4 - ROM Feed by Grade



To maximise the cash flow, West and North Pit is mined with two stages and Central pit with five stages. Figure 5 shows the individual pit movements in tonnes. Mining commences in Central Pit. Mining in the Central Pit is prioritised as it has better grade. Total material movement by different material classes are shown in Figure 6. It can be seen that some Inferred Resource is available in the pit. All the Inferred Resource is considered as waste in the reserve schedule and financial model.

Figure 5 - Total Tonnes Mined by Pit

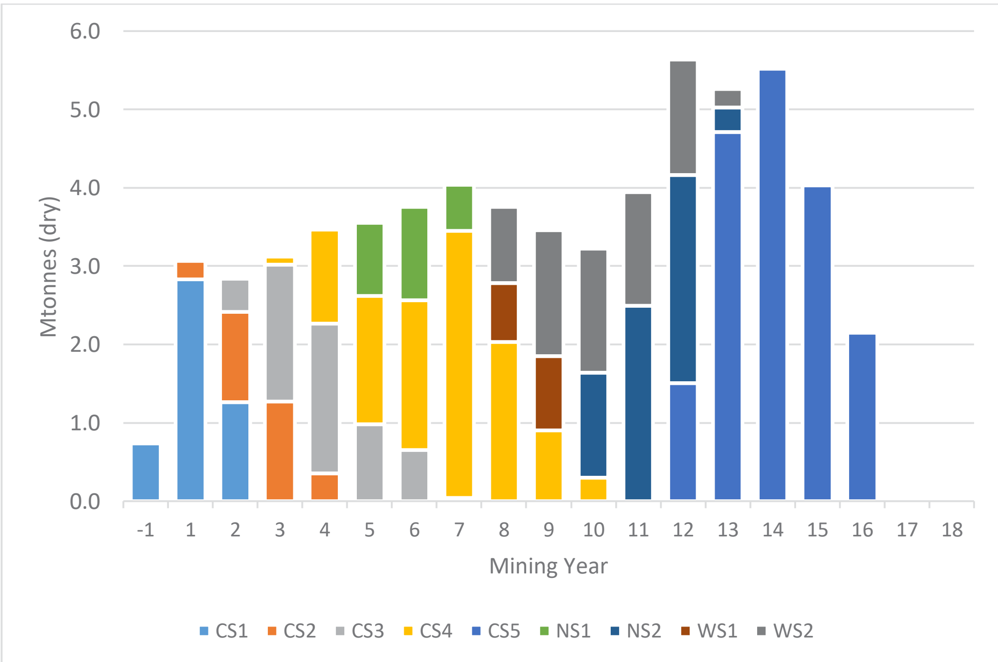
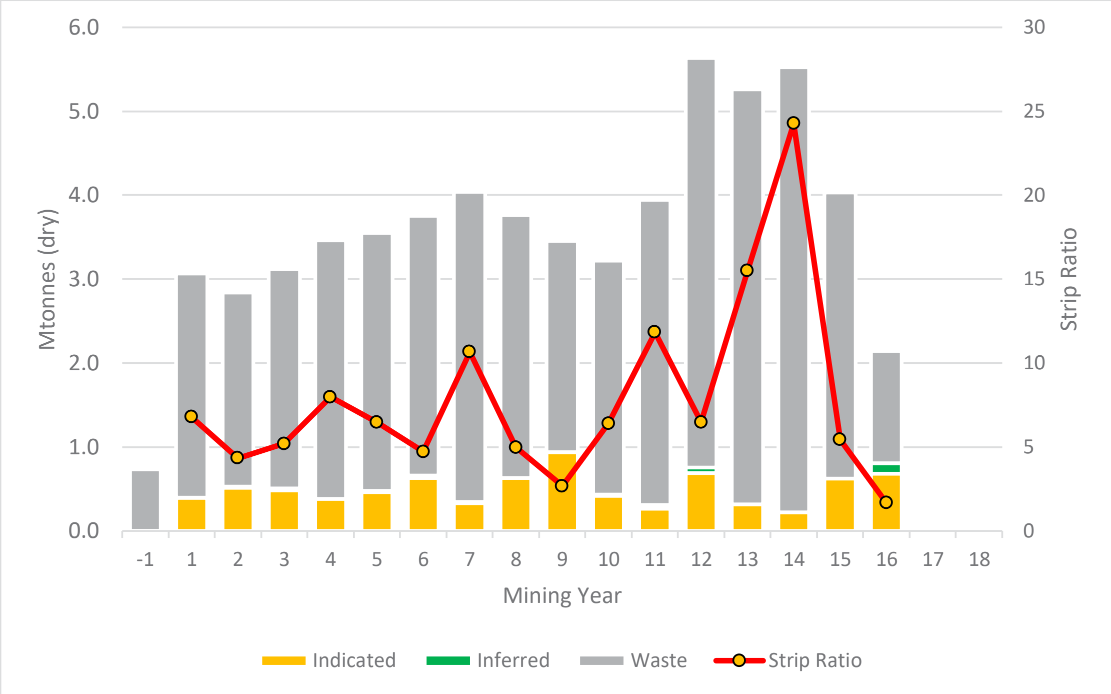


Figure 6 - Total Tonnes Mined by Mineral Class



Total ore tonnes mined by grade is shown in Figure 7 and Figure 8 shows the processing schedule.

Figure 7 - Total Ore Tonnes Minned by Grade

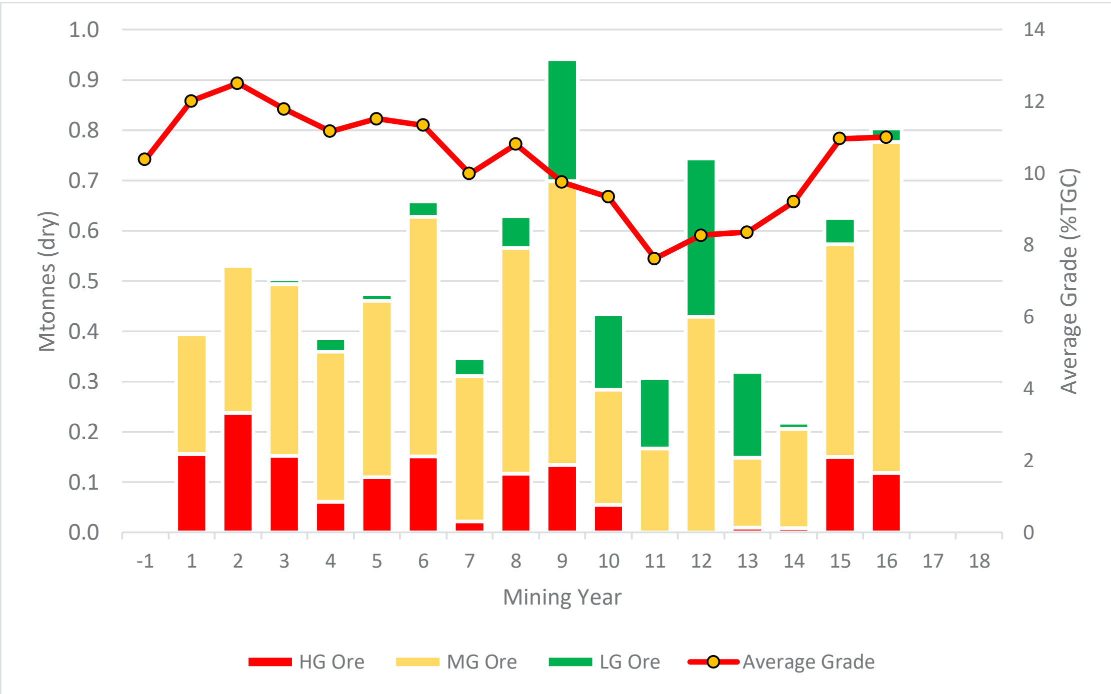
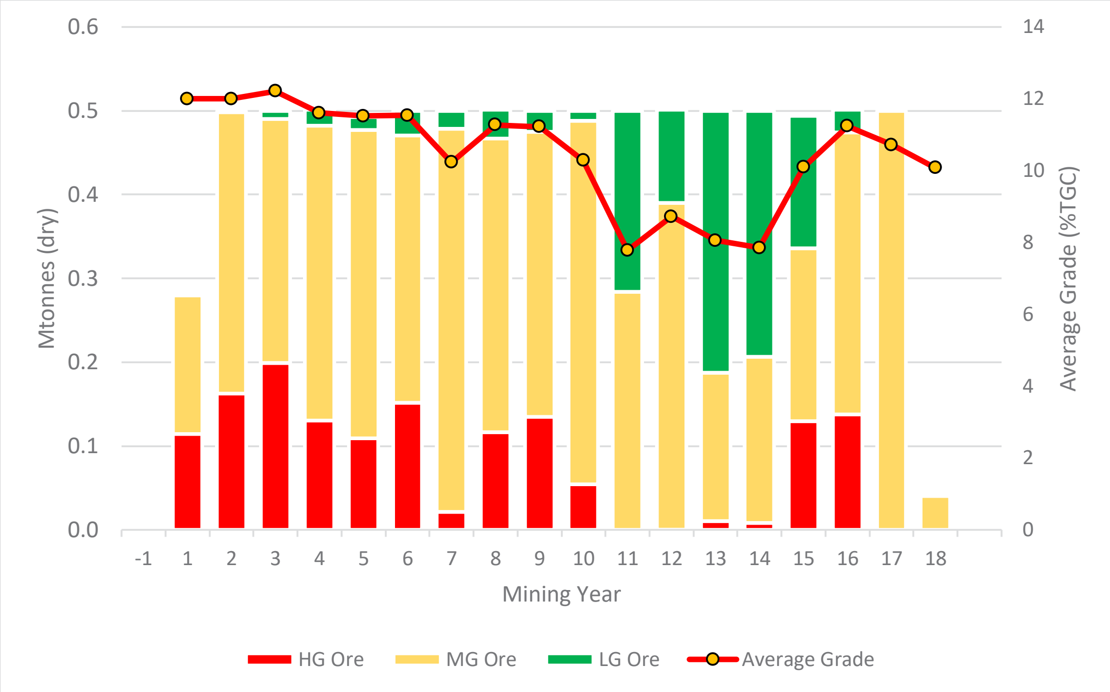


