// DRA Pacific Pty Ltd

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8 October 2021

The Directors
Sovereign Metals Limited
Level 9, 28 The Esplanade
Perth, WA, 6000
Australia

The Directors
RFC Ambrian Limited
Octagon Point
5 Cheapside
London EC2V 6AA
United Kingdom

Dear Sirs,

RE: SOVEREIGN METALS – COMPETENT PERSONS REPORT

Sovereign Metals Limited (**Sovereign, SVM** or **the Company**) has engaged DRA Pacific Pty Ltd (**DRA**) to prepare a Competent Persons Report (**CPR**) on the Company's Malingunde graphite project located in Malawi. DRA understands that the CPR will accompany the Admission Appendix and Schedule One in connection with the proposed admission of the ordinary shares of Sovereign to trading on the AIM market of the London Stock Exchange (AIM) by being made available on Sovereign's website.

The CPR was prepared in accordance with the standards set out in the "Joint Ore Reserves Committee" Code 2012 (**JORC 2012**) and the "Note for Mining, Oil and Gas Companies" (June 2009, the "**AIM Note**") which forms part of the AIM rules for companies, and has been signed off by a relevant Competent Persons (**CPs**) as defined in JORC 2012 and the AIM Note.

Neither of the contributing authors of the CPR, or any other employees or associates of DRA, have a material interest, either directly or indirectly in Sovereign or the assets which are the subject of the CPR. No commercial relationship has existed between DRA and Sovereign prior to the engagement to prepare this report and DRA's only financial interest is the right to charge professional fees at normal commercial rates, plus normal overhead costs, for work carried out in connection with the preparation of the CPR.

DRA is not a sole trader and is qualified under AIM Rules to provide such reports for the purposes of inclusion in public company prospectuses and admission documents. DRA has given and has not withdrawn, its written consent to consent for the CPR to be used for the purposes of SVM's Admission to trading on AIM, including publication on SVM's company website and to the inclusion of statements made by DRA and to the references to its CPR and its name in other documents pertaining to SVM's Admission to trading on AIM, in the form and context in which the report and those statements appear. DRA has authorised the contents of its report and context in

which they are respectively included and has authorised the contents of its report for the purposes of paragraph 1.3 of Annex I to the AIM Rules.

DRA confirms that to the best of its knowledge and belief (having taken all reasonable care to ensure that such is the case), the information contained in the CPR is in accordance with the facts and does not omit anything likely to affect the import of such information.

DRA confirms that nothing has come to its attention to indicate any material changes to what is reported in the CPR.

DRA confirms that it has reviewed the information contained elsewhere in the Admission Document relating to information contained in the CPR and confirms that the information presented is accurate, balanced, complete and not inconsistent with the CPR.

Yours Faithfully,

John Riordan FAusIMM (229194)

Process Engineering Manager

DRA Pacific Pty Ltd

COMPETENT PERSONS REPORT

MALINGUNDE GRAPHITE PROJECT

Sovereign Metals Limited / Malawi

Project Number: IMWPPR5693

S206-REP-PR-002

Revision: A

IMPORTANT NOTICE

This Competent Persons Report ("**the Report**") has been prepared by the DRA Pacific Pty Limited (**DRA**) for the exclusive benefit of Sovereign Metals Limited (**Sovereign**) and exclusively in relation to the Malingunde Graphite Project (the "**Project**") and is subject to a separate agreement entered into between DRA and Sovereign dated 29 April (the "**Agreement**"). Neither this Report (nor any of its contents) are intended for nor may they be relied upon by any other person or used for any other purpose without the written consent of DRA.

In undertaking the preparation of the Report, DRA has been provided with and has relied upon records, documents and other data and information supplied by Sovereign and others and for which DRA bears no responsibility. Save as expressly stated in the Report, DRA has assumed and did not attempt to verify the accuracy of such data, records or documents. DRA does not represent, warrant or guarantee the correctness of the findings or conclusions made by it in the Report, nor does it accept any responsibility or liability (howsoever arising in contract, tort (including negligence) or otherwise at law) for the accuracy, sufficiency, reasonableness or validity of such findings, conclusions, and assumptions or for any errors, omissions or misstatements (negligent or otherwise) relating thereto to the extent they are based on such records, documents, data and information.

Neither DRA nor its affiliates, principals, sub-contractors, officers, directors or employees accept any liability (howsoever arising in contract, tort (including negligence) or otherwise at law) whatsoever in respect of this Report other than in accordance with the Agreement, and in particular DRA shall not accept any liability (howsoever arising in contract, tort (including negligence) or otherwise at law) to any third party to whom this Report may be presented for any direct, indirect or consequential loss or damage howsoever arising from: the conclusions, findings and statements made by DRA in the Report or omitted from the Report, or the use or reliance upon, or the interpretation of the Report or any information contained in the Report for any purpose (including without limitation valuation purposes) or for any design, engineering or other work performed using the Study or for any changes, alterations or additions to the Report not made and approved by DRA. To the extent permissible under any applicable law, DRA disclaims any warranties or warranties imposed by law, including but not limited to compliance, merchantability, fitness for a particular purpose and custom and usage.

Apart from specific rights of usage granted to Sovereign under the Agreement, DRA retains all rights to intellectual property in the Report and all documents produced by it.

1 EXECUTIVE SUMMARY

Sovereign Metals Limited (**Sovereign, SVM** or **the Company**) has commissioned DRA Pacific Ltd (**DRA**) to compile a Competent Persons Report (**CPR**) on one of the Company's material assets in Central Malawi. A copy of this CPR will be made available Sovereign's website in connection with the proposed admission of the ordinary shares of Sovereign to trading on the AIM market of the London Stock Exchange (**AIM**).

It is understood that the purpose of this CPR is to support an AIM Admission document in London and all of these documents have been compiled to comply with the AIM Guidance Note for Mining, Oil and Gas Companies issued in June 2009.

1.1 Malingunde Graphite Project

Sovereign's 100%-owned Malingunde Graphite Project (**Malingunde**) located in Malawi, southeast Africa is at Pre-Feasibility Study (**PFS**) level. Malingunde represents a high quality potential future mining operation producing premium quality natural graphite products. The PFS demonstrates low operating and low capital costs providing excellent margins. The compelling economic estimates can be attributed to the deposit being hosted entirely by soft saprolite material, its high grade at 9.5% Total Graphitic Content (**TGC**) and the excellent infrastructure availability.

Malingunde comprises a planned open cut mining and a beneficiation processing plant operation, treating run of mine ore to produce on average 52,000 tonnes per year of graphite concentrate at a purity of 97% TGC. The graphite concentrate will be bagged and trucked to the railhead at Kanengo, from where it will be packed into shipping containers for direct rail to the port of Nacala for export.

Soft-saprolite hosted graphite deposits are sought after as they have distinct operating and capital cost advantages over hard-rock deposits. Currently operating saprolite-hosted flake graphite mines are located in Madagascar, however these are mostly small and low grade (typically 4-6% TGC).

1.2 Resource & Ore Reserves

The Malingunde saprolite-hosted graphite deposit is the result of millions of years of tropical weathering of primary graphitic gneisses. Most of the silicate minerals other than quartz have been altered to clay, resulting in a soft, friable saprolite horizon averaging about 25m vertical thickness from surface. Graphite is also unreactive in this weathering environment, with the large graphite flakes preserved in the clay dominant matrix.

Sovereign has defined the largest & high grade saprolite hosted deposit in the world with Resources of 45.7Mt at 7.2% TGC which includes Ore Reserves of 9.5Mt at 9.5% TGC (each estimated under the JORC Code (2012)).

1.3 Metallurgy

The Malingunde process flowsheet enables the ability to produce very high-grade flotation concentrates from a simple flowsheet, not requiring primary crushing or grinding and employing only well-established mineral processing technologies. This provides significant capital and operating cost benefits over hard-rock processing.

1.4 Infrastructure

Operating rail allows low transport costs; below or comparable to regional peers utilising trucks. Operated by a joint venture wholly owned by Vale, the rail delivers product directly to the deep-water port at Nacala.

Additionally, Malingunde is located just 20km from Lilongwe, the capital of Malawi, providing enviable access to labour, water, power and other mine site services.

1.5 Graphite Market

The primary end-market for natural flake graphite is the refractory, foundries and crucible sectors which consumed approximately 77% (900,000 tonnes) of flake graphite production in 2020. The refractory industry is the volume driver for flake graphite, with foundries and crucibles offering smaller markets for higher purity graphite products. The major product flake graphite is consumed in is magnesia-carbon bricks, a mainstream, global refractory brick which is used in the steel industry.

The lithium-ion battery sector is the main emerging market for flake graphite. Greater capacity batteries, such as those required for electric vehicles, are expected to drive significant demand for graphite over the coming years. It is forecast the battery sector will become the largest segment by 2028.

China continues to be the world's leading producer of natural flake graphite, supplying approximately 62% of the market in 2020. Brazil, India, Canada, Mozambique, Madagascar and North Korea were major contributors of the remaining 38% of global production.

The supply-demand balance in the graphite market is forecast to remain in balance for an extended period. However, a significant supply deficit is anticipated by 2024 as demand is forecast to strengthen putting the market into deficit.

1.6 Key Project Metrics

ECONOMIC		
Development Capital	$USm	45.7
Indirect & contingency	$USm	18.0
Total Capital	$USm	**63.6**
Sustaining Capital	$USm	**28.2**
Mine Gate Operating	$US/t conc.	275
Transport & Logistics	$US/t conc.	63
Total Operating Costs (Average LoM)	$US/t conc.	**338**

PHYSICAL		
Average annual plant throughput	tpa	600,000
Average annual concentrate production	Tpa	52,000
LoM average feed grade	% TGC	9.5%
Mine life	Years	16

FINANCIAL		
NPV 10% (post-tax)	$USm	144
IRR (post-tax)	%	38%
EBITDA (average LoM)	$USm	45

1.7 Conclusion

Malingunde offers a technically and economically robust, low risk pathway to production of premium quality, coarse flake graphite concentrates. The significant cost savings, compared to hard-rock peers, are realised by the soft, free dig nature of the mineralisation and low strip ratios, with no requirement for primary crushing or grinding in the processing plant.

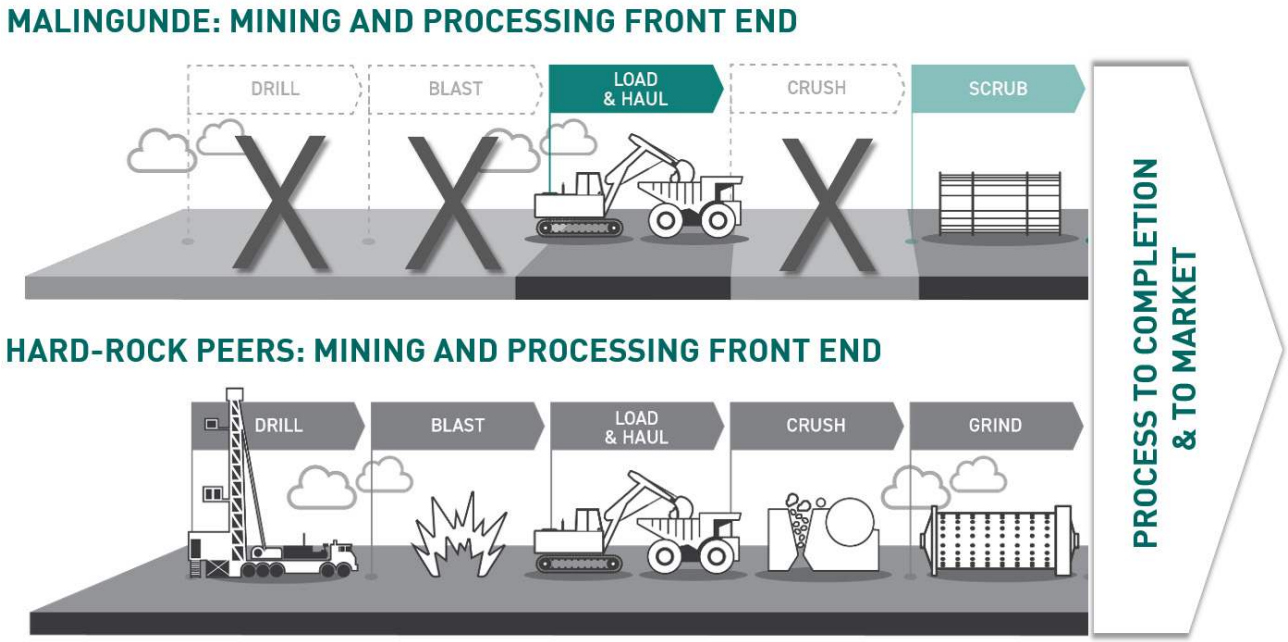

Figure 1.1 Malingunde's front end advantage

Malingunde is not reliant on an unrealistically large scale or overly optimistic basket pricing assumptions to be economically viable. The very low operating cost nature of the Project provides protection, and ensures profitability for the project, even in extreme downside global graphite pricing scenarios.

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2 INTRODUCTION

Sovereign Metals Limited (Sovereign, SVM or the Company) has commissioned DRA Pacific Ltd (**DRA**) to compile a Competent Persons Report (**CPR**) on one of the Company's material assets in Central Malawi. A copy of this CPR will be made available Sovereign's website in connection with the proposed admission of the ordinary shares of Sovereign to trading on the AIM market of the London Stock Exchange (**AIM**).

It is understood that the purpose of this CPR is to support an AIM Admission document in London and all of these documents have been compiled to comply with the AIM Guidance Note for Mining, Oil and Gas Companies issued in June 2009.

2.1 Summary of sources

Sovereign Metals Limited (**SVM**) completed a Prefeasibility Study (**PFS**) for their Malingunde Graphite Project (the Project) in Malawi in 2018. The PFS was conducted by Minnovo who was subsequently acquired by DRA Global.

In April 2021, DRA Pacific Ltd (**DRA**) was requested to update the PFS capital and operating costs for the Project to be used in developing a CPR for disclosure support for the AIM listing on the London Stock Exchange. During this process, no additional engineering or testwork has been considered, and thus the technical development of the Project is the same as was assumed in the PFS completed in 2018. However, the tailings storage facility (**TSF**) construction assumptions have been adjusted in reaction to new Global Industry Standards on Tailings Management (**GISTM**). As a result, the height and area required for the TSF starter wall is larger than originally assumed in the PFS, and the costs of construction are also increased.

This report draws significantly upon the detail in the PFS and updates the major assumptions for both capital and operating cost estimates and reasserts the overall context of the project by re-stating the highlights of the 2018 PFS that remain unchanged.

Resource delineation is principally underpinned by drill programs from 2016-2018 while significant processing testwork has been completed since 2016 by SGS Lakefield in Canada and ALS in Australia.