Figure 8 - Total Ore Tonnes Processed by Grade



Financial Model and Sensitivity Checks

Capital and operating costs estimated to a minimum PFS level of confidence have been applied to the planned activities. The revenue assumptions are based on a market report in conjunction with Evolution. The cash flow model has been generated solely for ore reserve studies.

The cost inputs and the modifying factors used for the optimisation are also used in the cash flow model. The NPV was calculated using a 10% discount rate applied at the beginning of each year from the commencement of processing operations.

Sensitivity analysis was done for the metal price, metallurgical recovery, operating cost, capital cost and discount rate. The project NPV remains positive for the tested sensitivity *between* +20% and -20%. The sensitivity analysis completed indicates that the project results are most sensitive to commodity price and then to the metallurgical recovery. The project Net Present Value (NPV) remains positive for a price variance down by -28%. The project has a positive NPV until the operating costs are increased by +56%.

1.8 Material modifying factors, including status of environmental approvals, mining tenements and approvals, other government factors and infrastructure requirements for selected mining method and transport to market

Material modifying factors including land access, infrastructure requirements, and logistics have been addressed in the Updated DFS to an adequate level of confidence for a Probable Ore Reserve.

The environmental approval process for the Project and the environmental certificate was signed by the Minister responsible for the Environment and issued on 2 November 2016. Following the issue of the environmental certificate, the mining license application was submitted and obtained in February 2017. As part of the preparation of the 2020 DFS, an updated ESIA was submitted to the Tanzanian Government in December 2019 and as part of the Updated DFS, a further updated ESIA was submitted to the Tanzanian Government in 2022.

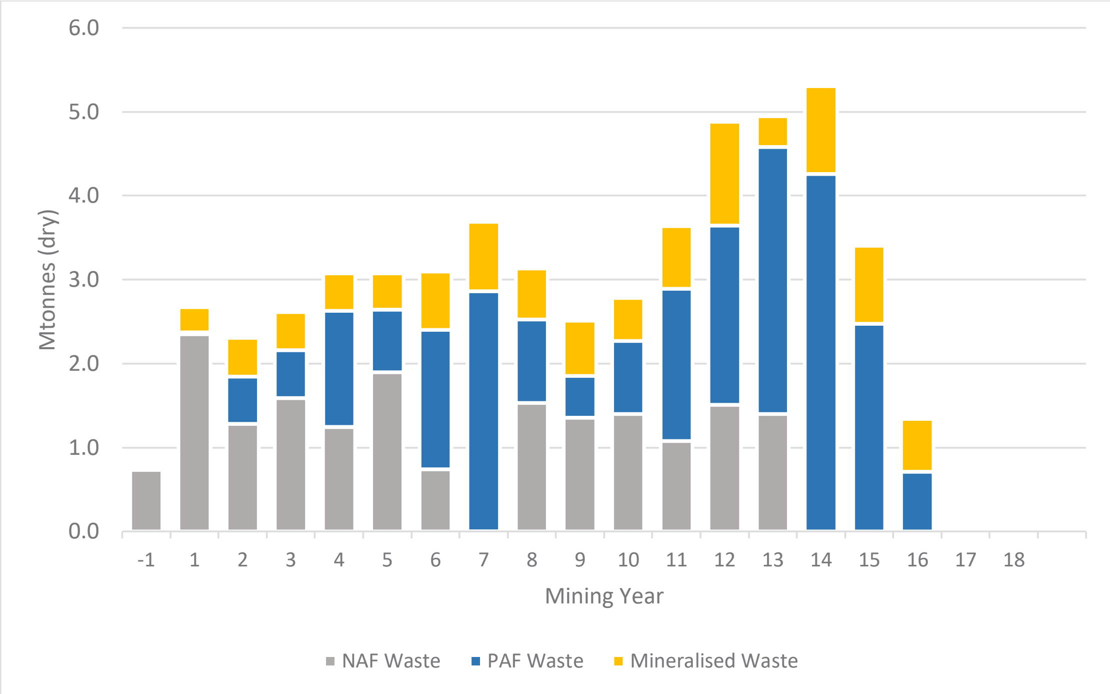
Infrastructure requirements are detailed in the Updated DFS and consist of a process plant and associated equipment infrastructure such as the power station; a fuel depot; and office facilities; surface water management infrastructure, tailings management arrangements infrastructure ; open pit mining mine and waste dumps; water supply (bore field and clean water dam) and pipe routes; access roads within the plant and the Project site mining lease; and camp facilities complete with dedicated services.

Access to the Project is via both sealed and unsealed roads from Mtwara and Lindi. Engagement with local communities is proposed to be part of the process in road design and road management practices for Project staff and contractors. Two options for export of the graphite product have been assessed. Alistair Logistics, a local Tanzanian logistics groups, have provided detailed information logistics studies outlining on options for delivery of product to either Dar es Salaam Port or Mtwara Port. The DFS has assumed that the graphite product will be exported via the Port of Dar es Salaam.

Mine Waste Management Pty Ltd (MWM) has conducted a study for the management of acid mine and metalliferous drainage (AMD) generating waste rock within the proposed waste rock dump (WRD) at the Chilalo Graphite Project (the Project) for Evolution. MWM provided an AMD management design philosophy for the Chilalo WRD. Most of the material within the pit shell is acid forming and/or potentially metalliferous. Figure 9 shows the NAF (Non-Acid Forming) & PAF (Potentially Acid Forming) material production throughout the mine life. The following WRD design strategies are recommended for the Project:

- Control all WRD toe seepage so that it reports to containment ponds;
- Instead of placement of NAF oxide waste rock around the outer perimeter and final upper surface of the WRD to encapsulate PAF waste rock rendering the PAF inert and reduce oxygen ingress;
- Material segregation based on geochemical (NAF vs PAF) classification, with higher risk materials being encapsulated by lower risk materials (this approach will be assessed during the detailed design phase);
- Managing of physical WRD properties by placing waste rock using an alternating paddock dumping approach and 2 m high lift methods to minimise oxygen ingress by advection;
- Water management to prevent run-on water to the WRD; and
- Incorporation of controls to direct WRD seepage towards the TSF ponds into the WRD design philosophy.

Figure 9 - NAF and PAF Material Mined from Chilalo Pit



Section 1: Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Details of the sampling techniques are shown below: **Pre-2018 drilling programs:** • Reverse circulation (RC) drilling was used to collect 1 m downhole samples for the laboratory analysis. • Typically, a 1–2 kg sample was collected using a cone splitter or during 2016 drilling, a representative 1/8 sample was collected using a three-tier riffle splitter. Samples were composited to 2 m numbered and bagged before dispatch to the laboratory and sent for combustion infrared detection (LECO) analyses. All RC samples were submitted for analysis. • HQ diamond core was geologically logged and sampled to corresponding 2 m composite RC intervals when twinning an RC hole, otherwise sampling was to geological contacts with nominal sample lengths between 0.25 m and 1.5 m. • HQ quarter-core samples were collected by diamond blade rock saw, numbered and bagged before dispatch to the laboratory and sent for LECO analyses. All core samples were submitted for analysis. • Commercial reference materials (CRMs) and field duplicate samples were regularly included into the sample stream for both RC and diamond to monitor analytical accuracy and sampling precision. • Sampling is guided by Evolution's standard operating and QAQC procedures. **2018 drilling program:** • Samples were collected on 1 m basis within the same zone (i.e. within HG, LG and WASTE). When there is a change in zone, samples were collected based on the lithological boundaries of mineralisation, with minimum sample length of 0.5 m and maximum length of 1.5 m and sent for LECO analyses graphitic carbon and sulphur content. All resource holes cores were submitted for analysis. For the pit geotechnical and tailings storage facility (TSF) sterilisation holes, the mineralised zones were selected and submitted for assaying. • CRMs and field duplicate samples were used to monitor analytical accuracy and sampling precision. • Sampling is guided by Evolution's standard operating and QAQC procedures. • PQ (resource holes) and NQ (pit geotechnical and TSF sterilisation holes) diamond cores were geologically logged and sampled. Core is quarter cored by diamond blade rock saw, numbered and bagged before dispatch to the laboratory for preparation and analysis. • Core is routinely photographed wet and dry.
Drilling techniques	Details of the drilling techniques are shown below: **Pre-2018 drilling programs:** • Diamond and RC holes were drilled in a direction to intersect the mineralisation orthogonally. • RC holes were drilled using a 140–146 mm face sampling hammer button bit. • The RC drilling was completed using either a Schramm 450 or UDR 650 drill rig with additional booster and auxiliary used as required to keep samples dry and produce identifiable rock chips. • Diamond holes were drilled using HQ diameter (63.5 mm) core bit with standard inner tubes to target depth. • The diamond drilling was completed using a conventional wire-line core rig. • Core orientations were measured every drilled run, either 3 m or 1.5 m. • Downhole directional survey was taken every 30 m to ensure target was reached. **2018 drilling program:** • Diamond holes were drilled in a direction to intersect the mineralisation orthogonally. • Metallurgical drillholes were targeted down dip or vertically to obtain maximum amounts of mineralised material to provide suitable samples for metallurgical testing. • Diamond drilling with standard inner tubes PQ3 and NQ are drilled to target depth. • Diamond drilling was completed using a conventional wireline rig. • Core orientations were measured every drilled run either 3 m or 1.5 m. • Downhole directional survey was taken every 30 m to ensure target was reached.
Drill sample recovery	Details of the drill sample recovery are shown below: **RC drilling:** • Sample quality and recovery of RC drilling was continuously monitored during drilling to ensure that samples were representative, and recoveries maximized. • RC sample recovery was recorded using sample weights. **Diamond drilling:**

Criteria	Commentary
	• Diamond core recoveries in fresh rock are measured in the core trays per drilling run. Diamond core is reconstructed into continuous runs and marked with bottom-of-hole orientation lines. Depths are checked against depths marked on core blocks. Rock quality designation (RQD) is also recorded as part of the geological logging process. • Core recoveries were good – typically >95%. • There is no discernible relationship between sample recovery and total graphitic carbon (TGC) grade. Diamond twinning of RC holes has demonstrated a minimal downwards bias in RC TGC grade.
Logging	Details of the logging are shown below: **RC drilling:** • Detailed geological logging of RC holes captured various qualitative and quantitative parameters including lithology, mineralisation, colour, texture and sample quality. RC holes were logged at 1 m intervals. • RC chip trays are photographed, wet and dry for future reference. **Diamond drilling:** • Detailed geological logging of all diamond holes captured various qualitative and quantitative parameters including mineralogy, colour, texture and sample quality. • All diamond core has been geologically and geotechnically logged to a level of detail to support Mineral Resource estimation. • Logging data is collected via rugged laptops. The data is subsequently loaded into a dedicated fully relational geological database (Datashed) hosted by a consultant (rOREdata Pty Ltd) for storage. • Core is regularly photographed wet and dry for future reference. • All holes drilled have been geologically logged in their entireties.
Subsampling techniques and sample preparation	Details of the Subsampling techniques and sample preparation are shown below: **RC drilling:** • RC samples were sampled dry and routinely taken at 1 m intervals. This was completed either directly with a 1–2 kg sample retrieved from a regularly cleaned cone splitter or a representative 1/8 sample taken from a regularly cleaned three-tier riffle splitter. The remainder of the drilled sample was recovered in a large plastic bag. • RC 1 m samples were then composited into a 2 m sample using a laboratory deck splitter, or where possible sampled to nearest 1m geological boundary. • A small fraction of RC samples returned to the surface wet. These samples were dried prior to sampling. All samples were submitted for assay. • All RC samples were labelled such that they corresponded to remainder samples if further analysis was required. **Diamond drilling:** • Core is cut with a diamond saw into half core and then one half into quarter core. A quarter of the core, sampled to 1 m or lithological boundaries, is sent to the laboratory for assay. • A quarter core is archived. A half core is reserved for any other required test-work. Such as metallurgical, AMD etc. **All drilling:** • Control samples (blanks, field duplicates and commercial standards) are inserted into the sample stream every 20th sample (one standard, one blank, one site duplicate) or not less than 5% of all collected samples for each control sample. Additionally, one standard, one blank and one site duplicate will be inserted for every 20 m of mineralisation intersected. A mineralised zone is a zone greater than 5 m with a visual estimate of more than 5% graphite. Internal dilution of non-mineralisation (up to 5 m) can be included in the mineralised thickness. • High valued standards are preferably inserted within the strong mineralisation. Similarly, low valued standards are inserted within the weak mineralisation. A mineralised zone is a zone greater than 5 m with a visual estimate of more than 5% graphite. • Samples were stored on site prior to being transported to the laboratory. • Samples were marked with unique sequential numbering to ensure controls against sample loss or omission. • Samples were sorted, dried and weighed at the laboratory where they were then crushed and riffle split to obtain a sub-fraction for pulverisation, in preparation for sample analysis.
Quality of assay data and laboratory tests	Details of the quality of assay data and laboratory tests are shown below: **Pre-2108 drilling programs:**

Criteria	Commentary
	• All RC and diamond samples were submitted to ALS for both sample preparation and analytical assay. • Samples were sent to the ALS laboratory in Mwanza (Tanzania) for sample preparation. Samples are crushed to >70% passing -2 mm and then pulverised to >85% passing-75 microns. • For all samples a split of the sample is analysed by means of a combustion infrared detection method using a LECO analyser to determine TGC (ALS Minerals Codes C-IR18). • Majority (97%) of samples have also been assayed for total sulphur by means of a combustion infrared detection method using a LECO analyser (ALS Minerals Code S-IR08). • Laboratory duplicates and standards were also used as quality control measures at different subsampling stages. • 76 samples were sent for umpire laboratory testing, with the results validating the accuracy of the primary laboratory assay results. • Examination of all the QAQC data indicates that the laboratory performance has been satisfactory for both standards, with no failures and acceptable levels of precision and accuracy. **2018 drilling program:** • All samples were submitted to ALS laboratory in Johannesburg, South Africa for sample preparation and analytical assay. • Samples are crushed to >70% passing -2 mm and then pulverised to >85% passing -75 microns. • For all samples, a split of the sample is analysed using a LECO analyser to determine graphitic carbon and sulphur content (ALS Minerals Codes C-IR18 and S-IR08). • Laboratory duplicates and standards were also used as quality control measures at different subsampling stages. • 148 samples were sent for umpire laboratory testing at the SGS Randfontein, South Africa laboratory. Analysis of the results showed an insignificant upward bias (+2.1%) in the primary laboratory mean grade results, few outliers and over 95% passing 10% half absolute relative difference. The results are considered to validate the accuracy and precision of the primary laboratory assay results. • Examination of all the QAQC data indicates that the laboratory performance has been satisfactory for both standards, with very few failures and acceptable levels of precision and accuracy. CSA Global believes that laboratory accuracy and precision has been sufficiently demonstrated to use the drill assay data with a reasonable level of confidence in a Mineral Resource estimate (MRE).
Verification of sampling and assaying	Details of the verification of assaying and sampling are shown below: • Senior Ngwena Tanzania Ltd (Ngwena)/Graphex Mining Ltd (Graphex) geological personnel supervised the sampling, and alternative personnel verified the sampling locations. • External oversight is established with the contracting of an external consultant to regularly assess on site standards and practices to maintain best practice. • Six RC holes have been twinned by diamond drilling core holes to assess the degree of intersection and grade compatibility between the dominant RC samples and the twinned core • Assay data is loaded directly into the fully relational Datashed geological database which is hosted and managed by an external database consultancy. • Visual comparisons will be undertaken between the recorded database assays and hard copy records at a rate of not less than 5% of all loaded data. • No adjustments have been made to assay data.
Location of data points	Details of the location of data points are shown below: • Drillhole collar locations have been surveyed using a handheld global positioning system (GPS) with an accuracy of 5 m for easting, northing and elevation coordinates. • Drillhole collars where re-surveyed using a differential GPS with an accuracy of <5 cm at the end of the program. • Collar surveys are validated against planned coordinates and the topographic surface. • Downhole surveys are conducted during drilling using a Reflex single shot every 30 m. • The primary (only) grid used is UTM WGS84 Zone 37 South datum and projection. • The topographic surface used in resource modelling has been generated from the contour data generated from the UAV surveys completed by Atlas Geophysics in 2017 and spot heights and collar surveys data captured using differential GPS.
Data spacing and distribution	Details of the data spacing and distribution are shown below: • The Chilalo deposit has been sampled using RC and diamond core drilling over a number of drilling campaigns, with initial drilling completed on a nominal 200 m x 200 m grid.