The list of contributing consultants who have provided updated cost estimates are:

- Mineral Resource Estimate – CSA Global.
- Ore Reserves and Mining – Orelogy.
- Process plant and Non-Process Infrastructure – DRA Pacific Ltd.
- Environmental Impact Assessment (**EIA**) including social impact – Dhamana Consulting with others.
- TSF design and water management – SLR Consulting.
- Shipping and logistics study – Morgan Sterling.
- Graphite Market – Fastmarkets (previously named Metals Bulletin)

2.1.1 Site Visits

Site visits have been carried out by the following personnel:

- Mr David Williams, the Competent Person for the JORC Resource Estimate, and a representative of CSA Global has conducted a site visit in 2016; and
- Mr Ryan Locke, the Competent Person for the JORC Reserve estimate and a representative of Orelogy Pty Ltd has conducted a site visit in 2018.

Due to the COVID-19 pandemic, no consultants have been able to complete a site visit to Sovereign's projects in Malawi as part of this engagement.

2.2 Mineral Assets of Sovereign Metals

2.2.1 Summary

Sovereign is conducting exploration across its large ground package of over 2,880km^2. Sovereign's ground package is made up of eight Exploration Licences (**EL**s) and one Retention Licence (**RL**) as summarised in Table 2.1. The ELs and RLs are held through SVM's wholly owned Malawian subsidiaries, Sovereign Services Limited and McCourt Mining Limited. The Malingunde Project is situated on EL0372.

Table 2.1 Summary of Sovereign's Licences

Licence	Holding Entity	Percentage Interest	Status	Expiry	Licence Area (km^2)	Comments
EL 0372 (Malawi)	SSL	100%	Exploration	13/03/2022	729.2	Granted
EL 0492 (Malawi)	SSL	100%	Exploration	29/01/2023	935.4	Granted
EL 0528 (Malawi)	SSL	100%	Exploration	27/11/2021	16.2	Granted
EL 0545 (Malawi)	SSL	100%	Exploration	12/05/2022	53.2	Granted
EL 0561 (Malawi)	SSL	100%	Exploration	15/09/2023	124.0	Granted
EL 0574 (Malawi)	SSL	100%	Exploration	15/09/2023	292.0	Granted
EL 0582 (Malawi)	SSL	100%	Exploration	15/09/2023	285.0	Granted
EL 0609 (Malawi)	MML	100%	Exploration	25/09/2024	440.5	Granted
RL 0012 (Malawi)	SSL	100%	Exploration	26/07/2026	6.0	Granted

SSL: Sovereign Services Limited
MML: McCourt Mining Limited

Exploration licenses are generally granted for up to three years, with the licence renewable for two additional periods of two years each upon expiry. Mineral deposits contained within exploration licences that have come to the end of their term, can be converted to a retention licence for a term of up to five years, subject to certain criteria.

Exploitation of the Malingunde Project is planned to be by open cut mining and a beneficiation processing plant operation producing a graphite concentrate for export.

2.2.2 Review of Sovereign Metals' Interests

No Director (other than Julian Stephens) of Sovereign or its subsidiaries, Competent Person, or promoter has any interest, current or past, in any of the assets presented in Table 2.1, other than by virtue of equity ownership in Sovereign.

Pursuant to the acquisition by Sovereign of the Malawi projects in November 2012, the following consideration was paid:

- A$1,000,000 cash
- 12,500,000 fully paid ordinary shares in Sovereign
- 8,750,000 convertible performance shares (1:1 conversion to fully paid ordinary shares on delineation of Resources of at least 25Mt at 10% graphitic carbon or equivalent within 3 years of transaction completion). These performance shares converted into ordinary shares on 9 December 2014.

- 8,750,000 convertible performance shares (1:1 conversion to fully paid ordinary shares on announcement of a positive scoping study within four years of transaction completion). These performance shares converted into ordinary shares on 2 October 2015.
- 2.0% gross profit royalty (gross sales revenue minus cash operating costs of mining and processing) payable to the original Project vendor for ore extracted from the licence area in the initial acquisition, which includes Malingunde Graphite Project.

Sovereign's Managing Director, Dr Julian Stephens, was an original vendor of the Malawi projects pertaining to a 25% entitlement in the consideration outlined above.

2.3 Table of Reserves and Resources

2.3.1 Mineral Resources

Malingunde's Mineral Resources (inclusive of Ore Reserves) are reported in accordance with the 2012 Edition of the JORC Code as follows:

Table 2.2 Mineral Resource Table

Resource Category	Tonnes (Mt)	Grade (% TGC)	Contained Graphite (Mt)	Operator
Measured	*4.8*	*8.5*	*0.41*	*SSL*
Indicated	*32.3*	*7.2*	*2.32*	*SSL*
Inferred	*27.9*	*7.0*	*1.95*	*SSL*
Total	***65.0***	***7.2***	***4.68***	***SSL***

Sovereign has a 100% interest in the Resources
Source: David Williams (Competent Person for the Resources)
SSL: Sovereign Services Limited

2.3.2 Ore Reserves

Malingunde's Ore Reserves are reported in accordance with the 2012 Edition of the JORC Code as follows:

Table 2.3 Ore Reserve Table

Reserve Category	Tonnes (Mt)	Grade (% TGC)	Contained Graphite (Mt)	Operator
Proved	*3.1*	*9.5*	*0.30*	*SSL*
Probable	*6.4*	*9.5*	*0.60*	*SSL*
	9.5	**9.5**	**0.90**	***SSL***

Sovereign has a 100% interest in the Reserves
Source: Ryan Locke (Competent Person for Reserves)
SSL: Sovereign Services Limited

Note: Malingunde ore reserve is reported at a 6.75% total graphitic carbon ('TGC') lower cut-off grade for saprolite and between 9.5% and 11.0% for saprock.

3 OVERVIEW

3.1 Project Location

The Project is located in the Lilongwe District of the Central Region of Malawi. The project site is located approximately 20km southwest of Lilongwe, with the northern border to Mozambique being 30km to the west. The nearest port is Nacala on the east coast of Mozambique which is connected by a railway line from Lilongwe. Figure 3.1 displays a map of the project location.

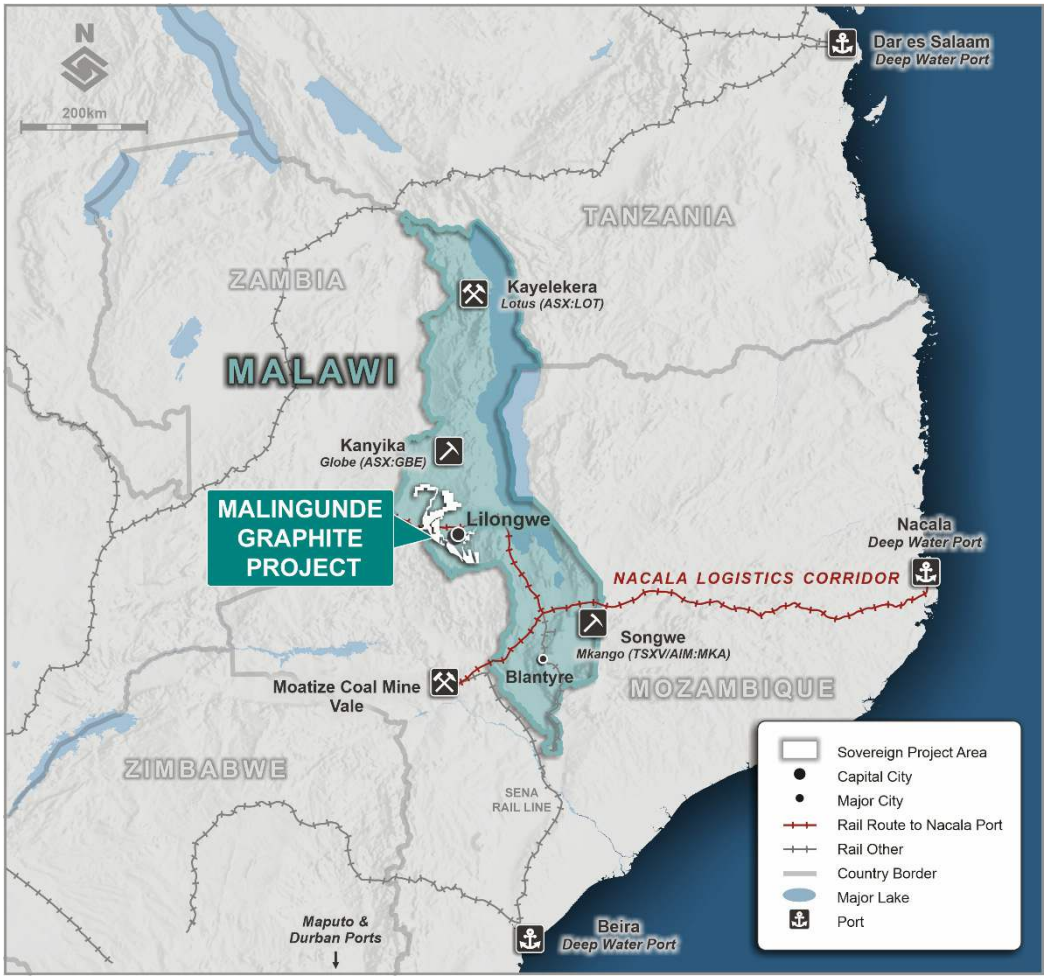


Figure 3.1 Malingunde Graphite Project Location Map

3.2 Project Description

The Project is described in detail in the respective sections of this report. In summary, the Project comprises a planned open cut mining and a beneficiation processing plant operation, treating run of mine ore to produce on average 52,000 tonnes per year of graphite concentrate at a purity of 97% TGC. The graphite concentrate will be bagged and trucked to the railhead at Kanengo, from where it will be packed into shipping containers for direct rail to the port of Nacala for export.

The resource is a soft, saprolite-hosted graphite deposit which has specific benefits for the process, most specifically no drill or blast is required for mining as the material is free-dig and the upfront comminution circuit is limited to a sizer and a low energy scrubber.

The Project is a greenfields site and therefore the study includes all non-process infrastructure required to support the mining and processing operations.

3.3 Project History

SVM has been conducting exploration in country since 2012. In 2015, SVM's in-country geological team made new and significant discoveries in an area where there is no outcrop called the Lilongwe Plain. Following the discovery, extensive drilling was carried out over 3.4 km of strike length (see Figure 3.2 below) which led to the maiden Mineral Resource Estimate (**MRE**) being released in April 2017 (April 2017 MRE).

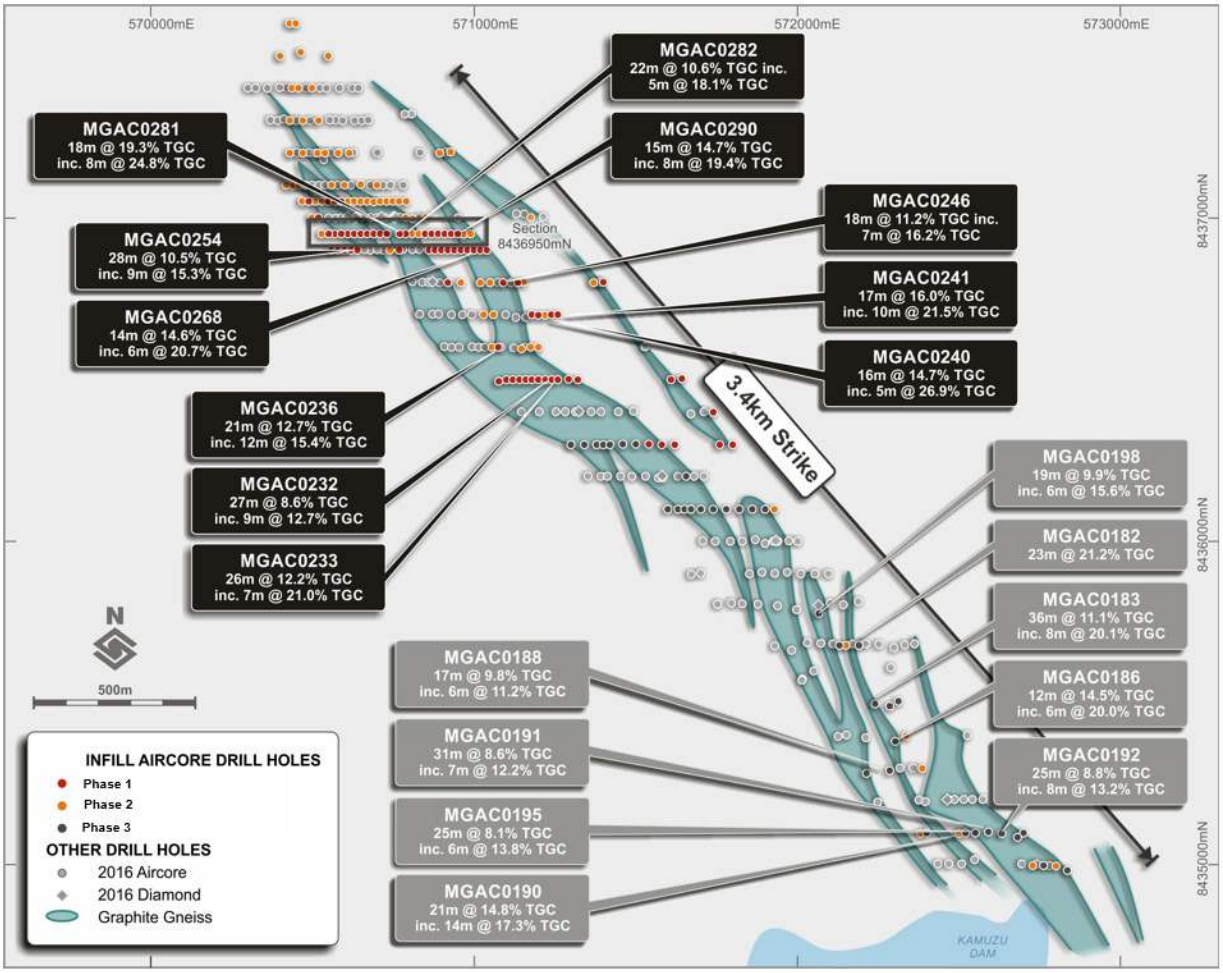


Figure 3.2 Malingunde Graphite Project – Mineralisation drillholes

The MRE, which was conducted by CSA Global, identified 65.1 Mt at 7.1% TGC for 4.6 Mt of contained graphite. In summary, at a 4% TGC cut- off grade, Indicated and Inferred resources are as follows:

- 28.8 Mt of saprolite @ 7.1% TGC.
- 17.0 Mt of saprock @ 7.0% TGC.
- 19.3 Mt of fresh rock @ 7.0% TGC.

SVM subsequently engaged AMEC Foster Wheeler to conduct a Scoping Study which was completed in June 2017.

The PFS commenced in November 2017 and used this same resource (April 17 MRE) as the basis for the mine design, scheduling and plant and infrastructure design work.

During the PFS period, the results from the 2018 in-fill drill program were used to produce an updated Mineral Resource announced in June 2018 (June 2018 MRE). Again, the work was carried out by CSA Global and identified 65.0 Mt at 7.2% total graphite content for 4.7 Mt of contained graphite. In summary, at a 4% TGC cut- off grade, Measured, Indicated and Inferred resources are as follows:

- 28.8 Mt of saprolite @ 7.2% TGC (Measured and Indicated - 23.5 Mt @ 7.4% TGC).
- 16.9 Mt of saprock @ 7.2% TGC (Indicated - 13.6 Mt @ 7.4% TGC).
- 19.3 Mt of fresh rock @ 7.3% TGC (all Inferred).

This updated resource (June 2018 MRE), along with the PFS engineering and design work was subsequently used for the Ore Reserve determination for the Project.

The Company completed an update on cost assumptions made in the 2018 PFS to Q2 2021 for the basis of compiling this report and confirm there has been no material changes.

3.4 Geological Setting

3.4.1 Physiography

The dominant feature of the Malingunde project area is the South Lilongwe Plain, a gently undulating plain interrupted by occasional low inselbergs such as Malingunde Hill (1,250m above sea level) and cut by three major flowing rivers. The plain varies between 1,140m and 1,300m in height above sea level.

The major rivers of the South Lilongwe Plain all drain to the north-east, eventually arriving at Lake Malawi. Sinuous, tributary streams feed the major rivers of the plains, with seasonal swamps (dambo) a feature of the low gradient, lower energy regime of the plains.

The Lilongwe River is the principal river of the project area, flowing to the south of the Malingunde Deposit and cutting it off at the Kamuzu Dam. The Lilongwe River is deeply incised with rock bars and exposures common along its length. Immediately south of the Malingunde Deposit the Lilongwe River has been dammed, forming the twin walled Kamuzu Dam, which provides potable water to Lilongwe.

The geomorphology of the Lilongwe Plains comprises three erosion features:

- A Post-Gondwana surface, formed in the early and mid-Cretaceous, presently displayed as the occasional inselbergs dotted throughout the plain;
- The late Cretaceous – early Miocene African cycle, which formed extensive plains, including South Lilongwe Plain;
- Late-Miocene Post-African features, often merging with the African cycle erosional surface.

The climate of the South Lilongwe Plain can be described as tropical continental, with a mean annual temperature of 18-23 degrees Celsius, and an average rainfall of 860mm. Some 85% of rainfall occurs during the rainy season between December and March, and the hottest periods occur in the lead up to the rainy season, occasionally peaking around 35 degrees Celsius.

The moderate rainfall coupled with the generally fertile soils of the plains has resulted in the natural savannah vegetation having been almost entirely modified or removed and the land being extensively cultivated as subsistence farming dominated by maize crops and secondary cash crops of groundnuts and tobacco. The dambo grasslands are often utilised for grazing and small-scale sugar cane crops.

3.4.2 Regional Geology

The geological descriptions below rely on the systematic historic exploration work conducted by the Malawi Geological Survey Department during the mid-1900s, dominantly Bulletin 23 (Thatcher, 1968).

Malawi's geology is dominated by the Nyasa Rift, the southern extension of the Cenozoic East African Rift (EAR), which extends some 800km from southern Tanzania south to the Middle Shire Rivers, with some structures extending further south into Mozambique. The seismically active rift system is principally made up of a series of half grabens with complex fault geometries, and the Nyasa Rift is occupied by Lake Malawi.

The majority of the country is dominated by crystalline metamorphic and igneous basement rocks which have been subjected to several periods of deformation, primarily during the Precambrian. In the Permo-Triassic, the continental extension splitting the supercontinent Gondwana apart led to extensive faulting, resulting in the formation of long narrow north-east to south-west trending troughs in which sandstones, limestones and mudstones of the Karoo Supergroup were deposited. These sediments were subjected to repeated periods of uplift, erosion and faulting from the Jurassic to the present, producing graben structures in which Tertiary and younger sediments were deposited. Quaternary lacustrine sands and gravels are common in the Lake Malawi area, indicating the retreat of the lake to its present position.

There are some Jurassic-aged basalts in the far north and south of the country and several carbonatite intrusions in southern and south-central Malawi. Unlike the older rift system, however, there is little evidence of magmatic activity and volcanism associated with rift formation, with the exception of some Pleistocene volcanics found near the northern end of Lake Malawi. There are also hot springs in the western and southern lake area.

Lowermost in the South Lilongwe Plains recognised geological units is the Precambrian Basement Complex, made up of biotite rich gneisses, granulites and schists. Paragneisses and semi-pelitic schists dominate the rock units, metamorphosed under extreme temperature and pressure conditions to granulite facies. Interspersed within the paragneisses are lesser orthogneisses, with associated psammitic, pelitic, and calcareous horizons, as well as concordant and discordant amphibolites and felsic pegmatites and minor basic to ultrabasic intrusions.

The rock types of the Basement Complex include biotite gneisses, with subordinate hornblende gneisses, calc-silicate granulites and gneisses. The area from Dedza Boma extending northwest to Namitete and north to Ntchisi Boma includes a distinct group of kyanite-graphite-pyrite-pyrrhotite paragneisses, kyanite-muscovite gneisses, kyanite quartzites and graphitic quartzo-feldspathic schists and granulites.

The kyanite-mica gneisses observed around the Malingunde area have protoliths including thinly bedded sequence of arkosic sandstones with interspersed bands of carbonaceous shales deposited in a nearshore deltaic environment.

The entire rock package of the Malingunde area has been deformed by the Mozambique Orogeny imparting a strong north-south to northwest-southeast shear foliation and schistosity. The complex structural history of the area is not fully understood, though gneissic foliation is often compositional layer parallel around Malingunde, with north plunging folds observed in outcrop along the Lilongwe River.

The rocks of the South Lilongwe Plains are obscured by thick weathering profiles and residual soils. Deep residual weathering profiles to 45m have been observed in water exploration drilling. A red-brown sandy clay soil has been observed to be associated with ferruginous graphite-bearing rocks.

The localised presence of lateritic duricrust layer has proven to be beneficial, due to the cessation of physical weathering and hence protection of the highly weathered graphite-rich rocks.

Hydromorphic dark grey, black and mottled soils, composed of clay minerals and thin humus of A-horizon are found around dambos. A combination of very slow permeability and poor site drainage produces waterlogged soil and seasonal flooding. Pale coloured angular, sandy colluvium is washed into heads of dambos.

3.4.3 Project Geology

The Precambrian Basement Complex rich in graphite and pyrrhotite paragneisses occurs across RL0012 and the western parts of EL0372. This same package, though highly weathered, underlies the Lilongwe Plain and is covered by the western parts of EL0372 and the majority of EL0609 and EL0492.

The Malingunde Deposit comprises 4.5km strike length of shallowly north-east dipping, north-west striking graphitic gneisses. The mineralised package has up to six separate sub-parallel zones of graphite gneiss with cumulative across strike widths averaging 120m and locally exceeding 200m. The newly discovered Msinja Deposit, located 1.5km along strike to the south-east has a strike length of approximately 1.0km with about five parallel zones of mineralisation. Across strike cumulative widths of mineralisation range between 40 and 100m.

Lithologies described in historic geological survey work (Regional Geology, above) are commonly recognised in drilling samples. At surface, scattered areas of coarse kyanite float are reasonably common and occasional outcrops of iron rich, pisolitic duricrust are to be observed.

The host rocks at Malingunde have been subject to intense weathering under tropical climatic conditions. This has resulted in development of substantial thicknesses of saprolite and other weathered facies. A typical profile from surface is soil (“SOIL”, 0-1m), ferruginous pedolith (“FERP”, 1-4m), mottled zone (“MOTT”, 4-7m), pallid saprolite (“PSAP”, 7-9m), saprolite (“SAPL”, 9-25m), saprock (“SAPR”, 25-35m) and fresh rock (“FRESH” >35m). In some areas, a thin lateritic duricrust is present within the FERP, though this rarely exceeds 1m in thickness. A typical graphic summary of the weathering profile observed at the Malingunde Deposit can be seen in Figure 3.3.

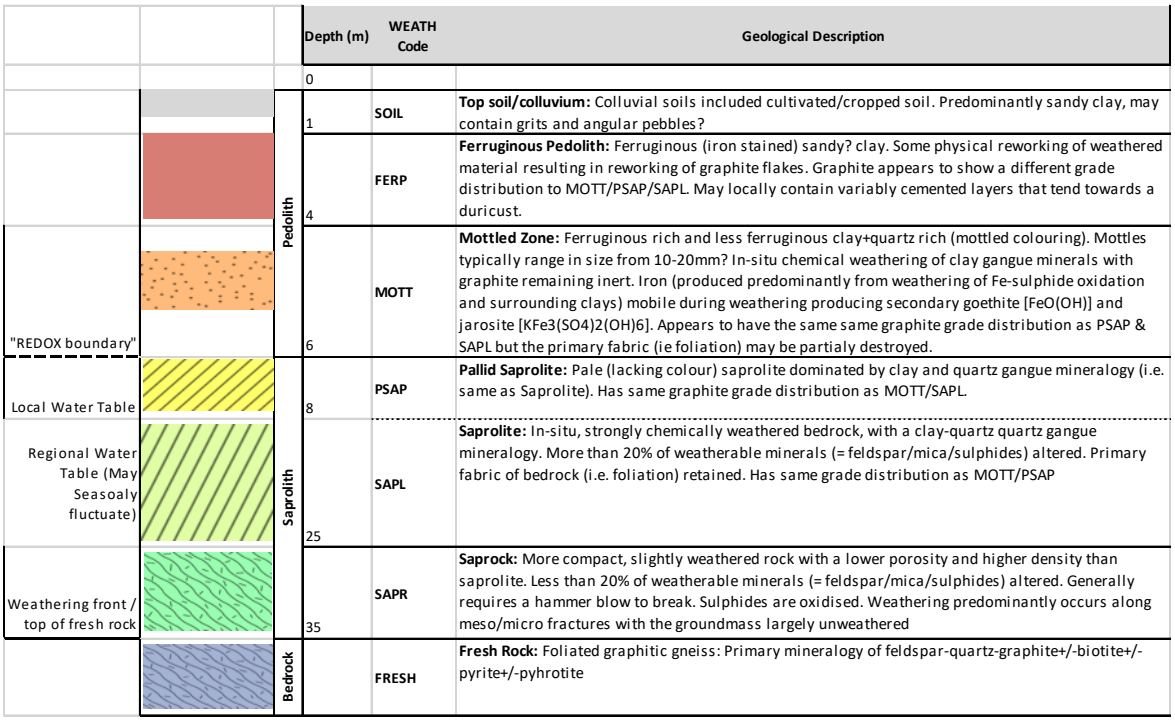


Figure 3.3 Typical weathering profile observed at the Malingunde Deposit

3.4.4 Mineralisation

Flake graphite mineralisation occurs within graphitic gneiss units that are interlayered and separated locally by barren or low-grade biotite-kyanite+- graphite gneisses. Mineralisation is broadly conformable with the host paragneiss sequence, striking north-west and dipping at 10-40° to the north-east. The graphitic gneisses of central Malawi are very coarse grained resulting in a graphite flake distribution in concentrates of generally >60% +150um. This is likely because of the very high metamorphic grade (granulite facies) and long cooling period experienced by the host rock package allowing large flakes time to crystallise.

Graphite is generally chemically inert during the weathering process and in most of the weathering zones the flakes remain pristine. However, in the SOIL and FERP zones graphite grades are highly depleted, with very little material above 4% TGC occurring. Grades may also be slightly depleted in the MOTT zone. Recovered flake sizes are decreased significantly in the FERP zone and somewhat in the MOTT zones as opposed to the bulk SAPL zone. This is thought to be a result of physical reworking and some volume reduction in the upper levels with associated dilution and natural flake comminution.

3.5 Regional Population and Infrastructure

The Project is located within the Lilongwe District on Malawi. The Lilongwe District is 6,159 km^2 in size with an estimated population of 1.35 million persons. The village of Ndumila is located within the proposed mining areas where the village of Kumalindi is located on the northern edge of the project area straddling the S124 secondary road. The access road to the plant area will run from the S124 road along the eastern edge of this village to the plant site security gate.

In areas away from the villages, land use is limited to small scale seasonal farming and grazing of livestock.

The natural environment of the project area has been extensively transformed by agricultural activity with only a few small patches of remnant woodland remaining.

Local infrastructure is good with the S124 road connecting the project site to Lilongwe. A mobile communications tower with voice/data capability is located nearby at Malingunde Hill.

3.6 Communities

Sovereign has operated in Malawi for over eight years. The Company has retained its senior staff since inception allowing for long standing relationships across Goverment, traditional authorities leaders and the business sector.

Currently, the Company employees over 40 Malawi nationals employed in various positions during drilling programs. Sovereign is also active in the communities, with a number of initiatives completed including the installation of water pumps, assistance with fertilizer and seed to local communities.

Further to this, Sovereign holds regular discussions with local landholders and community groups to keep them well informed of the status and future planned work programs for the project.

An Environmental Impact Assessment (**ESIA**) is currently planned with reference to applicable Malawian and international environmental and social permitting and baseline requirements for the Project.

Sovereign is committed to conduct its activities in full compliance to the requirements of national regulations, its obligations under international conventions and treaties and giving due consideration to international best practices and policies. The Company plans to appoint an experienced environmental consultant to manage the ESIA process, and environmental and social baseline studies have commenced with appropriately qualified independent experts. The Company has also completed a high-level risk assessment to identify major environmental and social risks which could affect the development of the Project, along with mitigating strategies to allow identified risks to be addressed early in the project design phase.

The Company has embarked on several exercises with the communities in the area and there is a general positive acceptance of the Project.

Based on the current assessments and commenced ESIA, the Company believes there are no environmental issues currently identified that cannot be appropriately mitigated in accordance with standard practices adopted for the development of mining projects.

As the Project continues to develop, the Company expects to enter into a Community Development Agreement (**CDA**) with the surrounding communities. Significant engagement with these communities has occurred is ongoing ahead of negotiation of the CDA which is expected to be concluded during the DFS stage.