Criteria	Commentary
	• Subsequent infill drilling programs have sequentially reduced the grid spacing to a nominal 50 m drill spacing on drill section lines nominally 100 m apart along strike. • Six geotechnical drillholes have been completed between 200 m and 400 m apart, designed to provide information on the stability of the pit walls. • Metallurgical drilling (two holes) was aimed at collecting enough mineralised material for metallurgical testwork. One of the metallurgy holes was drilled down dip the main high-grade mineralisation zone and the second one was drilled vertical at about section 472,000 m E.
Orientation of data in relation to geological structure	• All drillholes have been orientated to intersect the graphitic mineralisation as close to perpendicular as possible. • From surface mapping of the outcrops in the area, trenching and already completed modelling, the interpreted mineralisation zones, dip at angles of between 50° and 60° to the south to south-southwest. The drilling was hence planned at a dip of -50/60° oriented 315–360°. • The orientation of drilling is not expected to introduce any significant sampling bias.
Sample security	• All samples are marked with unique sequential numbering to ensure controls against sample loss or omission. This number was retained during the entire process. • The samples are cut, packed and locked in the offices at Ntaka camp (at site) which have 24-hour security prior to transportation by locked commercial truck carrier. • Prior to the 2018 drilling campaign, samples were trucked to the ALS Mwanza sample preparation facility, which then prepared and shipped the sealed prepared samples to the ALS Brisbane laboratory for analysis. • For the 2018 drilling campaign, the samples were transported to Dar-es-Salaam by locked commercial truck carrier due to the ALS Mwanza facility having been shut down. • An export permit is processed while samples are kept at the Dar-es-Salaam offices with 24 hours security prior to being sealed by government officials from the ministry of minerals. • The sealed samples were then air freighted to the ALS laboratory in Johannesburg, South Africa by DHL courier.
Audits or reviews	An independent consultant from CSA Global, with expertise in graphite, completed a site visit prior to and upon commencement of drilling to ensure the sampling protocol met best practices to conform to industry standards.

Section 2: Reporting of Exploration Results

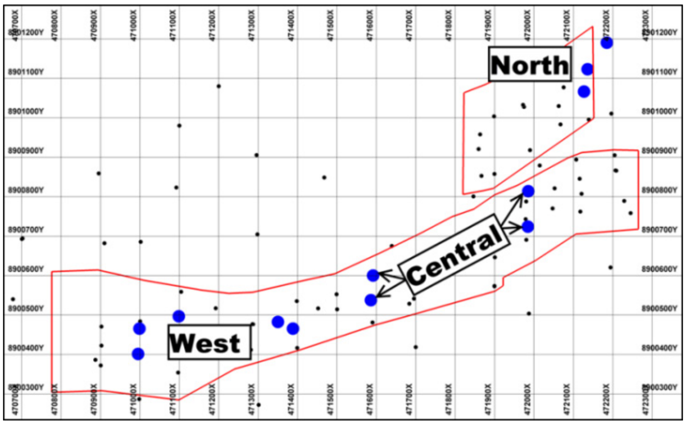
Criteria	Commentary
Mineral tenement and land tenure status	• The Mineral Resource Estimate (MRE) reported in this announcement was originally situated on granted prospecting licence PL6073/2009 which is owned by Ngwena, a wholly owned subsidiary of Evolution. • Subsequent mining licence approval at the beginning of 2017 has enveloped the Chilalo Mineral Resource within ML569/2017, owned by Ngwena, whilst the remainder of original PL6073/2009 now exists as licence PL11034/2017 also held now by Ngwena. • ML569/2017 and PL11034/2017 are currently valid and in good standing. Three further prospecting licences located proximate to the ML: PL 9926/2014, PL 9949/2014 and PL 11050/2017 are currently valid and in good standing.
Exploration done by other parties	Exploration has been performed by an incorporated subsidiary company of Evolution, Ngwena. Stream sediment surveys carried out historically by BHP were not assayed for the commodity referred to in the announcement.
Geology	The regional geology is comprised of late Proterozoic Mozambique mobile belt lithologies consisting of mafic to felsic gneisses interlayered with amphibolites and metasedimentary rocks. The mineralisation consists of a series of intercalated graphitic horizons within felsic gneiss (siliceous and aluminous rich sediments), amphibolites (mafic sourced material) and rarely high purity marble horizons.
Drillhole information	• All relevant drillhole information has been previously reported to the Australian Securities Exchange (ASX). No material changes have occurred to this information since it was originally reported. • All relevant data has been reported.
Data aggregation methods	Not relevant when reporting Mineral Resources.
Relationship between mineralisation widths and intercept lengths	Not relevant when reporting Mineral Resources.
Diagrams	Refer to figures within the main body of this report.
Balanced reporting	Not relevant when reporting Mineral Resources.
Other substantive exploration data	• A versatile time domain electromagnetic (VTEM) geophysical survey was initially completed over a large portion of the Nachingwea Property. It identified numerous anomalies which were likely to be associated with graphite mineralisation. Based on the VTEM data a number of the identified targets were drilled in 2014 and the Chilalo high-grade deposit was discovered. • Downhole electromagnetic (DHEM) surveys were carried out on 18 of the RC drillholes completed in 2014; nine diamond holes completed in 2015, five RC drillholes completed in 2016 and 11 diamond holes completed in 2018. The DHEM survey data were acquired by Graphex's in-house survey crew and equipment (EMIT probe and receiver, and Zonge transmitter). The aim of the DHEM survey campaign was to detect known and off-hole electromagnetic (EM) responses associated with graphite mineralisation. The EM responses were modelled by Resource Potentials Pty Ltd to determine the location, orientation and size of the conductors associated with graphite mineralisation. The modelled DHEM conductor plate wireframes were provided in 3D DXF format to assist in geological modelling. • Fixed loop electromagnetic (FLEM) surveys were carried out during the 2015 and 2016 field seasons to collect ground EM data over multiple linear conductive graphitic horizons identified in the existing versatile time-domain EM (VTEM) survey data. Graphex's in-house Zonge GGT-10 transmitter, a SmartEM 24 receiver and a Smart Fluxgate 3-component B-Field sensor and personnel were used for the FLEM surveying. • All other meaningful exploration data concerning the Chilalo Project has been reported in previous reports to the ASX. • No other exploration data is considered material in the context of the MRE which has been prepared. All relevant data has been described in Section 1 and Section 3 of JORC Table 1.
Further work	• An Updated DFS was completed in March 2023, the results of which are included in this announcement. • Figures are provided within the main body of this report.