3.7 Topography and Climate

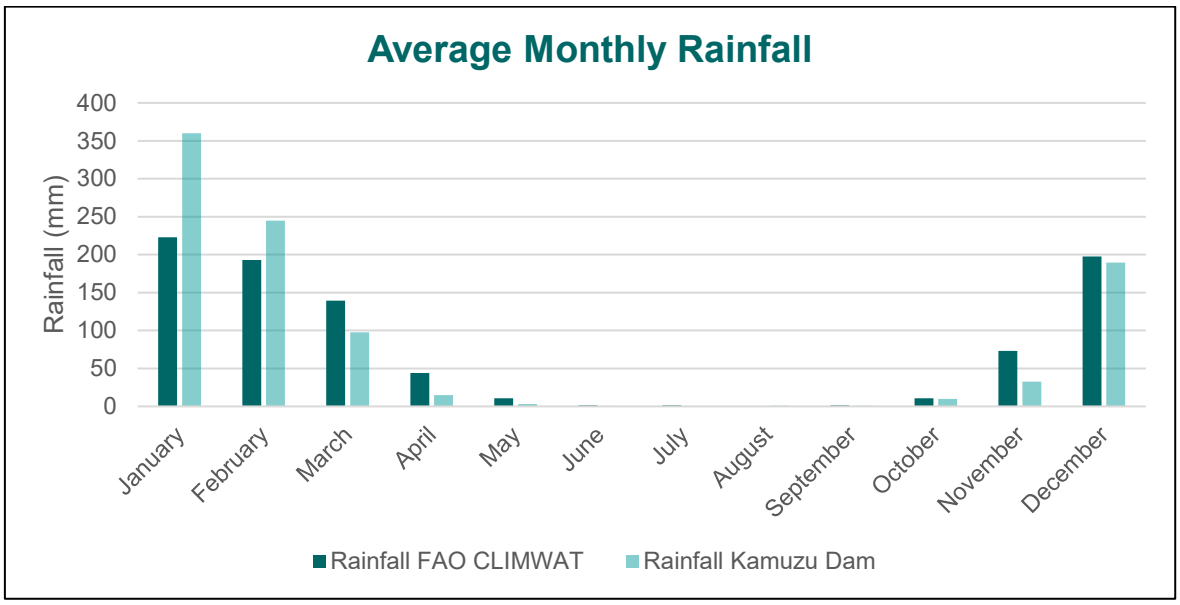
The topography on the site is generally flat with variation in elevation across the project area between 1050m and 1100m above sea level.

This region features a humid sub-tropical climate. Winters are generally dry and mild with the majority of rainfall occurring during the summer months between November and April.

The average temperature is moderated by elevation and averages 20.3°C with annual precipitation averaging 860 mm per year. Monthly average temperature and rainfall measurements for Lilongwe, some 20 km from the site (Source climate-data.org).

Monthly rainfall peaks in January at 225 mm with the minimum rainfall generally being encountered in months of June to September where monthly rainfall averages between 0 and 2 mm/month.

Maximum temperatures are highest on average in October at around 30°C with July being the coldest month of the year with an average maximum temperature of 23.2°C.



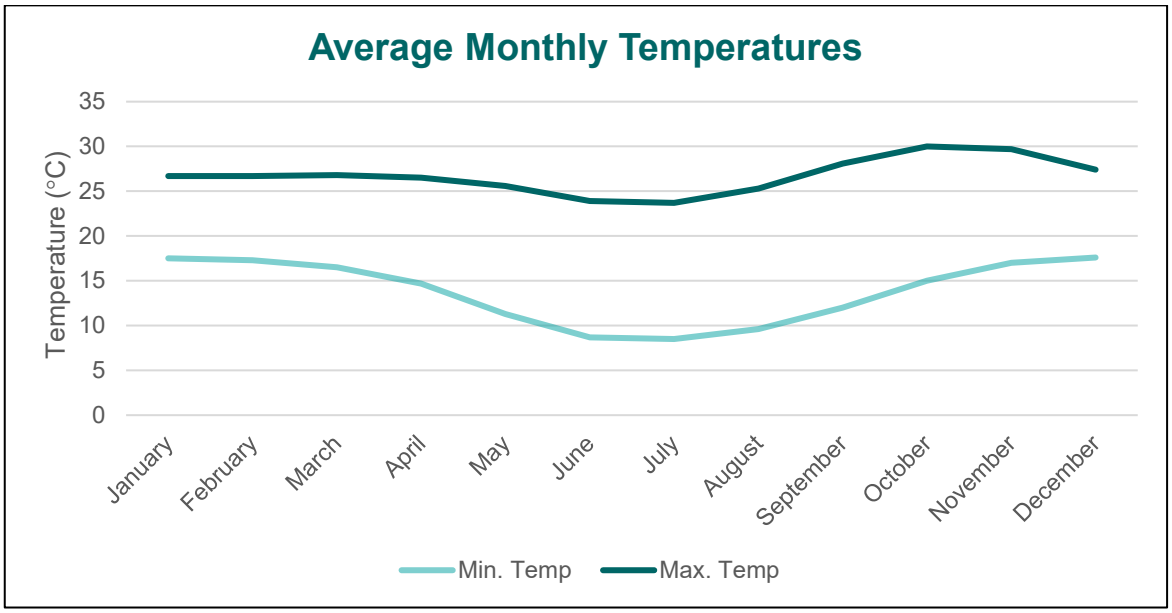


Figure 3.4 Lilongwe Monthly Rainfall and Temperature Data

3.8 Regulatory and Fiscal Setting

3.8.1 Regulatory

Exploration and Mining activities in Malawi are regulated by the Mining Act (2019). The new Act replaced the previous legislation, the Mines and Minerals Act (1981).

The Ministry of Natural Resources, Energy and Mining (MNREM) is the Government entity responsible for the administration of the minerals sector, including granting of exploration and mining licences. It has statutory oversight of the energy, minerals, and forestry sectors.

The following table outlines the various types of licences and the key terms for each type:

Table 3.1 Summary of Licence Types

Type	Term	Permitted Activity	Size
Reconnaissance (Rec)	12 months (12 month extension)	Not land disturbing exploration and supporting activities (non-exclusive)	No more than 100,000km^2
Exploration (EL)	3 years (+ 2x 2 year extensions	Exploration activities	No more than 2,500km^2
Retention (RL)	5 years	Feasibility studies	No more than 25km^2
Mining (ML) *	Up to 25 year or LoM + extensions of 15 years (unlimited)	Mining	As per PFS mine plan

Subject to successful exploration and achieving positive technical and economic outcomes with more advanced studies (such as Feasibility Study), Sovereign endeavours to apply for a Mining Licence (**ML**). The following requirements, milestones and approvals are needed to be completed prior to submitting a ML:

- Malawian incorporated company.
- Technically and financially competent.
- Approval under the Environment Management Act.
- Pre-Feasibility Study.
- Operation plans: community engagement, mining operations, mine site, waste management, rehabilitation & closure, resettlement and employment & training plans.
- Commencement of on-site development within six months.
- Operating Requirements: all expected good practice mining operating and reporting requirements.

As a condition of retaining the current rights to tenure to exploration tenements, Sovereign is required to pay an annual rental charge and meet minimum expenditure requirements for each licence. These obligations are at the sole discretion of Sovereign and the majority of the remaining exploration commitments relate to licences with a term greater than one year. For the purposes of disclosure, Sovereign has apportioned the remaining commitments on an equal monthly basis over the remaining term of all of its exploration licences as summarised below in Table 3.2:

Table 3.2 Summary of Exploration Commitments

Commitments	2021	2020
Within one year	$555,909	$237,507
After one year but not more than five years	$316,439	$151,519
Total	**$389,026**	**$389,026**

3.8.2 Fiscal Setting

The main taxes and fees imposed on companies operating in the mining sector include Corporate tax, Dividends Tax, Royalties and Fees. The Malawi Revenue Authority (**MRA**) is the main body responsible for collecting and managing taxes paid to the central government. The taxation regime for mining companies in Malawi is a corporate income tax at 30%. A Rent Resource Tax (**RRT**) of 15% after tax profit is currently legislated in the Taxation Act of 2018. However, it is understood that it is not currently being applied to any mining projects in Malawi and it is uncertain if it would apply to Sovereign's projects in the future.

The following table outlines other fiscal rates applied to mining operations: The following table outlines other fiscal rates applicable to a mining operation:

Table 3.3 Summary of Other Fiscal Rates

Instrument	Rate	Fixed/Negotiable	Comments
Royalty	Generally 5%	Negotiable	Depending on level of processing (Royalties can be up to 10%).
Dividend Withholding	Rate varies		
Import duty	Variable	Based on tariff book	Zero for all capital equipment (subject to pre-approval).
VAT	16.5%	Fixed	Zero input for exports.
VAT – Fuel	-	Negotiable	Application for 0% for fuel used to generate power.
State Equity	Up to 10%	Fixed (based on size of project)	The Government shall have the right, but not the obligation, to acquire, directly or through a Government nominee, without cost, a free equity ownership interest of up to ten percent (10%) in any mining project that will be subject to a large-scale mining licence (>5Mt mined per annum or >US$250m Capex).
Annual Rents	Fixed rate per km^2	Fixed	Calculated based on a fixed fee times area

4 GEOLOGY AND RESOURCE

4.1 Overview

The Malingunde Deposit lies 20 km to the south-west of the city of Lilongwe, Malawi, and was initially defined by SVM's geologists during regional auger exploration works following up on airborne VTEM and ground FLTEM geophysics.

The Project is located within the Lilongwe District of Malawi. The Lilongwe District is 6,159 km^2 in size with an estimated population of 1.35 million persons. The village of Ndumila is located within the proposed mining areas where the village of Kumalindi is located on the northern edge of the project area straddling the S124 secondary road.

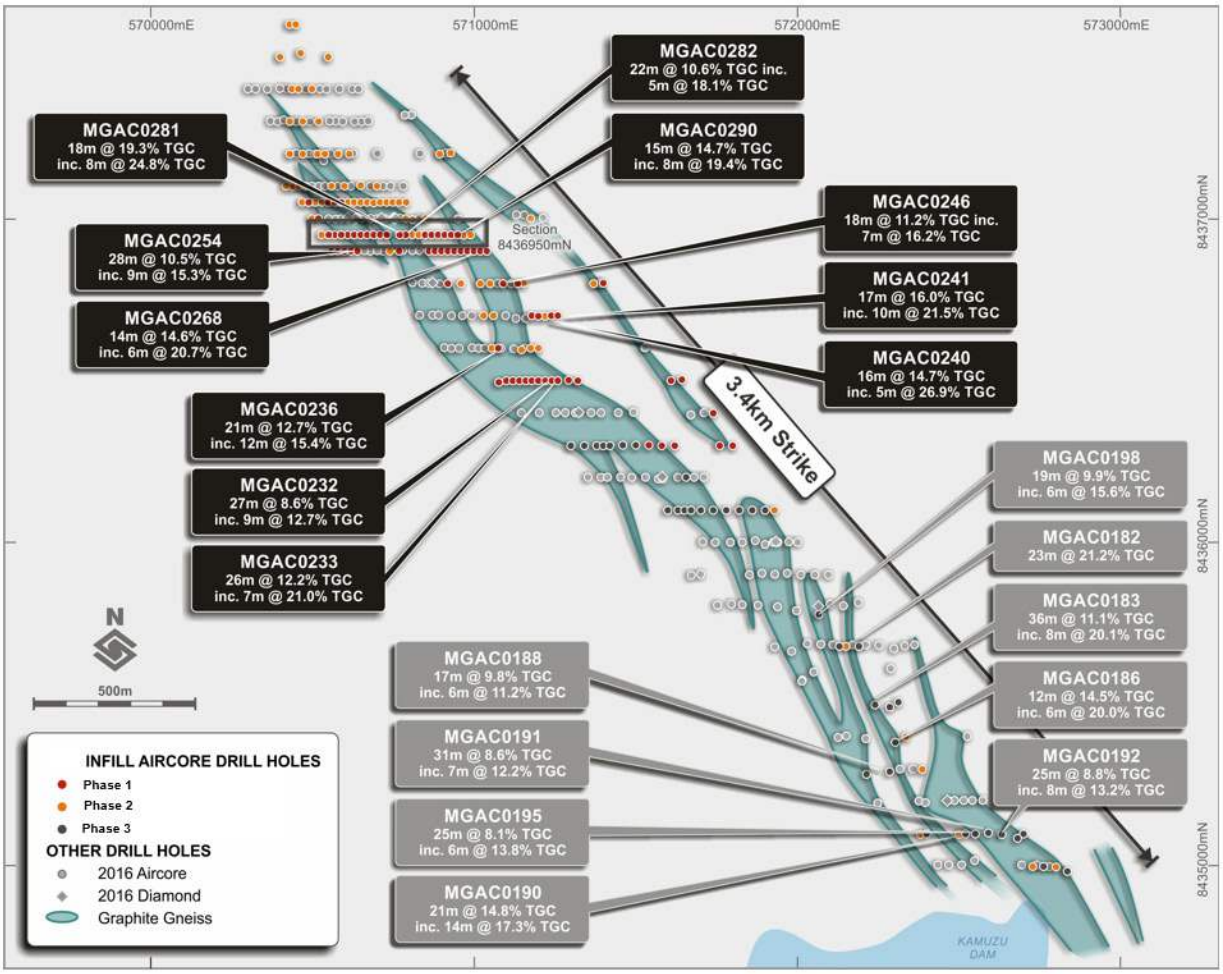
The flake graphite mineralisation occurs within graphitic gneiss units that are interlayered and separated locally by barren or low-grade biotite-kyanite-graphite gneisses. Mineralisation is broadly conformable with the host paragneiss sequence, striking north-west and dipping at 10-40° to the north-east.

In order to conduct a Mineral Resource Estimation (MRE) on the Malingunde mineralisation a program of diamond drilling (13 holes for 487.75 m) followed by a resource definition air core drilling program (180 holes for 5,516.8 m) were conducted during late 2016. Additionally, 569 hand auger holes (6,042 m) were also included to complete the MRE drill hole database.

In April 2017, CSA Global finalised the Malingunde Graphite Deposit MRE, resulting in a JORC 2012 Inferred and Indicated Mineral Resource of 28.8 Mt @ 7.1% TGC within saprolitic material types. Following a successful Scoping Study, SVM undertook a second resource drill campaign in 2018 comprising 176 holes for 5,295 m air core drilling. This data was used to provide additional data for the updated MRE announced in June 2018 that forms the basis for the Ore Reserve declaration and will be used in the proposed Feasibility Study (**FS**).

The combined exploration programs have created an effective grid over the Malingunde Graphite project of approximately 3,500m x 750m.

Figure 4.1 shows the location of the drill holes at the Malingunde Graphite Deposit.



4.2 Assaying

Hand-auger (HA), Air-core (AC) and Diamond core (DD) drilling form the basis of the MRE and are described below:

HA drilling was employed to obtain samples vertically from surface at nominal 1-metre depth intervals, with samples composited on geologically determined intervals. Composite samples were riffle split on site.

A total of 1,053 HA holes (10,686 m) support the MRE.

AC drilling was employed to obtain bulk drill cuttings at nominal 1-metre (downhole) intervals from surface. All 1-metre samples were collected in plastic bags directly beneath the drilling rig cyclone underflow. The entire 1-metre sample was manually split using either a 3-tier (87.5:12.5 split) or single tier (50:50 split) riffle splitter or a combination thereof to facilitate the mass reduction of a laboratory assay split. Compositing of the laboratory sample split was performed on a geological basis. Mineralised (>=3% v/v visual) laboratory splits of 1-metre intervals from surface to the top of the saprolite zone were not composited whereas mineralised splits of the underlying saprolite and saprock intervals were composited nominally at 2-metres. Unmineralised (=<3% v/v visual), laboratory splits of 4-metre intervals from top of hole to bottom of hole were composited.