Section 3: Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• Data used in the MRE is sourced from a database export. Relevant tables from the database are exported to Microsoft Excel format and converted to CSV format for import into Datamine Studio 3 software. • Validation of the data import include checks for overlapping intervals, missing survey data, missing assay data, missing lithological data, and missing collars.
Site visits	• Representatives of the Competent Person have visited the project on several occasions, most recently in June 2015. The Competent Person's representatives were able to review drilling and sampling procedures, as well as examine the mineralisation occurrence and associated geological features. All samples and geological data were deemed fit for use in the MRE.
Geological interpretation	• The geology and mineral distribution of the system appears to be reasonably consistent through the core high-grade zone. Modelling of the geology of the Chilalo Main deposit has been updated to reflect the results of drilling completed in in 2018. The 2018 drilling was primarily focused on infill to upgrade confidence in the geological and grade continuity of the deposit in the southwest extension of the Main deposit and on extension and infill for the North deposit similarly to upgrade confidence in the geological interpretation and continuity, and grade continuity. • Any structural influences are not expected to be significant through the core high-grade zone of the Chilalo Main deposit, where the drilling and geophysical data have shown good geological and grade continuity; however structural influences are at noted at roughly 471,280 m E with a strike change noted in the Main deposit and a linear topographic feature trending northwest to southeast. The structural influences are not anticipated to significantly alter interpreted mineralisation volumes or grades in the area of intersection with the main zone mineralisation. The mineralisation zones to the north of the eastern side of Main deposit appear separated from the Main deposit by a structural feature evidenced by a topographic low between the deposits. The North deposit mineralisation has a southward dip and appears to be structurally terminated to the east, south and west. • Drillhole intercept logging, assay results, DHEM and FLEM modelling have formed the basis for the mineralisation domain interpretation. Assumptions have been made on the depth and strike extents of the mineralisation based on drilling and geophysical information. • The extents of the modelled zones are constrained by the information obtained from the drill logging and geophysical data. Alternative interpretations are unlikely to have a significant influence on the global MRE. • An overburden layer with an average thickness of 2.5 m has been modelled based on drill logging and is depleted from the model. Graphex geologists have updated weathering logging in drillholes to ensure interpretive consistency across drilling campaigns. This updated weathering data has been provided to CSA Global and used in concert with visual validation using core and chip photographs, as well as sulphur analysis values to generate weathering surfaces for base of complete oxidation and top of fresh rock. • Interpretations of the geological units of the Chilalo project area have been generated by Graphex geologists. A mineralisation interpretation based on a nominal TGC% cut-off grade of 5% for the core higher-grade lenses and a nominal 2% for the surrounding lower-grade lenses has been generated by CSA Global and correlated with the geological interpretation reasonably well. • Continuity of geology and grade can be identified and traced between drillholes by visual, geophysical and geochemical characteristics. Additional data is required to more accurately model the effect of any potential structural or other influences on the down dip and strike extents of the defined mineralised geological units. Confidence in the grade and geological continuity is reflected in the Mineral Resource classification.
Dimensions	• In the Chilalo Main deposit the core high-grade mineralisation (>5% TGC) interpretation consists of two lenses. The main footwall lens strikes towards 250°, dipping roughly 50° towards 160°, with a strike length of roughly 1.1 km from the northeast towards the southwest, and a further strike length of roughly 500 m, after a strike change to 250° at about 471280 m E with a dip roughly 40° towards 180°. The average interpreted depth is approximately 200 m below surface and the true thickness is approximately 25 m for the eastern half and 10 m for the western half. The secondary high-grade lens is interpreted to be approximately 1.1 km long in the hanging wall of the western two thirds of the main lens from roughly 471800 m E extending to the west. It is interpreted to be between 40 m in depth in the east, and 160 m in depth in the west, and between 2 m and 15 m in true thickness with a similar strike and dip to the main lens. The low-grade mineralisation (>2% TGC) lenses enclose the high-grade lenses and are in the hanging wall above them and have similar strike and depth extents over the classified portions of the model. Some of the low-grade lenses are interpreted to continue along strike to the west for approximately 800 m, but these portions of the model are not classified

Criteria	Commentary
	due to insufficient data and therefore lower confidence. These lenses are generally about 5–15 m in true thickness. • At the Chilalo North deposit, the core high-grade mineralisation (>5% TGC) interpretation consists of two lenses. The hanging wall lens strikes towards 240°, dipping roughly 45° towards 150°, with a strike length of roughly 500 m from the northeast towards the southwest. The average interpreted depth is approximately 150 m below surface, ranging between roughly 110 m on the eastern and western ends to a maximum roughly 180 m near the centre. True thickness ranges between roughly 6 m on the eastern and western extremities through a maximum of roughly 30 m near the centre. • The footwall lens has a very similar strike and dip geometry to the footwall lens but extends about 90 m below surface in the east and 120 m below surface in the west and up to about 230 m near the centre. The average true thickness of this lens is roughly 7 m in the east and 6 m in the west. The interpreted low-grade mineralisation (>2% TGC) lenses enclose the high-grade lenses or are between or in the hanging wall above them. They have similar strike and depth extents to the high-grade lenses. The average true thickness of the two larger low-grade lenses that enclose the high-grade lenses is roughly 40 m in the centre to 10 m in the east and west for the hanging wall lens, and the footwall lens is on average about 12 m.
Estimation and modelling techniques	• The mineralisation has been estimated using ordinary kriging (OK). • Two >5% TGC high-grade lenses and four >2% low-grade lenses were interpreted at the Chilalo Main deposit, with two high-grade lenses and six low-grade lenses in the Chilalo North East deposit. • Samples were selected within each lens for data analysis. Statistical analysis was completed on each lens to determine if any outlier grades required top cutting. • Statistical analysis to check grade population distributions using histograms, probability plots and summary statistics and the coefficient of variation, was completed on each lens for the estimated element. The checks showed there were no significant outlier grades in the interpreted cut-off grade lenses. The few modestly outlying values were visually assessed and found to reflect true higher-grade zones, having some continuity, but which were not large enough to separately model. These areas were checked during the model validation process to verify they did not unduly influence the grade estimation. • An inverse distance squared (IDS) grade estimate was completed concurrently with the OK estimate in a number of estimation runs with varying parameters. Block model results are compared against each other and the drillhole results to ensure an estimate that best honours the drill sample data is reported. • No mining has yet taken place at these deposits. • No mining assumptions have been made. • Sulphur has been estimated into the model for possible future use by mine engineers and metallurgists in terms of processing and water quality. • Interpreted domains are built into a sub-celled block model with a 10 m(N) x 25 m(E) x 5 m(RL) parent block size. Search ellipsoids for each lens have been separately orientated based on their overall geometry. To accommodate the strike change in the interpreted mineralisation lenses in the Chilalo Main deposit, additional search ellipsoid orientations have been defined for each affected lens. Block size, sample numbers per block estimate, ellipsoid axial search ranges and block discretisation have been tailored based on the results of a kriging neighborhood analysis. The search ellipse is doubled for a second search pass and increased 20-fold for a third search pass to ensure all blocks are estimated. Sample numbers required per block estimate have been reduced with each search pass. • Hard boundaries have been used in the grade estimate between each individual interpreted mineralisation lens. Soft boundaries are used within each lens to accommodate the strike changes and associated adjusted search ellipsoids. • Validation checks included statistical comparison between drill sample grades, the OK estimate and the IDS estimate results for each zone. Visual validation of grade trends along the drill sections was completed and trend plots comparing drill sample grades and model grades for northings, eastings and elevation were completed. These checks show reasonable correlation between estimated block grades and drill sample grades. • No reconciliation data is available as no mining has taken place.
Moisture	Tonnages have been estimated on a dry, in situ basis, and samples were generally dry. No moisture values could be reviewed as these have not been captured, with core samples being dried before density measurements.
Cut-off parameters	Visual analysis of the drill assay results demonstrated the higher-grade zones interpreted at the nominal lower cut-off grade of 5% TGC corresponds to a natural grade change from lower to higher grade mineralisation. The lower cut-off interpretation of 2% TGC corresponds to natural break in the grade population distribution. Graphex verbally confirmed that early indications from metallurgical testing show