A total of 384 AC holes (11,595.8 m) support the MRE.

DD drilling (angled and vertical) was designed to obtain representative large diameter (PQ3) core for geological, geotechnical and metallurgical testwork purposes. Subsequent to completion of all geological and geotechnical logging and sampling (whole core samples removed laboratory bulk density and strength testing) drill core was either manually hand split or sawn using a circular saw and sampled as ¼ PQ3 core. Upon completion of laboratory bulk density and strength testing of the whole core intervals the entire core was submitted to the laboratory. A total of 13 DD holes (487.75 m) support the MRE. Laboratory splits were submitted Intertek Perth for assay sample preparation. Total Graphitic Carbon (TGC) analysis of all assay pulps samples was undertaken by Intertek Perth**.**

4.3 Resource Estimation

The MRE is based upon data obtained from 13 DD drill holes (487.75 m), 384 AC holes (11,595.8 m) and 1,053 HA holes (10,686 m) drilled across the Malingunde and Msinja deposits. Five (5) pairs of AC/DD and eight (8) pairs of AC/HA twinned holes are included in the drilling totals. Drilling occurred during 2016 and 2017.

HA and AC holes are located on east-west transects across the entire strike of the modelled deposit spaced nominally at 100 m x 20 m with infill of 50 m (N) x 20 m (E) over a section of the northern area of the Malingunde deposit. DD holes were drilled on existing drill sections and spaced between 200 m and 400 m north-south along the strike extent of the deposit. All HA holes were drilled vertically whilst the majority of the AC and DD holes were angled, designed to intersect broadly orthogonal to the shallow-moderate east dipping mineralisation.

The drill hole collars were surveyed using a differential global positioning system (DGPS) to centimetre accuracy. All DD holes were down-hole surveyed using a Reflex Ez-Trak multi-shot survey tool at 30m intervals down hole. Owing to their shallow depths (maximum 12 m), HA holes were not downhole surveyed. AC holes were not routinely down-hole surveyed, however 23 holes (5%) were surveyed to verify the amount of downhole deviation.

HA and AC drill samples were geologically logged, recording relevant data to a set template at 1 m intervals. DD core was geologically logged based on geological intervals. DD core was also geotechnically logged and digitally photographed.

DD core (PQ3) was quarter cut and sampled according to geological intervals. HA samples were composited on geological intervals of between 2-3 m during the 2016 field season, and 1 m intervals in 2017 and submitted for Total Graphitic Carbon (TGC) analysis. AC samples were sampled at 1 m and 2 m intervals. Field quality assurance procedures were employed, including the use of analytical standards, coarse blanks and duplicates.

TGC wireframe interpretations were based upon a lower cut-off of 4% TGC, which is equivalent to the graphitic gneiss domain boundary, from geological logging of HA/AC/DD drill holes.

The MRE block model consists of 6 zones of TGC mineralisation in the Malingunde deposit, and 5 in the Msinja deposit. Mineralisation domains were encapsulated by means of 3D wireframed envelopes based upon a lower cut-off grade of 4% TGC. Weathering domains were interpreted based upon geological logs of drill samples. Domains were extrapolated along strike or down plunge to half a section spacing. Internal waste units were modelled within the graphitic gneiss mineralisation envelopes to define barren domains.

All drill hole assay samples were composited to 2m intervals. All assayed HA/AC/DD drill hole intervals were utilised in the grade interpolation.

The MRE for the Malingunde Graphite Project, reported in accordance with the 2012 Edition of the JORC Code, is presented in Table 4.1 below:

Table 4.1 Mineral Resource Estimate

Resource Category	Tonnes (Mt)	Grade (% TGC)	Contained Graphite (Mt)	Operator
Measured	*4.8*	*8.5*	*0.41*	*SSL*
Indicated	*32.3*	*7.2*	*2.32*	*SSL*
Inferred	*27.9*	*7.0*	*1.95*	*SSL*
Total	***65.0***	***7.2***	***4.68***	***SSL***

Sovereign has a 100% interest in the Resources above.. The MRE includes both the Malingunde and Msinja deposits.
Source: David Williams (Competent Person for the Resources)
SSL: Sovereign Services Limited

MALINGUNDE MINERAL RESOURCE ESTIMATE *4.0% cut-off grade*								
	Measured		Indicated		Inferred		Total	
	Tonnes (Mt)	Grade (% C)	Tonnes (Mt)	Grade (% C)	Tonnes (Mt)	Grade (% C)	Tonnes (Mt)	Grade (% C)
Saprolite	4.8	8.5%	18.7	7.1%	5.4	6.3%	28.8	7.2%
Saprock	-	-	13.6	7.4%	3.3	6.3%	16.9	7.2%
Total	**4.8**	**8.5%**	**32.3**	**7.2%**	**8.6**	**6.3%**	**45.7**	**7.2%**
Fresh rock	-	-	-	-	19.3	7.3%	19.3	7.3%
Total resource	**4.8**	**8.5%**	**32.3**	**7.2%**	**27.9**	**7.0%**	**65.0**	**7.2%**

MALINGUNDE MINERAL RESOURCE ESTIMATE *7.5% cut-off grade*								
	Measured		Indicated		Inferred		Total	
	Tonnes (Mt)	Grade (% C)	Tonnes (Mt)	Grade (% C)	Tonnes (Mt)	Grade (% C)	Tonnes (Mt)	Grade (% C)
Saprolite	2.7	10.0%	5.4	9.6%	1.1	9.0%	9.2	9.7%
Saprock	-	-	4.7	10.0%	0.6	9.1%	5.3	9.9%
Total	**2.7**	**10.0%**	**10.1**	**9.8%**	**1.7**	**9.0%**	**14.5**	**9.7%**
Fresh rock	-	-	-	-	6.5	9.9%	6.5	9.9%
Total resource	**2.7**	**10.0%**	**10.1**	**9.8%**	**8.3**	**9.7%**	**21.0**	**9.8%**

Note: Sovereign has a 100% attributable interest in the Resources above. The MRE includes both the Malingunde and Msinja deposits.

5 ORE RESERVES

Pit optimisation, mine design and mine scheduling were completed by Orelogy and is based on an average of 52,000 tonnes of concentrate produced per annum over 16 years LOM. This equates to an average throughput of 600,000 tonnes per year, with declared Ore Reserves, reported in accordance with the 2012 Edition of the JORC Code, shown below in (Table 5.1).

Table 5.1 Ore Reserve Estimate

Reserve Category	Tonnes (Mt)	Grade (% TGC)	Contained Graphite (Mt)	Operator
Proved	*3.1*	*9.5*	*0.30*	*SSL*
Probable	*6.4*	*9.5*	*0.60*	*SSL*
	9.5	**9.5**	**0.90**	***SSL***

Sovereign has a 100% interest in the Reserves
Source: Ryan Locke (Competent Person for Reserves)
SSL: Sovereign Services Limited

Note: Malingunde Ore Reserve is reported at a 6.75% total graphitic carbon ('TGC') lower cut-off grade for saprolite and between 9.5% and 11.0% for saprock

MALINGUNDE ORE RESERVE						
	Proved		Probable		Total	
	Tonnes (Mt)	Grade (% C)	Tonnes (Mt)	Grade (% C)	Tonnes (Mt)	Grade (% C)
Saprolite	3.1	9.5%	5.3	8.9%	8.4	9.1%
Saprock	-	-	1.2	12.3%	1.2	12.3%
Total	**3.1**	**9.5%**	**6.4**	**9.5%**	**9.5**	**9.5%**

Note: Sovereign has a 100% attributable interest in the Reserves. The ore reserve includes material from the Malingunde deposit only.

Reserves were defined by using a lower cut-off grade of 6.75% TGC for saprolite and between 9.5% and 11.0 % TGC for saprock.

To determine the reserves, a standard open pit optimisation techniques have been used to determine the location of the optimal three-dimensional geometry of the potential open pit. This is based on a range of modifying factors (e.g. costs, process recoveries, prices, overall wall slopes etc.). A range of optimisation runs were completed which showed the resource was effectively insensitive to mining costs, processing costs, selling costs and overall slopes. The work indicated the overall project value is most sensitive to changes in price and process recovery.

A more complete description of the proposed mining operations is set out in Section 6.

Orelogy were requested to review the 2018 PFS mining assumptions to validate or modify the ore reserves statement as required. The process of validation included a sensitivity analysis using the following primary factors which have been demonstrated to influence the Malingunde Ore reserve:

- Market Price.
- Mining Costs.
- Process recovery and costs.

In summary, the sensitivity analysis demonstrated that the typical variances of the influencing factors did impact the projected cash flow of the project, however they had no material change on the reported mining ore inventory. As such the ore reserves reported in the 2018 PFS remain valid.

The 2018 PFS ore reserve was based on the June 2018 MRE and the cost information generated from the second stage of the PFS work. This is based on an average of 52,000 tonnes of concentrate produced per annum over 16 years LOM. This equates to an average throughput of 600,000 tonnes per year, with declared Ore Reserves shown above in Table 5.1.

6 MINING

The Company engaged independent consultants Orelogy Mining Consultants Pty Ltd to carry out the pit optimisations, mine design, scheduling, mining cost estimation and Ore Reserve generation for the Malingunde PFS. The proposed mining method is a conventional truck and shovel mining operation. Free dig mining is considered appropriate for this style of shallow, saprolite-hosted graphite mineralisation. This methodology is used throughout the region for open pit mining operations and is a robust, easily implementable approach.

The proposed mining method requires conventional mining infrastructure including but not limited to mining equipment workshop, fuel & oil storage facilities, wash bay, offices, lunch and ablution facilities and a first aid room. These are to be supplied by the mining contractor. Sovereign Metals has defined a mining infrastructure area and will supply water and power to this location. As there is no anticipated requirement for blasting, no infrastructure is required for explosives storage. An initial contract mining strategy was selected for the first 7 years, transitioning to owner-operator model after this.

A schedule was developed that progressively mines material from the northern-west zones 1 and 2, then the central zones 3 and 4 and finally the south-east zone 5 (Figure 6.1). A three month pre-strip of 190kt of waste is required in order to provide sufficient material to construct the initial tailings storage facility (**TSF**). The life of mine strip ratio is 1:1 waste:ore including the capitalised pre-strip.

The mine schedule is based on achievable production rates for the specified size of mining fleet with only a single shift per day required. No assumptions have been made to date regarding minimum mining widths or dilution.

Mine designs have been undertaken using the geotechnical recommendation provided by Peter O'Bryan and Associates (POBA), the independent geotechnical consultant appointed by Sovereign Metals Ltd to undertake the geotechnical assessment. POBA provided specific berm, batter and inter-ramp angle design criteria for the deposit. The risk around any geotechnical uncertainty is mitigated by:

- The pits are relatively shallow, being a maximum of ~30m below surface.
- Sensitivity to slope angles was assessed during the optimisation phase and showed the deposit discounted value was insensitive (less than -4%) to changes in slope parameters.
- The nature of the deposit and the small scale and low strip ratio of the mining stages will enable access to other areas of the deposit in the event a mining area is inaccessible.

There is significant opportunity to increase the mine life beyond 16 years by processing lower grade material from the large resource base, or by discovering additional high-grade resources within reasonable trucking distance to the proposed processing plant.

The total Production Target of 9.5Mt run-of-mine (to produce approximately 830kt of concentrate) is underpinned by Proved Ore Reserves of 3.1Mt (32%) and Probable Ore Reserves of 6.4Mt (68%).

The Ore Reserve was derived by conversion of a portion of the Measured and Indicated Resource categories to Proved and Probable Ore Reserve categories respectively. No Inferred Resource material has been used in the PFS as discussed in Section 4.

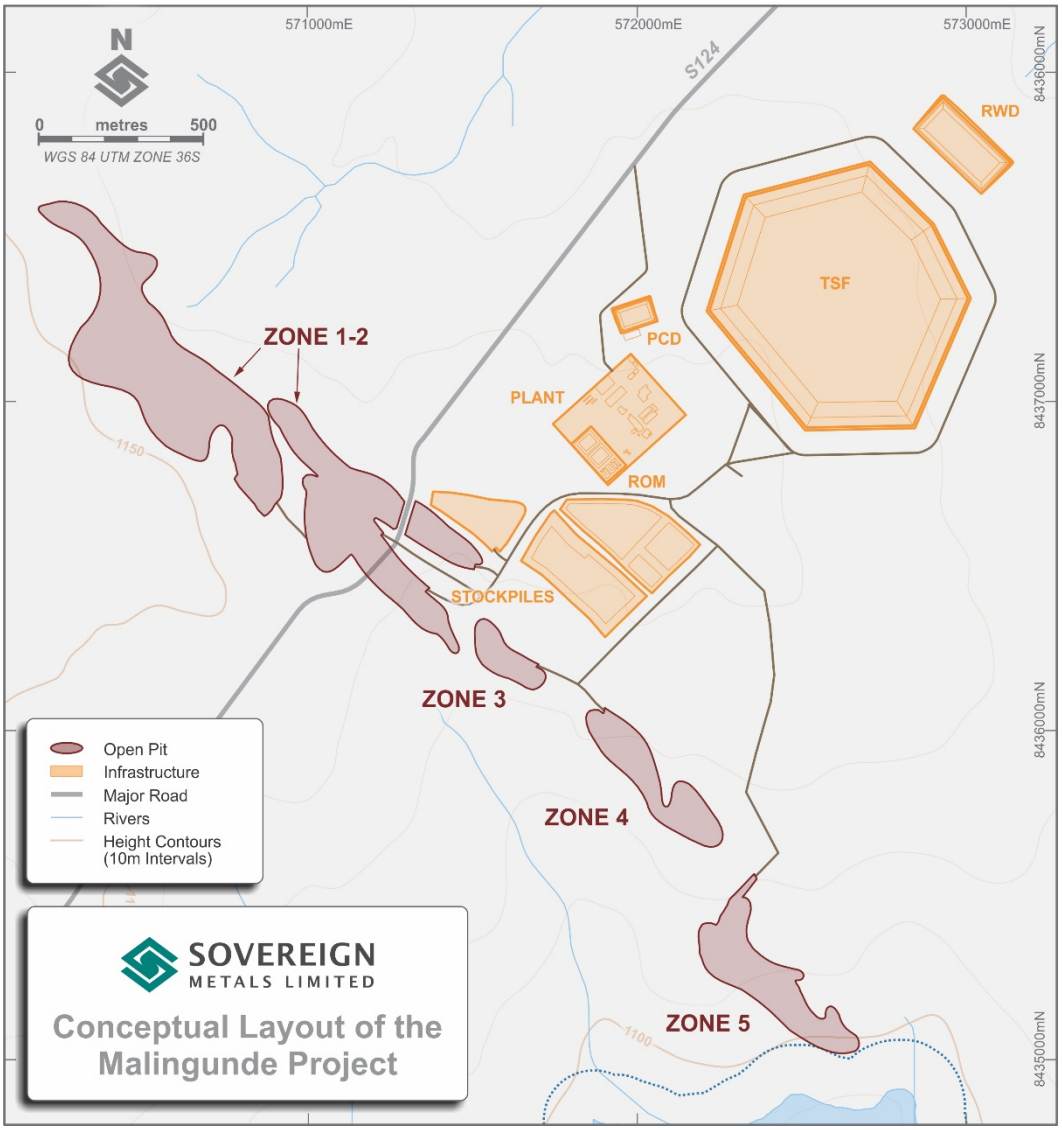


Figure 6.1 Mine Design and Infrastructure

The production schedules for the Ore Reserve determination showing the material type by period and grade profile are shown in Figure 6.2.