Criteria	Commentary
	that the lower-grade material is capable delivering good quality flake material. Since this material is also primarily located in the hanging wall, and it would need to be mined in an open cut to access deeper portions of the higher-grade zones, it has been classified as Inferred as it may be possible to economically beneficiate.
Mining factors or assumptions	• It has been assumed that these deposits will be amenable to open cut mining methods and are economic to exploit to the depths currently modelled using the cut-off grade applied. • No assumptions regarding minimum mining widths and dilution have been made.
Metallurgical factors or assumptions	**2015 "Chilalo Main" Mineral Resource:** • 32 quarter-core samples from four boreholes were selected for thin section examination by Townend Mineralogy, mainly to identify weathering zones and to assess graphite flake size and likely liberation characteristics. • Minerals such as jarosite, opaline silica, clays and goethite have replaced Fe-sulphides and silicate minerals to depths of 20–30 m downhole. This mineral assemblage is interpreted to define the Oxidised Zone. • There is significant weathering/alteration in the high-grade graphite domain, resulting particularly in the breakdown of sillimanite to kaolin which occurs to depths of approximately 50 m downhole. The occurrence of kaolinised sillimanite (plus Fe sulphides) is interpreted to define the Transitional Zone. • There appears to be two graphite populations in terms of flake width: (i) thin flakes generally less than about 100 micron width and up to about 1 mm in length, in lithologies with between about 2% and 5% TGC; and (ii) flakes up to 1 mm thick and several millimetres in length in rocks with more than about 5% graphite. • Metallurgical composites were prepared at SGS laboratory in Perth from diamond drill core, to form representative fresh and transitional ore samples. • The metallurgical composites were crushed to minus 3.35 mm and demonstrate that highest TC grades are in the coarse size fractions greater than about 0.25 mm. • Cleaner flotation testwork on fresh and transitional composites using five stages of cleaning produced final graphite concentrates at target grade TGC >94% and up to 95% graphite recovery, maintaining a favourable coarse particle size distribution (PSD) – 40–70% of the flakes are >150 micron). • Testwork on oxide composites using a standard flotation procedure has demonstrated high graphite recovery. • The preliminary testwork program demonstrated that the mineralisation is amenable to the production of high-grade graphite concentrates, at coarse flake sizes, using relatively simple flotation processes. • Additional metallurgical testwork on each mineralisation and weathering domain is required to verify and refine the initial findings. **2017 "Chilalo North East" Mineral Resource:** • 19 composite RC chip samples from three boreholes NRC16-181, NRC16-184 and NRC16-185 were selected for thin section examination by Townend Mineralogy. The objective was to identify weathering zones, to assess graphite flake size and likely liberation characteristics in addition to comparison with the Main deposit. • It is cautioned that RC chip samples are not expected to be as representative as diamond core samples, given that the RC chips exclude fine powders generated by the RC percussion method. • Minerals such as jarosite, opaline silica, clays and goethite have replaced Fe-sulphides and silicate minerals to depths of 15–30 m downhole. This mineral assemblage is interpreted to define the Oxidised Zone. • The occurrence of partially kaolinised sillimanite and/or feldspars (plus unoxidised Fe-sulphides) is interpreted to define the Transitional Zone which extends to about 30–60 m downhole. The higher-grade parts of the deposit appear to be more deeply weathered than low grade, or unmineralised lithologies. • There are several graphite populations in terms of flake width: (i) thin elongate flakes generally less than about 0.1 mm width and up to about 1 mm in length, (ii) flakes up to about 0.5 mm thick and several millimetres in length; and (iii) very small flakes less than about 0.1 mm in length especially within felsic porphyroblasts. It is anticipated that the population of very small flakes <0.1 mm length may not be recoverable; however, as this population does not appear to be significant, this is not expected to materially affect overall metallurgical recoveries. • Graphite flakes observed from the high-grade zone of the North East deposit are visually similar to flakes observed from the Main deposit, in terms of shape, size and textural relationships. This suggests that the high-grade part of the North East deposit may have similar metallurgical process response to the Main deposit.

Criteria	Commentary
	2019 "Chilalo" Mineral Resource: • Representative composite samples from the metallurgy laboratory, crushed to -3.35 mm and homogenised through a rotary splitter, were mounted and polished. Each slide was analysed by petrographic microscopy at Townend Mineralogy Laboratory, using a Leica image analysis program. • Image analysis suggests that there are two in situ flake populations, with a break at approximately 180–150 micron. • Several of the Oxide and Transitional samples show extensive splitting of graphite flakes when in contact with clay minerals. • Global composite and variability composites made up from 2018 drill core samples were submitted to ALS Laboratory, Perth, for metallurgical process tests during 2019. • The metallurgical composites were grouped according to weathering domains; (i) Oxide and (ii) Transitional and Fresh samples which were combined and described as Fresh. • Two global composites were made from across the deposit, described as Global Oxide (three drillholes) and Global Fresh (nine drillholes) from the West, North and Central part of the deposit. • Six variability composites were made from across the deposit, described as North Oxide (one drillhole); North Fresh (three drillholes); Central Oxide (one drillhole); Central Fresh (four drillholes); West Oxide (three drillholes) and West Fresh (five drillholes). • Example map below showing location of Fresh variability composite drill collars. The red polygons are the outline of the 2017 Inferred Mineral Resource. Map grid is 100 m x 100 m.  • Head grades of the composites ranged between ~8% and 14% TGC. • The variability samples included individual core sample intervals with grades between ~4% and ~15% TGC, which is considered representative of the 'high grade' portion of the deposit. • Sulphur values in the head samples were generally low compared with graphite contents and ranged from 0.06% to 0.48% total sulphur in the oxide composites to 1.54% to 2.26% total sulphur in the fresh composites. • Sulphide sulphur content in oxide samples is low, as most sulphur in oxidised material is in the form of minerals such as jarosite. • Flotation testwork of the composites which were initially stage ground to P100 1.4 mm, and using flash rougher flotation, screening and five stages of cleaning produced final graphite concentrates above target grade TGC >94% and 90–98% graphite recovery. A favourable coarse PSD was maintained, at approximately 60% >180 micron flake size. • Metallurgy testwork is continuing; further results are anticipated later in 2019.
Environmental factors or assumptions	No assumptions regarding waste and process residue disposal options have been made. It is assumed that such disposal will not present a significant hurdle to exploitation of the deposit and that any disposal and potential environmental impacts would be correctly managed as required under the regulatory permitting conditions.
Bulk density	• In situ dry bulk density values have been applied to the modelled mineralisation based on the average measured values for each of the weathering zones. Of the 1,141 measurements taken that were considered valid for analysis, 12 are in the interpreted overburden zone, 197 fall within the interpreted weathered zone, 559 in the transitional zone and 373 in the fresh zone. • Density measurements have been taken on drill samples from all different lithological types, using water displacement methods.

Criteria	Commentary
	• Weathered material was wax coated prior to immersion, while the non-porous competent rock did not require coating. • It is assumed that use of the average measured density for each of the different weathering zones is an appropriate method of representing the expected bulk density for the deposit.
Classification	• Classification of the MREs was carried out taking into account the level of geological understanding of the deposit, quality of samples, density data and drillhole spacing. • The MRE has been classified in accordance with the JORC Code (2012 Edition) using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1 and Section 3 of this Table. • Overall the mineralisation trends are reasonably consistent over numerous drill sections. • The Mineral Resource is classified as an Indicated Mineral Resource for those volumes where in the Competent Person's opinion there is adequately detailed and reliable, geological and sampling evidence, supported by geophysical electromagnetic modelling data, which are sufficient to assume geological, mineralisation and quality continuity. • The Mineral Resource is classified as an Inferred Mineral Resource where the model volumes are, in the Competent Person's opinion, considered to have more limited geological and sampling evidence, supported by geophysical electromagnetic modelling data, which are sufficient to imply but not verify geological, mineralisation and quality continuity. • The MRE appropriately reflects the view of the Competent Person.
Audits or reviews	Internal audits were completed by CSA Global which verified the technical inputs, methodology, parameters and results of the estimate. No external audits have been undertaken.
Discussion of relative accuracy/confidence	• The relative accuracy of the MRE is reflected in the reporting of the Mineral Resource as per the guidelines of the JORC Code (2012). • The Mineral Resource statement relates to global estimates of *in situ* tonnes and grade.