There is significant opportunity to increase the mine life beyond 16 years by processing lower grade material from the large resource base, or by discovering additional high-grade resources within reasonable trucking distance to the proposed processing plant. This mine life extension was not assessed in this CPR.

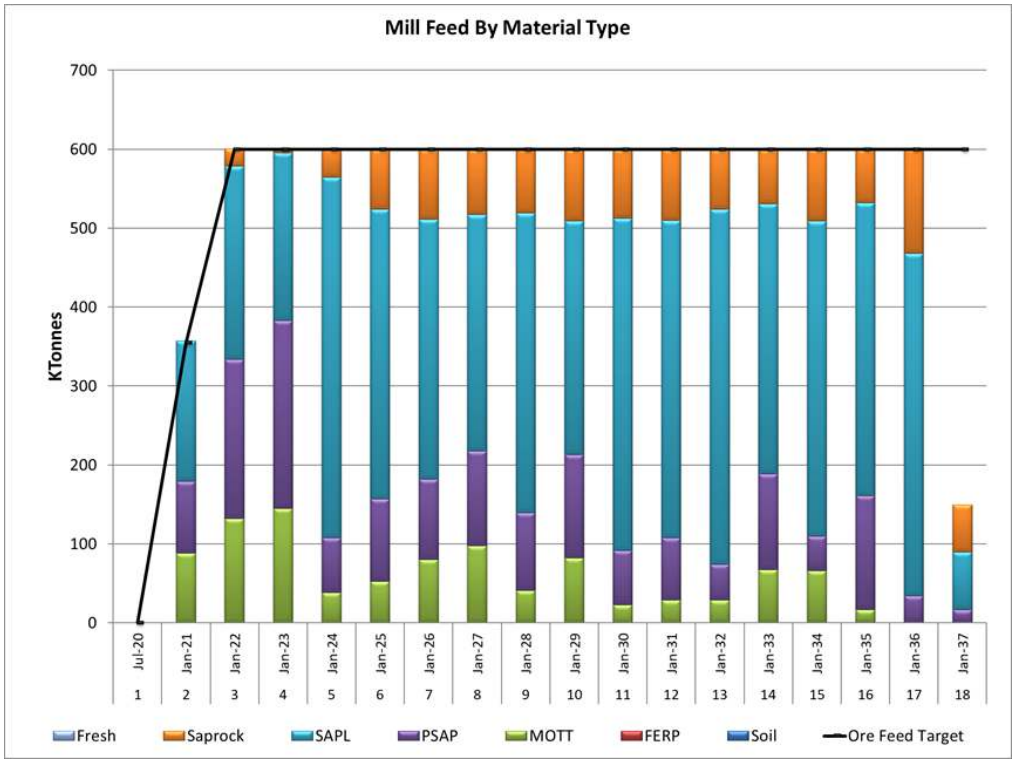


Figure 6.2 Process Plant Feed Material Types and Grade

7 METALLURGY AND PROCESSING

Significant metallurgical test-work programs have been conducted on the Malingunde saprolite hosted graphite deposit since 2016.

An optimised flowsheet was developed by SGS at Lakefield in Canada, and numerous variability tests were carried out on samples from varied lateral and vertical locations within the deposit. Overall, the test-work showed relatively consistent results across the deposit with 48%-78% of the concentrate in the coarser size fractions >149µm (>100 mesh). Combined concentrate grades consistently range between 95% and 98% TGC. Open circuit and locked cycle flotation tests (LCT) produced recoveries between 76% and 94%.

A substantial upscaled metallurgical program was undertaken as part of the PFS. This consisted of comminution and scrubber test-work undertaken at ALS in Perth and flotation and solid / liquid separation and tailings geochemical / geotechnical test-work undertaken at SGS in Canada. The test-work identified the ability to process the more competent saprock, located vertically beneath the very soft saprolite, as up to 15% of the overall feed blend. This enables access to substantial additional high-grade mineralised material previously not considered in the 2017 Scoping Study production target.

Overall, all metallurgical test-work undertaken to date shows a robust flowsheet capable of repeatable metallurgy for a wide range of feed samples has been developed for Malingunde.

The Company has used results from two recent locked cycle tests (LCTs) conducted as part of the PFS metallurgical program to estimate product grade, flake size distribution and recoveries.

The Company has applied an assumption of 97% C and an overall recovery of 90% for modelling production over the life of mine (LoM). These metallurgical results were the weighted average of two LCTs on a master composite ore sample that aimed to represent the LoM feed.

Table 7.1 Malingunde Flake Distribution – weighted average LCT results.

MALINGUNDE FLOTATION RESULTS – PFS INPUTS				
PARTICLE SIZE		C (%)	Distribution (wt. %)	Flake Category
Tyler Mesh	(µm)			
+32	+500	98%	5%	Super Jumbo
-32 +48	-500 +297	97%	19%	Jumbo
-48 +80	-297 +177	97%	26%	Large
-80 +100	-177 +149	97%	9%	Medium
-100 +200	-149 +74	97%	25%	Small
-200	-74	94%	16%	Amorphous
TOTAL		97%	100%	

The design of the processing plant is based on the SGS testwork and best practise in similar operations. Importantly, the process requires no primary crushing or grinding of the ore, a material advantage over hard-rock graphite deposits. The basic flowsheet is summarised below and also shown in Figure 7.1:

- The plant feed will be delivered from the run-of-mine (ROM) stockpile by front-end-loader (FEL) to the grizzly and ROM bin.
- Material is passed through a mineral sizer for primary size reduction.
- Plant feed at 100% -20 mm is processed through a scrubber charged with steel media.
- The scrubber discharge slurry is passed through a 10 mm screen with a small quantity (0-15%) oversize being directed to a small pebble crusher.

- The scrubber undersize is pumped to the rougher flotation section for processing. Rougher tailings are pumped to the tailing's thickener.
- Rougher concentrate undergoes a polishing regrind.
- The ground concentrate undergoes cleaner flotation stages with the cleaner concentrate split into coarse and fine fractions at 180 µm.
- Attritioning on the coarse and fine fractions followed by three stages of recleaner flotation.
- The final concentrate fractions +180 µm and -180 µm streams are combined and thickened.
- The concentrate is dewatered using a plate and frame filter with air blow and membrane squeeze steps.
- The filtered concentrate is dried using a flash dryer.
- Dried product is screened and bagged for despatch and sale.

The simple process design uses proven technology and is operational across a number of graphite mines today. The high-grade feed stock of 9.5% TGC over the life of the project assists in achieving the very low processing costs.

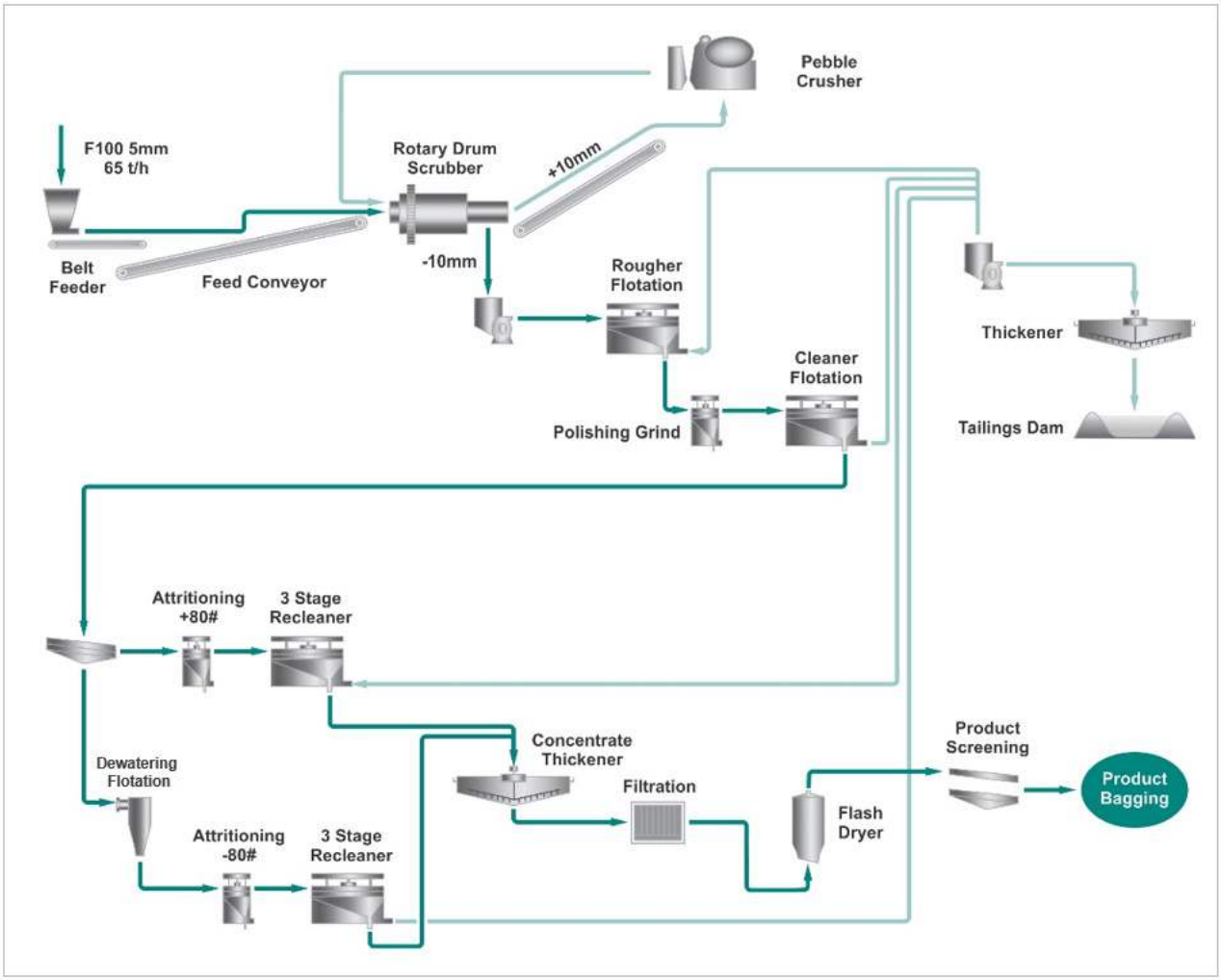


Figure 7.1 Process Flowsheet Schematic

8 INFRASTRUCTURE AND SERVICES

Malingunde is located approximately 20 km south west of Lilongwe, Malawi's capital, and is serviced by a bitumen road from the main M1 highway to within 10 km of site where it becomes an all-weather gravel road. Final product is therefore only required to be hauled a short distance by road to the existing and underutilised operational intermodal rail siding at Kanengo before being railed to the port of Nacala.

The Malawi Electrical Supply Corporation ("ESCOM") plans to construct a 132/11kV substation near Bunda, just 10 km to the east of Malingunde which will be linked to the national grid (Figure 8.1). The 2018 PFS assumed that a new Bunda substation would be operational by 2027 (4 Years after commissioning). and grid power as the primary source from this time. Although the Bunda substation may come online earlier, this cost update retains a conservative position that grid power will be available from Year 4 onwards and that diesel generators will supply all power for the first three years of operation. The Project economic model therefore assumes on site diesel power generation to the end of Year 3, with grid power availability from this point.

Water is relatively plentiful in the immediate area and the project will be able to source sufficient water from within the project area, predominantly as part of the pit dewatering requirements.

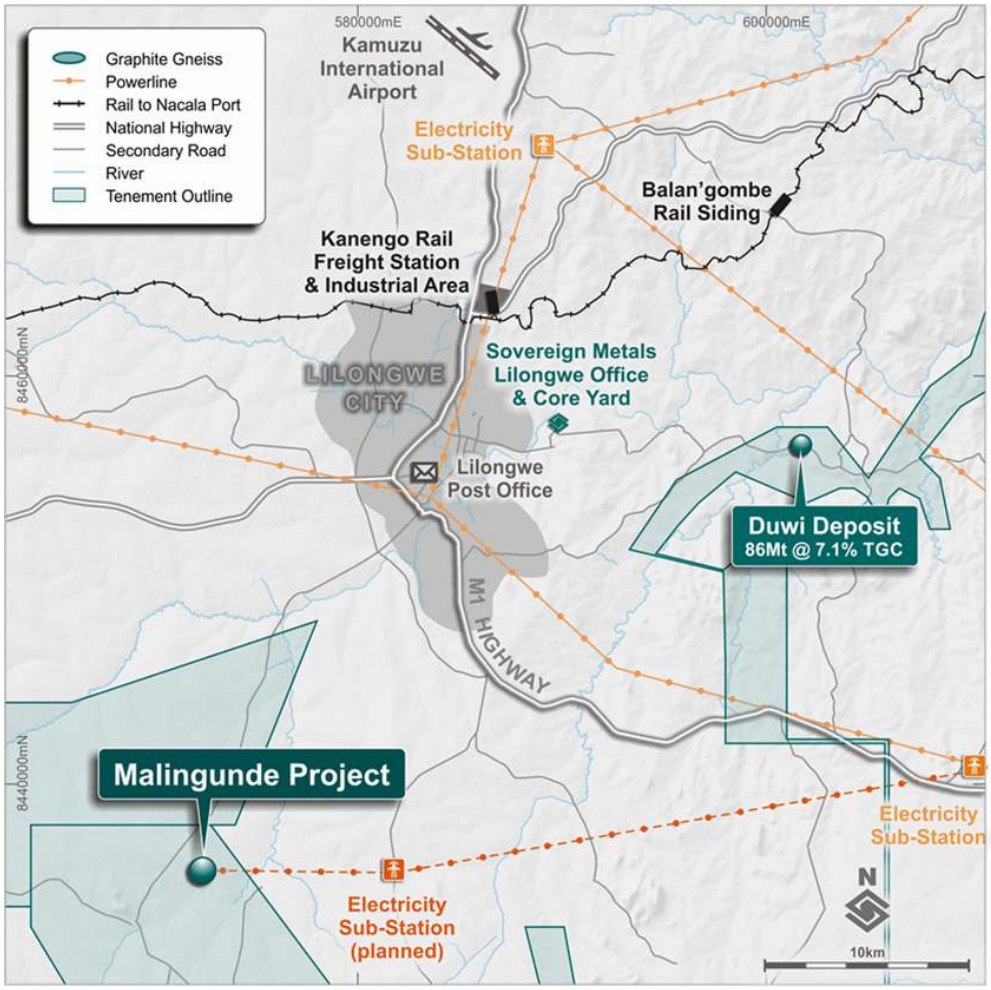


Figure 8.1 Map of Regional Infrastructure

9 HYDROLOGY, HYDROGEOLOGY AND TAILINGS STORAGE

The Tailings Storage Facility (**TSF**) for the Project was designed to safely contain the life of mine estimated tailings of 5.8 Mt. As per the outcome of sub-studies undertaken during the 2018 PFS the selected TSF option is unchanged as follows:

- A conventional slurry TSF was the most effective deposition method.
- TSF located to the northeast of the plant location was selected as the preferred site.
- Compacted earth walls and cyclone walls were options for the Project.
- In pit disposal should be evaluated during the next stage of study to suit the pit development mining schedule.