Section 4: Estimation and Reporting of Ore Reserves

Criteria	*JORC Code explanation*	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Mineral Resource estimate for the Chilalo Graphite Project is based on information compiled by Mr. Grant Louw who was a full-time employee of CSA Global Pty Ltd at the relevant time under the direction and supervision of Dr Andrew Scogings, who was an Associate of CSA Global at the relevant time. Dr Scogings takes overall responsibility for the report. Dr Scogings is a member of both the Australian Institute of Geoscientists ("MAIG") and Australasian Institute of Mining and Metallurgy ("AusIMM") and has sufficient experience, which is relevant to the style of mineralization and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2012 Edition). • Classification of the Mineral Resource estimates was carried out taking into account the level of geological understanding of the deposit, quality of samples, density data and drill hole spacing. The Mineral Resource is classified as an Indicated Mineral Resource for those volumes where in the Competent Person's opinion there is adequately detailed and reliable, geological and sampling evidence, supported by geophysical electro-magnetic modelling data, which are sufficient to assume geological, mineralisation and quality continuity. CSA Global objectively considers the Mineral Resource has reasonable prospected for eventual economic extraction. • The Mineral Resource estimate is reported inclusive of the Ore Reserve estimate.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person, Mr Andrew Hutson of Resolve Mining Solutions has not visited the Chilalo Graphite Project. • The site visit was planned for February 2023 but was delayed due to inclement weather conditions limiting access to the site. The deferral of the site visit is not deemed material as the quantum of change in the Ore Reserve is not material, with the main variances between the statements being predominantly around waste and water management. • The site visit is planned for Quarter 2, 2023.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Prefeasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• Evolution engaged Resolve Mining Solutions to conduct an Updated DFS study for the mining of Chilalo. The study confirmed the operation being processing 500ktpa of ROM throughput for the entire Mine Life. The Updated DFS addressed key technical and economic parameters relating to the Chilalo Graphite Project to an appropriate level of confidence. This Ore Reserve estimate considers the Indicated Resource only scheduling scenario of the Chilalo Graphite Project's Mineral Resource estimate, applying all of the Modifying Factors. The Updated DFS found that the Project is physically and economically viable with a strong Internal Rate of Return and a Pay-Back period of approximately 2.5 years. • The work undertaken to date has addressed all material Modifying Factors required for the conversion of a Mineral Resources estimate into an Ore Reserve estimate and has shown that the mine

Criteria	*JORC Code explanation*	Commentary
		plan is technically feasible and economically viable. The Ore Reserves have been based on parameters provided by Evolution and determined by Resolve, from relevant technical studies conducted by different companies and rates acquired from different contractors.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• The revenue generated from a graphite operation is primarily driven by the flake size distribution of the product. The flake proportion over a series of size categories determines the basket price of the product. The carbon grade (TGC) is not directly related to flake size. The mineral resource has a minimum cut off of 2% TGC. There is no further cut off applied for the Indicated Resource category. The cut-off between ore and waste also has been determined by net value per block. Total block costs are estimated for all operating costs to the point of sale including processing, product haulage, crusher feed, general and administration, ore differential, sustaining capital, selling costs, and grade control costs. The total block revenue minus the total block costs estimates the net value per block. Any Indicated block returning a positive net value has been defined as "ore" for the purposes of pit design and production scheduling. Any material that has been defined as Mineral Resource that has a negative net value has been defined as "waste". • Project economics from the total Project have been considered at the end of the Project iteration to confirm that the cut-off criteria support economic operations for the Chilalo Graphite Project.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• Input parameters for the pit optimizations were; mining costs based on mining contract rates received from the preferred mining contractor; pit geotechnical parameters were provided by OHMS geotechnical consultants; mineral processing costs and recoveries from reputable laboratories and CPC, commodity price for a 95% TGC graphite product from Evolution. Evolution has taken market studies from various reputable authorities and consultants to price the Chilalo product. Whittle™ software applied these parameters to the characterization of the Block Model to estimate an appropriate pit shell which was used as a basis for the pit design. The current pit design is considered suitable for Ore Reserve estimation. • A traditional excavator (40t to 120t) and articulated dump truck (40t to 50t) configuration have been selected based on a maximum annual mining rate of 5-6 Mtpa and is appropriate for the design, bench height, mining dilution and recovery applied in the Updated DFS. The selected mining approach is typical for a small to medium scale open pit mining operation. This deposit is going to be mined out as multiple pits and cutbacks. Minimum mining width of 30m is maintained for the cutback designs. Operations include drill and blast activities for the majority of the open pit mining. The waste dump will be progressively rehabilitated to reduce the amount of PAF waste rock exposed throughout the operation. • Geotechnical analysis has been undertaken by Open House Management Solutions (OHMS). The proposed pit slopes are considered likely to be stable for the current pit design.

Criteria	*JORC Code explanation*	Commentary
		• Dilution for tonnes and grade was calculated through characterization of the resource model into a standard mining unit of 5m x 5m x 5m resulting in a 10% dilution and 2% ore loss. • A minimum mining width of 20m for normal bench and a minimum cutback width of 30m was used in the pit design. The pit design has a dual lane ramp of 17 m and a single lane ramp of 12 m for the final 30 vertical metres. • Inferred Mineral Resources is not included in the pit optimisation and pit design. Ore Reserve contains only Indicated Resource. A mining and production schedule were completed with Inferred Mineral Resource treated as waste and concluded that conversion of Inferred Mineral Resource to processed product is not required for the overall financial viability of the Chilalo Graphite Project. • The Updated DFS addresses the requirements of all site-based infrastructure, power, water, and logistics to establish, build and operate the Project. The planning of these requirements in the Updated DFS comprised of design, budget estimates from suppliers and detailed cost estimates at least to a PFS level of confidence as required by the JORC code. The appropriate costs of infrastructure and logistics for the establishment and support of the proposed operation are included in the cost estimates for the Project. The company is planning to construct all the infrastructure required to meet the selected mining method and schedule.

Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*
	• *Whether the metallurgical process is well-tested technology or novel in nature.*
	• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*
	• *Any assumptions or allowances made for deleterious elements.*
	• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.*
	• *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*
		• Representative samples have been used to assess the Chilalo Graphite Project mineralisation's amenability to beneficiation by froth flotation, and also to identify the nature, flake size and occurrence of graphite in a selection of drill core samples and flotation products. The testwork was completed in 2015,2017,2018 and 2019.
		• The proposed metallurgical process is well established and used successfully in industry for the recovery of graphite.
		• In 2017, a bulk concentrate production pilot plant trial was conducted on two composites, one weathered trench composite (5.8t) and one fresh Pit composite (1.2t).
		• In 2019, a representative testwork program completed in ALS Laboratory demonstrates that the ore of the Chilalo Graphite Project is amenable to the production of high-grade graphite product from oxide, transitional, and fresh ore types.
		• ALS test work considered 3 stages,
		  ○ Test work to finalise flow sheet design and provided process engineering data based on program using global fresh and oxide composites produced from samples from the latest drilling campaign based on the objective of maximum graphite flake size preservation at a design target grade of 95% TGC for all flake sizes.
		  ○ Testwork on a number of variability composites identified within the ore body to assess ore variability to established flowsheet.
		  ○ 30-40 t bulk trench sample bulk run to validate the established flowsheet, produce bulk

Criteria	JORC Code explanation	Commentary
		concentrate for marketing purposes or materials for any required vendor testing. • Approximately 2 t of drill core was delivered to ALS Metallurgy between February and May 2019. These samples were used to form global master composites as well as establishing variability composites for the 2020 DFS. The Master composites were split into either Fresh and Oxide ore zone with samples coming from all three areas of the resource (North, Central and West). The samples were selected based on consultation with the geology consultants and included consideration of sample representivity, appropriate cut off grades, location within the likely pit shells, mineralisation continuity, mining widths, lithology. Weathering state and internal waste dilution and spatial spread within the pits. • The proposed processing plant will include a two-stage crushing circuit that will deliver product to a storage bin. Ore will be reclaimed from the storage bin and delivered to a two-stage milling circuit. The primary rod mill will operate in closed circuit with a screen. The undersize from the mill product screen will report to a rougher flotation cell for recovery of coarse fast floating graphite. The rougher tail will report to the secondary ball mill operating in closed circuit with cyclones. The undersize from the ball mill cyclones will report to the scavenger cells. The rougher and scavenger concentrate will undergo various stages of cleaning regrinding and screening. Coarse and fine graphite concentrate will be filtered and dried in separately. Dry graphite concentrate will be screened into various product sizes and bagged for shipping. Flotation tailings will report to the tailings hopper thickener and then be pumped to the tailing storage facility (TSF). • Design throughput rates for the Phase 1 processing plant have been set at 500,000 tpa of open pit ore with production of approximately 50,000 tpa of graphite. An effective characterization of 91% has been used for design purposes. Inclusion of an intermediate crushed ore bin and installed standby equipment will enable this characterization to be achieved. • No specific price adjustments have been made for deleterious elements.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterization and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• Graphex Mining Limited previously prepared and submitted to the Tanzanian Government, an Environmental and Social Impact Assessment (ESIA) and an Environmental Management Plan (EMP) as part of the process of granting mining licenses for the Project. The mining license application was submitted and obtained in February 2017. The Chilalo Graphite Project has been issued with an Environmental Certificate by the National Environment Management Council of Tanzania. This certification is a pre-requisite for the granting of a Mining License. The appropriate environmental considerations of the Project are included in the Project planning. • As part of the preparation of the DFS, Graphex submitted an updated ESIA to the Tanzanian Government in December 2019. • As part of the preparation of the Updated DFS, Evolution submitted an updated ESIA to the Tanzanian Government 2022.