For the updated PFS costing, SLR Consulting (Africa) Pty Ltd (SLR) was requested to update design assumptions to align with the new Global Industry Standards on Tailings Management (GISTM). SLR provided a report documenting the design and cost implications of GISTM and updated the PFS level cost estimate to reflect the modified design and escalation to 2021. SLR completed a high-level Dam Break Assessment (DBA) and concluded that the TSF will likely be classified as a TSF with a “very high” consequence thereby requiring a more conservative engineering design than was originally included in the 2018 PFS.

Compared to the PFS design SLR recommends to only utilise downstream construction to increase the stability of the TSF. Also, the TSF starter wall (constructed from pit waste) will need to increase in height to ensure sufficient underflow during the life of the TSF and additional freeboard required by the GISTM. The increased initial starter wall height (from 4m to 8m) has resulted in the following variations compared to the 2018 PFS TSF starter wall assumptions:

- Larger starter wall footprint area.
- Larger requirement for pit waste for construction of the TSF starter wall.
- A requirement for borrow from the TSF basin to make up for the shortfall in pit waste material available at start up.
- Larger clearing and grubbing areas.
- Larger top soil removal area.
- Larger box cut volume.
- Larger base compaction area.

Hydrology, hydrogeology and geochemical assessments are unchanged since the 2018 PFS. SLR undertook these assessments at a PFS level. The baseline hydrology assessment indicates that the majority of samples collected within the Project area are within the three standards identified for the project (MS drinking water specifications, WHO Guidelines and IFC Mining Effluent Guidelines water quality specifications).

The baseline work for the hydrogeological studies indicate an approximately uniform hydrogeological environment, with boreholes producing between 1-2 m^3/h. However, two of the boreholes, have sustainable yields in excess of 5 m^3/h. The numerical modelling work has shown that for the pits, the cone of drawdown is at a maximum extent at the end of mining period (16 years) and recovers rapidly thereafter. After year 16, the residual drawdown is below 1m, with an aerial extent which decreases with time, indicating full recovery.

The maximum plume extent from the downstream toe of the TSF is predicted to reach 1,053 m, at the end of year 100 with the geochemical testwork indicating that the TSF pool and seepage water is of

relatively good quality. This needs to be included in the hydrogeological model during the next phase of design, but indications are that effects on groundwater will be negligible (or within acceptable limits).

In terms of water balance, it is expected the project will require an additional ~20,000m^3 per month during each nine month dry season for the first two years of operation.

The geochemical testwork on tailings indicates highly weathered lithologies with low acid potential and low neutralising potential. The low acid potential (<0.3% S) shows that the materials are unlikely to be capable of sustained acid generation and this is confirmed by the NAG tests, which indicate a near-neutral pH even after intense oxidation of the samples. Organic analytes were generally below detection limit. Only the total carbon fraction C10-C16 was indicated above detection limit (17 mg/kg), which is indicative of the diesel added to the process. The soil screening value for industrial sites given by the Oklahoma Department of Environmental (2012) is 2500 mg/kg. The concentration in the waste value is therefore not expected to be a concern.

10 OPERATIONS

The assumptions made with regard to the operating strategy for the Project at start-up are:

- Contractor mining covering load and haul, ore rehandling, haul road development and maintenance, stockpile management and associated fleet maintenance.
- Contractor covering the transport and logistics management for the concentrate product from mine gate to Nacala Port.
- Owner mineral resource management with grade control and contractor drilling for any exploration.
- Owner operated processing facility including process maintenance.
- Owner site management including financial management, procurement and materials management, human resources, stakeholder engagement / community affairs, health and safety and environment
- Outsourced services which will be managed by designated owner contract managers include:
  - Security including access control and perimeter patrols.
  - Operational catering and cleaning services.
  - Employee transport.
  - Resource, grade control, process and environmental sample analysis (Laboratory).
  - Fuel Supply and management.
  - Power supply from on-site generation.

11 HEALTH AND SAFETY

The principal legislation that regulates occupational health and safety in Malawi is the Occupational Safety, Health and Welfare Act, 1997. The Act regulates conditions of employment in workplaces with regard to safety, health and welfare of employees. The Act imposes duties on employers, persons in control of premises, manufacturers and suppliers.

It is the duty of every employer to ensure the safety, health and welfare at work of all employees.

The Act also places on employers a duty to provide information, instruction, training and supervision to ensure the safety and health at work of their employees. Every worker in a workplace is required to be adequately and suitably instructed and trained in the measures available for prevention and control and protection against health hazards at the workplace.

In addition to the Occupational Safety, Health and Welfare Act, SVM will also adhere to the relevant provisions of:

- Employment Act, 2002 as amended in 2010
- Gender Equality Act, 2013
- Disability Act, 2012

The above legislation largely deals with the health and safety of employees. However, SVM will also consider health and safety impacts on surrounding communities and put in place appropriate safeguards.

12 ENVIRONMENTAL & SOCIAL

The Project location in relation to the environmental and social setting is important and will inform project alternatives. These are important in evaluating project trade-offs and developing the appropriate management and mitigation measures to be implemented for the project. Consequently, they will also influence the feasibility of the Project in terms of cost related to environmental and social drivers.

The ESIA process in Malawi is undertaken in three distinct phases, namely the Project Brief, Environmental Scoping and ESIA Phases.

A Project Brief was submitted to the Environmental Affairs Department (**EAD**) on 12 June 2017 to initiate the ESIA process for the Project. The EAD indicated that, based on the nature and scale of the activities, an ESIA is required to be undertaken and an ESIA Report is to be submitted. The ESIA must be compliant with the Malawi Guidelines of Environmental Impact Assessment (1997).

Collection of environmental data and a number of baseline studies have been undertaken since April 2017 and were largely completed by July 2018. This included surface and groundwater sampling, aquatic biomonitoring, fish and mollusc sampling, air quality monitoring, terrestrial ecological surveys, wetland surveys, noise and vibration baseline surveys, soil sampling, socio-economic data collection and household surveys.

Information from initial surveys, baseline data collection and consultation as part of the environmental scoping phase were collated and documented in the form of an environmental scoping report (**ESR**). The draft ESR was made available from 5 March to 13 April 2018 for review and comments by stakeholders. Comments and queries were incorporated in the comments and response report, and the draft ESR was amended as needed. The revised ESR was submitted to the EAD for review and was approved in 20 June 2018.

The ESIA process will ultimately culminate in the compilation of an ESIA report that will be prepared in accordance with the requirements of the EIA Guidelines (1997). The detailed ESIA phase and all specialist studies are near completion.

Acquisition of land for the Project will physically and economically displace a number of households and land users. The Company will adequately and satisfactorily mitigate and offset these impacts, should the proposed project be implemented, by providing the affected parties with the necessary resettlement measures.

A resettlement action plan (**RAP**) for the Project is being prepared which will conform to both Malawian legislation and international best practice standards, specifically the IFC Performance Standards (2012) that deals with land acquisition and resettlement. At the current time the Company is unable to reliably estimate resettlement costs and has not included a provision in the estimated development costs.

An environmental and social management plan (**ESMP**) is being developed as part of the ESIA process. The ESMP will contain specific measures to minimise and manage potential environmental and social impacts of project activities, as well as monitoring programs to evaluate compliance with environmental targets and standards.

The ESMP will address project aspects such as land clearing, management of topsoil, protection of cultural heritage, management of waste materials, prevention of surface and groundwater contamination, management of storm water, management measures for dust and noise, rehabilitation and revegetation, and management of community impacts.

13 PRODUCT LOGISTICS

Malingunde is located approximately 20km south west of Lilongwe, Malawi's capital, and boasts excellent access to services and infrastructure. The site is serviced by a bitumen road from the main M1 highway to within 10km where it becomes an all-weather gravel road.

The logistics strategy is unchanged and the basis and cost build-up for product export logistics comprises the following:

- Road transport of bagged product on flat-bed trucks from the mine site to the Kanengo rail head in Lilongwe
- Packing bags into shipping containers at Kanengo and periodic loading onto lightweight rail wagons
- Rail transport to Nacala port in Mozambique
- Storage and loading onto seaborne container carriers

The proposed route is shown in Figure 13.1. Rail freight cost estimates were provided by Central East African Railways (**CEAR**), the existing rail concessionaire and rail operator. The rail concession is operated as a joint venture between Mitsui & Co., Ltd, Vale SA and the Malawi and Mozambique Governments. CEAR have advised that there is available capacity to accommodate Malingunde concentrates. Export out of the port of Beira may become an increasingly viable logistics option given recent announcements of upgrades of the Sena rail line which connects Beira and the Tete province (Moatize Coal Mine).

The Company engaged Morgan Sterling Consultants who completed the original logistics study for the 2018 PFS to provided an update to the costs and validation of the original strategy for this update. The outcomes of the review was no change to the reported strategy in the 2018 PFS.

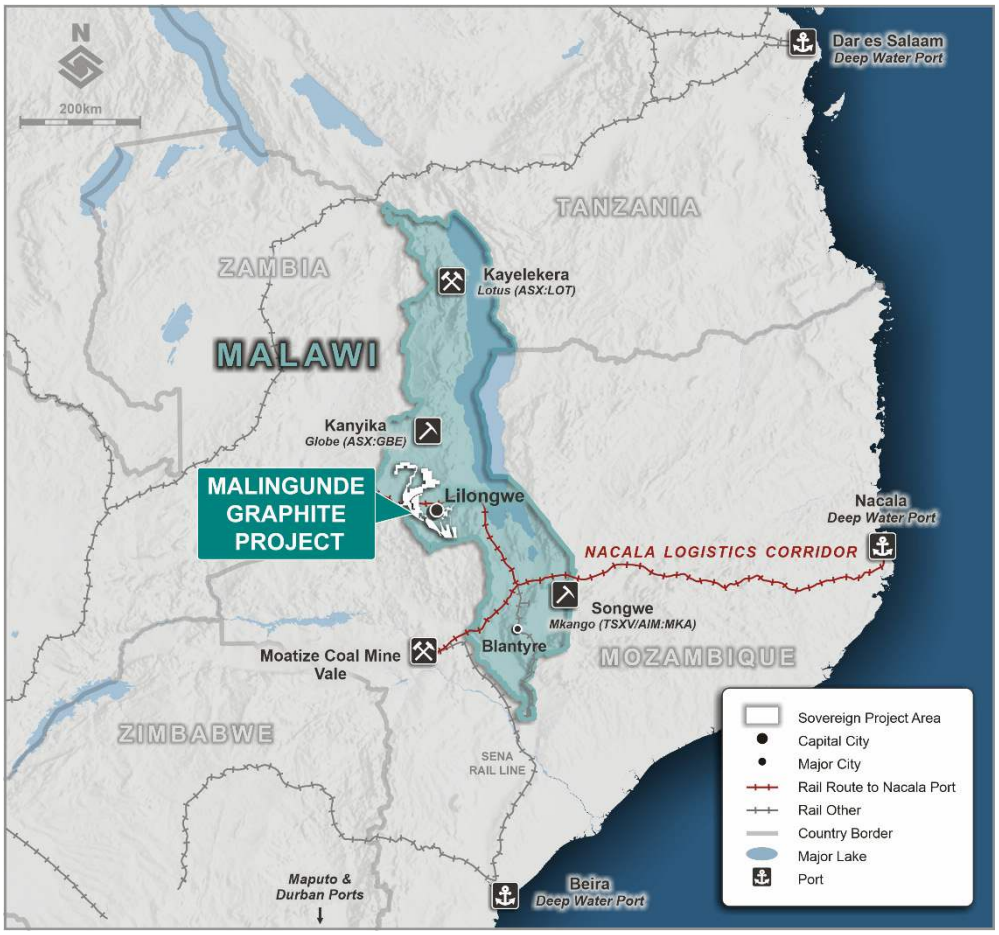


Figure 13.1 Nacala Rail Corridor

14 COST ESTIMATES

14.1 Capital Cost Estimates

As with the 2018 PFS, the base case that has been costed was described as the 600,000 t/y operation with TSF wall lifts using cyclone tailings.

For all areas of the project except for the TSF, engineered quantities, equipment and facility specifications and execution strategies are the same as per the 2018 PFS as no additional engineering has been completed. However, the labour and commodity rates (inclusive of installation) and equipment costs have been assessed and escalated to reflect a second quarter 2021 United States dollar (USD) estimate. As discussed in Section 9, the compliance with the new GISTM has resulted in a more conservative TSF design and resulted in increased cost in this area of the project.

The estimate has been divided into direct and indirect cost.

Processing and infrastructure capital costs are based on the cost of mechanical equipment provided primarily by Tier 1 and Tier 2 Chinese equipment vendors who have recently validated the costs originally provided in the 2018 PFS estimate.

Costs related to processing, processing infrastructure and associated costs were developed by DRA. Mining and TSF / Water Management costs were developed by Orelogy and SLR Consulting, respectively (SLR). Owners team costs were provided by SVM. The accuracy of the infrastructure capital costs is estimated to be +/-25%.

Table 14.1 Capital Cost Estimate Breakdown (Q2,2021)

Cost Category	Cost (US$M) 600,000 t/y
DIRECT COSTS	
Processing	25.0
Site Preparation	2.2
Processing Infrastructure	3.7
Mining	2.2
Tailings & Water	12.6
TOTAL DIRECT COSTS	**45.7**
INDIRECT COSTS	
Indirect Costs	8.9
Owner's Costs	9.1
TOTAL INDIRECT COSTS	**18.0**
TOTAL COST ESTIMATE	**63.6**

Note: Rounding errors may be present in the table above

Sustaining capital amounts have been estimated for the Project as US$28m. Majority of costs are associated with the TSF wall lifts, removal of overburden and capitalised waste mining as well as some plant equipment replacement (pumps only) and mobile equipment replacement.