Criteria	*JORC Code explanation*	Commentary
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.*	• The Updated DFS addresses the requirements of all site-based infrastructure, power, water, and logistics to establish, build and operate the Project. The planning of these requirements in the Updated DFS comprised of design, budget estimates from suppliers and detailed cost estimates to a minimum of DFS level of confidence. The appropriate costs of infrastructure and logistics for the establishment and support of the proposed operation are included in the cost estimates for the Project.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• The capital cost estimate used in the Updated DFS has been compiled based on the design, supply, fabrication, construction, and commissioning of a new graphite processing plant in Tanzania and includes mining equipment, supporting infrastructure, and indirect costs. The estimate for the processing facility is based on the preliminary process design, process design criteria and equipment list, and process flowsheets. Capital estimates have been based upon budget prices quotations for major equipment, in-house data from recent Projects, and industry standard estimating factors for equipment and installation costs. The capital cost estimates presented in the Updated DFS are considered to have a minimum overall accuracy of +/-15%. The capital cost estimate has been developed in US$. Different independent contractors and experts were engaged by Evolution to generate the cost estimate. • The operating cost estimate used in the Updated DFS includes all costs associated with mining, processing, infrastructure, and site-based general and administration costs. The operating cost estimates have been developed in US$. The operating cost estimate has been prepared to an accuracy of +/- 15%. The operating costs have been estimated from a variety of sources, including; budget quotations received from suppliers; operating cost databases; wages and salaries provided by Evolution and industry sources; estimated based on industry standards from similar operations; first principle estimates based on typical operating data; the mining operating cost estimates have been sourced from mining contractor submissions as requested by Evolution. • Evolution will offer a base range of carbon purities with the ability for additional processing to meet customer-specific and market mesh size specifications in the future. It is not commercially feasible or economic to have a wide range of carbon purities, yet it is acceptable to have small overlaps in carbon purity specifications to optimise inventory control and accommodate a greater range of market applications. If a customer specifies a particular carbon purity range (LOI), additional processing can be accomplished by adhering to the value-added and / or tighter specifications commanding higher prices from the customer. High-purity for natural flake graphite is defined as product with 99.0% LOI and higher. Evolution will have the capability to produce high-purity flake graphite (99.0% + LOI) using standard flotation and processing methods without aggressive chemical intervention. • All operating cost estimates have been based in USD.

Criteria	JORC Code explanation	Commentary
		• Transportation charges are based on the detailed price provided by a local contractor, Alistair Logistics. Transportation cost was assumed as US$143 per tonne of product. • Processing rate has been provided by Evolution based on the studies conducted by the consultants engaged by the company. • Operating costs and capital costs have been reviewed by Resolve Mining Services and are considered reasonable for the intended application. • Selling cost include Government royalties (3%) and other royalties (1%).
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• The average graphite price of USD$1615 per tonne of product has been used for Whittle optimisation. Market predictions and trend analysis have been done by independent graphite market analysts who provide detailed pricing across multiple markets, applications, and directly from end users. The consultant also uses government publications; dedicated websites to global graphite mining activities and global pricing information; USGS, and the Global Trade Atlas. Evolution believes the price estimates used in the Updated DFS are the most accurate estimates for selling Chilalo graphite.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• There is a positive correlation between graphite purity and price. Higher purity graphite product demands a higher price because it requires more processing on the producer side to remove impurities/volatiles within the graphite and opens the product to more applications. In general, larger flake sizes demand a premium price due to producing premium products (expandable graphite applications) and tighter supply conditions. Larger flake material offers greater strength to products due to the structure of the particles. This is a primary reason for its market use. The scarcity of graphite with a flake size exceeding +80 mesh means there is an escalation in process above this size. • Graphite does not trade on a designated metal exchange, nor does it have a benchmark index. Prices are negotiated directly between buyers and sellers. Given the graphite industry has historically been dominated by private companies, access to reliable graphite pricing data is difficult to obtain. There are also numerous products across a number of grades and flake sizes and prices differ depending on these characteristics. • Chilalo graphite has a distinct signature in the Chilalo resource, possessing specific metallurgical and chemical attributes ideally suited for foils, fire-retardants, engineered products, lubricants, and thermal drilling fluids. The Chilalo resource has proven it can be processed, using standard flotation, to achieve 95% to >99% LOI as well as achieving higher than average coarse flake fractions. These attributes are expected to produce a high-value product suitable for high-tech and higher priced applications. • Evolution has selected target markets for initial focus after understanding the competitive advantages of Chilalo graphite and undertaking market research on supply/demand, qualification timeframes and growth expectations of various markets. The initial target markets are as follows: Thermal Management Market

Criteria	*JORC Code explanation*	Commentary
		Group, Engineered Products Market Group and Lubricants Market Group. Evolution plans to sell into other applications for its products to diversify its revenue streams. These include value-added products in micronised graphite and expandable graphite.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• The economic analysis is based on cash flows driven by the production schedule. The cash flow projections include initial and sustaining capital; mining, processing and product logistics costs to the customer; revenue based on an appropriate sale price adjusted for fees, charges, and royalty; and a 10% discount factor. • Sensitivity analysis was undertaken for a +/- 20% variation on the key Project financial metrics including: average sale price; operating costs; capital costs; metallurgical recovery and discount rate. In all sensitivity cases, the NPV of the project was positive.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Local, regional and national stakeholders have been engaged in the development and planning of the Project. • The previously approved relocation action plan (RAP) has been updated, agreed with local communities and approved by the Government Valuer to address the relocation and compensation of community members who would be affected by mining operations. • Appropriate permitting for issues such as dewatering are being addressed through the appropriate processes.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• Evolution has entered into a binding offtake agreement with Yichang Xincheng Graphite Co Ltd for the sale of 30,000 tpa of coarse flake graphite from its Chilalo Graphite Project located in Tanzania for the first three years of operation. • Evolution is also conducting advanced discussions with potential buyers of the graphite product regarding offtake agreements and potential investment in the company. • According to Evolution, there are no apparent impediments to obtaining all government approvals required for the Chilalo Project. • The Ore Reserves stated are located on approved mining leases.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• The Mineral Resource has been modified by the application of suitable modifying factors and have been classified as Probable, based on the Indicated classification of the Mineral Resource estimate. The level of work undertaken through pit optimisation studies and pit designing is considered sufficient for the classification of Probable Ore Reserves. The Ore Reserve estimate considers only Indicated Mineral Resources and does not include any quantity of Inferred or unclassified material. Thus, the Ore Reserve estimate comprises of only Probable Ore Reserves. • Mr Andrew Hutson, the Competent Person for this Ore Reserve estimation, has reviewed the work undertaken to date and considers that it is sufficiently detailed and relevant to each of the deposits to allow

Criteria	*JORC Code explanation*	Commentary
		those Ore Reserves derived from the Indicated Mineral Resources to be classified as Probable. • No Measured material has been estimated in the Mineral Resource for the Chilalo Graphite Project.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• The Mineral Reserve estimate, mine design, scheduling, and mining cost model has been subject to internal peer review processes by Resolve Mining Solutions. No material flaws have been identified. • No external audit has been conducted.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• A key parameter of the estimate is the value of the average sale price received for the product. This is based on reliable metallurgical testwork to determine proportions of each flake size category in the product. The estimated price received for the combined product is based on a credible estimate of the expected price as of the Project base data. As with all commodities, the actual price received will depend on market conditions and contractual arrangements at the time of sale. A sensitivity analysis was completed in the financial model for average price reductions of 28% and the Project value remains positive at this point. • The Competent Person considers that the methodology applied to arrive at the Ore Reserve estimate for Evolution's Chilalo Deposit is appropriate. • The estimate is based on a detailed block model of the Resource and a detailed mine design. The Ore Reserve estimate is based on spatially supported and explicit mining schedule. • The overall accuracy of the cost estimate used in the estimation of these Ore Reserves is considered to be within +/-15%. Most of the cost estimates have been derived from contractors, market research and independent studies, so the global accuracy is considered very solid. • Confidence in the application of the modifying factors is appropriate for the estimate. • Ore will not be blended from other deposits before treatment in the processing plant.

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