14.2 Operating Cost Estimates

Graphite operations which process saprolite-hosted material have historically been the world's lowest cost producers of natural flake graphite concentrates. The Project estimates operating costs of approximately US$338 per tonne concentrate free on board (**FOB**), or US$275 at mine gate (**MG**), for its high-quality graphite concentrates at a production rate of 52,000 tonnes per annum over the life of mine. Additionally, estimated long term average costs move to just US$291 FOB or US$228 MG after year 7. The project is amongst the very lowest for unit operating costs amongst the current and future graphite development pipeline. The Project aims to produce at a reasonable scale that can easily be placed into existing traditional markets and the growing battery supply chain.

The extremely low operating cost is driven primarily by the saprolite advantage and low logistics costs compared to most East African peers. As the ore is hosted in soft saprolite, it offers a huge cost advantage for mining with its low strip ratios and free-dig nature. In terms of processing, no primary crush or grind is required, resulting in lower processing costs compared to hard-rock operations.

The proximity of the Project to Malawi's capital city Lilongwe offers significant infrastructure and other advantages. Access to an already established labour pool and other industrial services provides operating efficiencies. The largest advantages are the access to high voltage grid power after year 3, and the existing, operating rail/port logistics solution for product export.

Operating costs include all costs incurred by SVM in mining and processing ore to produce graphite concentrate and to transport the graphite concentrate to point of delivery being Free on Board (FOB) port of Nacala. The operating costs begin to be incurred from the date of introduction of first ore into the processing plant. The operating costs include general expenses and on-site administration costs.

The estimate has generally been developed from first principles. Exceptions are the plant maintenance materials cost which is a factored estimate based on the plant direct capital cost and parts of the General & Administration (G&A) cost which are allowances based on experience from other projects.

All currency amounts quoted are in United States Dollars (US$) unless nominated otherwise. The base date of the estimate is second quarter 2021. The accuracy of the operating cost estimate is estimated to be +25 -15%.

The operating strategy for the project considers three separate phases through the life-of-mine as the project matures (such as replacing contract mining with owner operation) and new infrastructure (most notably grid power) becomes available. The key assumptions for each phase are described below and the estimated annual cash operating costs for this base case is summarised in Table 14.2.

Phase 1. Years 1 - 3

Labour – Full complement of expatriate employees.

Mining – By mining contractor.

Power – Contractor power generation with heat recovery.

Phase 2. Years 4 - 7

Labour – Reduction in expatriate labour.

Mining – By mining contractor.

Power – Grid with owner operated diesel back up power.

Phase 3. Year 8 onwards

Labour – Reduced expatriate labour as for Years 4 – 7.

Mining – by owner.

Power – Grid with owner operated diesel back up power.

Table 14.2 Operating Cost Summary by Phase

	Description	Phase 1 Unit Cost US$/t product	Phase 2 Unit Cost US$/t product	Phase 3 Unit Cost US$/t product
MINING	Mining contractor	57.18	57.18	23.82
PROCESS	Labour (incl G&A)	74.47	52.30	52.30
	ROM ore rehandle	2.52	2.52	2.52
	Power	98.28	36.38	36.38
	Reagents and consumables	33.10	43.90	43.90
	Maintenance materials	14.24	14.24	14.24
GENERAL & ADMIN.	Overall (excl Labour)	54.72	54.72	54.72
Concentrate Transport		63.13	63.13	63.13
TOTAL		**397.64**	**324.37**	**291.01**

15 PROJECT IMPLEMENTATION

The 2018 PFS generated a preliminary implementation schedule for the subsequent project phases, being the Definitive Feasibility Study (DFS), engineering design, construction and commissioning of the facilities, infrastructure and services for the Malingunde Graphite Project.

As the start dates for the commencement of the DFS are not defined, the milestones are presented as months from initiation of the DFS in Table 15.1.

Sovereign has recently completed an update on the 2018 PFS to develop a representative study based on 2021 costing and revenue factors.

Table 15.1 Project Milestones

Item	Milestone	Month
1	DFS Phase Kick-Off	date not defined
2	Commence Early Engineering Phase	12
3	Final Investment Decision	15
4	EPC Contract Award	15
5	Commence Construction	20
6	Commence Production	35

From the commencement of the DFS, the project is estimated to take 35 months until first production.

16 MARKETING

The primary end-market for natural flake graphite is the refractory, foundries and crucible sectors which consumed approximately 77% (900,000 tonnes) of flake graphite production in 2020. The refractory industry is the volume driver for flake graphite, with foundries and crucibles offering smaller markets for higher purity graphite products. The major product flake graphite is consumed in is magnesia-carbon bricks, a mainstream, global refractory brick which is used in the steel industry.

The lithium-ion battery sector is the main emerging market for flake graphite. Greater capacity batteries, such as those required for electric vehicles, are expected to drive significant demand for graphite over the coming years. It is forecast the battery sector will become the largest segment by 2028.

China continues to be the world's leading producer of natural flake graphite, supplying approximately 62% of the market in 2020. Brazil, India, Canada, Mozambique, Madagascar and North Korea were major contributors of the remaining 38% of global production.

The supply-demand balance in the graphite market is forecast to remain in balance for an extended period. However, a significant supply deficit is anticipated by 2024 as demand is forecast to strengthen putting the market into deficit.

SVM is targeting a very simple mining and processing operation, selling reasonable volumes of very high-quality, dominantly coarse flake graphite products into existing markets.

SVM is focusing on initial entry into existing primary end-markets, including the refractory, foundry and expandable graphite sectors. The Project's very low production costs are expected to allow SVM to compete on price point with China, the world's largest supplier of natural flake graphite.

Test-work on Malingunde flake graphite for suitability in lithium-ion battery and other high-tech applications is also being conducted. This will allow SVM to expand its market reach to capitalise on future growth in the lithium-ion battery demand.

SVM has engaged with a diverse range of potential off-takers across a number of industrial sectors and global locations. To date, concentrate samples have been provided to a significant number of potential partners for assessment. Larger quantities of sample are now being requested by a number of these groups in order to validate and qualify SVM's flake graphite concentrates for their particular requirements.

Industry participants confirm that the highest value graphite concentrates remain the large, jumbo and super-jumbo flake fractions, primarily used in industrial applications such as refractories, foundries and expandable products. These sectors currently make up the significant majority of total global natural flake graphite market by value.

SVM engaged Fastmarkets, a specialist international publisher and information provider for the global steel, non-ferrous and industrial minerals markets, to assess the marketability of Malingunde graphite product.

Fastmarket's PFS level assessment has confirmed that, based upon their high-level view on global demand and supply forecasts for natural flake graphite, and with reference to the specific attributes of the Malingunde Project, there is a reasonable expectation that the product will be able to be sold into existing and future graphite markets. Given the extremely low-cost profile and high-quality product, it is expected that output from Malingunde will be able to fill new demand or displace existing lower quality / higher cost supply.

The Company has taken a deliberately conservative view for its base-case PFS scenario on graphite pricing. Using these assumptions, the PFS shows high operating margins and significant cash generation.

Table 16.1 Graphite Basket Price

	µm	%	Discounted Fastmarket Pricing (US$)	Contribution (US$)
Super jumbo +32 mesh	+500	5%	$2,955	$158
Jumbo +48 mesh	+300	19%	$2,391	$448
Large +80 mesh	+180	26%	$1,334	$353
Medium +100 mesh	+150	9%	$1,029	$88
Small +200 mesh	+75	25%	$818	$206
Amorphous -200 mesh	-75	16%	$277	$44
Basket Price				**$1,296**

The basket price used for the PFS was based on current pricing sourced from independent consultant, Fastmarkets. Prices are forecast to increase in the medium to long-term. The prices reported are in line with reported prices being received by other graphite producers with the prices discounted to incorporate market establishment and agent fees.

17 PROJECT ECONOMICS

The Company modelled numerous scenarios analysing the impact of several key inputs, including sales price, operating cost and capital cost, settling on a base case scenario using the following key parameters.

- Capital cost as set out in Section 14.1
- Operating cost as set out in Section 14.2
- Production assumptions as summarised in Sections 5, 6 and 7

- Life of Mine: 16 years
- Discount rate: 10%
- Tax rate: 30% (no RRT has been incorporated)
- Royalty rate: 5% royalty (Government) and 2% of gross profit (Original Project Vendor)
- Foreign exchanges:
  - USD:AUD = $0.78
  - MWK:USD = $790
  - ZAR:USD = $14.3
- Pricing: A flat basket price of US$1,296 per tonne as discussed in Section 16

The financial model has been prepared internally by the Company using inputs from the various expert consultants, and has been reviewed by an international accounting firm to validate the functionality and accuracy of the model.

The key metrics for the Project are shown below in Table 17.1.

Table 17.1 Key Project Metrics

ECONOMIC		
Development Capital	US$M	45.7
Indirect Costs	US$M	8.9
Owner's Costs (Inc. Contingency)	US$M	9.1
Total Development Costs	**US$M**	**63.6**
Sustaining Capital (over Life-of-mine)	US$M	28.2
Mine Gate Opex (exc. Royalties)	US$/t conc	275
Product Transport & Logistics	US$/t conc.	63
Average LOM Opex (FOB Nacala)	**US$/t conc.**	**338**

PHYSICAL		
Average Annual Plant Throughput	t/y	600,000
Average Annual Concentrate production	t/y	52,000
Average LOM Feed Grade	% TGC	9.5%
Average LOM Product Grade	% TGC	97.0%
Average LOM Plant Recovery	%	90%
Life-of-Mine (LOM)	Years	16
Average LOM Strip Ratio	Waste : Ore	1.0

FINANCIAL		
NPV (10%) Pre-tax	US$M	204
NPV (10%) Post-tax	US$M	144
IRR Pre-tax	%	48
IRR Post-tax	%	36
Product basket Price applied	US$/t conc.	1,296
Average Annual EBITDA LOM	US$M	43
Average Annual Revenue (post ramp-up)	US$M	64

17.1 Sensitivity Analysis

The Project economics presented were prepared at a ±25% level of accuracy to investigate the technical and economic parameters of a natural flake graphite operation at the Malingunde Project. The Company also modelled a number of different scenarios to evaluate the impact of key inputs to the Project's economics.

In the early stages of the Project, the major power source will be diesel generators prior to the availability of grid power. Changes in the diesel price have been modelled to analyse the impact it has on the operating costs of the project over its life. Based on the modelling a 10% increase in diesel price results in an increase in the operating costs of less than 2%.

The Company has applied a concentrate grade assumption of 97% TGC and an overall processing recovery of 90% for modelling production over the life of mine based on a conservative basket price. Large flake sizes and higher purity concentrates attract a premium price. If, at an operational level, a better flake distribution is able to be achieved margins maybe be improved.

Table 17.2 NPV Sensitivity based on discount rate

	Sensitivity ***Weighted Average Cost of Capital (WACC)***			
	6%	8%	**Base (10%)**	12%
NPV (US$m) – post tax	230	182	**144**	115

A sensitivity analysis has been performed on the financial model to understand the impact of variations to estimates on the Project's economics. The purpose of this assessment is to indicate a possible range of project outcomes. The Table below shows the impact on the Project's NPV (10%) (post tax) for the variations to the following parameters:

- Sales price
- Operating Cost
- Capital Cost

Table 17.3 Project variables sensitivity analysis (NPV)

	Sensitivity NPV (10%) (US$m) – post tax				
	-20%	**-10%**	**Base**	**+10%**	**+20%**
Price	87	166	**144**	173	201
Operating Cost	122	133	**144**	155	167
Capital Cost	131	138	**144**	151	157

Table 17.4 Project variables sensitivity analysis (IRR)

	Sensitivity Internal Rate of Return (IRR) – post tax				
	-20%	**-10%**	**Base**	**+10%**	**+20%**
Price	28%	33%	**38%**	42%	47%
Operating Cost	33%	35%	**38%**	40%	42%
Capital Cost	32%	35%	**38%**	41%	46%

18 CONCLUSIONS AND RECOMMENDATIONS

Malingunde Project's strong commercial potential, centred on very low operating and capital costs, with product revenues generated from a very high-quality product. The PFS validates Sovereign's strategy of exploring for soft, saprolite-hosted graphite mineralisation, with the aim of delivering:

- Very low operating costs.
- Low capital costs.
- Very simple mining & processing.
- Targeting entry to existing refractory, foundry and expandable graphite markets, with Li-ion battery markets as future upside.

The PFS shows that the Project is not reliant on an unrealistically large scale or overly optimistic basket pricing assumptions to be economically viable. The very low operating cost nature of the Project provides protection, and ensures profitability for the project, even in extreme downside global graphite pricing scenarios.

19 COMPETENT PERSONS STATEMENTS AND CONSENTS

19.1 Processing, Infrastructure and Capital Costs

The information in this CPR that relates to Processing, Infrastructure and Capital Costs are based on and fairly represent information compiled or reviewed by Mr Matthew Langridge, a Competent Person, who is a Fellow Member of The Australasian Institute of Mining and Metallurgy. Mr Langridge is employed by DRA Pty Ltd, an independent consulting company. Mr Langridge has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities undertaken. Mr Langridge, consents to the inclusion in the Announcement of the matters based on his information in the form and context in which it appears.

19.2 Operating Costs

The information in this CPR that relates to Operating Costs are based on and fairly represent information compiled or reviewed by Mr John Riordan, a Competent Person, who is a Fellow Member of The Australasian Institute of Mining and Metallurgy. Mr Riordan is employed by DRA Pty Ltd, an independent consulting company. Mr Riordan has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities undertaken. Mr Riordan, consents to the inclusion in the Announcement of the matters based on his information in the form and context in which it appears.

19.3 Geology and Resource

The information in this CPR that relates to the Malingunde Geology and Resource are based on and fairly represent information compiled or reviewed by Mr David Williams, who is a Member of The Australian Institute of Geoscientists. Mr Williams is employed by CSA Global Pty Ltd, an independent consulting company. Mr Williams has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Williams, consents to the inclusion in the CPR of the matters based on his information in the form and context in which it appears.

19.4 Ore Reserves and Mining

The information in this CPR that relates to Production Targets and Ore Reserves is based on and fairly represent information provided by Mr Ryan Locke, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Locke is employed by Orelogy Group Pty Ltd, an independent consulting company. Mr Locke 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 as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Locke consents to the inclusion in the CPR of the matters based on his information in the form and context in which it appears.

19.5 Metallurgy and Processing

The information in this CPR that relates to Metallurgy is based on, and fairly represents, information provided by Mr Oliver Peters, M.Sc., P.Eng., MBA, who is a Member of the Professional Engineers of Ontario (PEO), a ‘Recognised Professional Organisation’ (RPO) included in a list promulgated by the ASX from time to time. Mr Peters is the President of Metpro Management Inc and a consultant to SGS Canada Inc. (“SGS”). SGS is engaged as a consultant by Sovereign Metals Limited. Mr Peters has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources

and Ore Reserves'. Mr Oliver consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

19.6 Consents

DRA has given and has not withdrawn, its written consent to consent for the CPR to be used for the purposes of SVM's Admission to trading on AIM, including publication on SVM's company website and to the inclusion of statements made by DRA and to the references to its CPR and its name in other documents pertaining to SVM's Admission to trading on AIM, in the form and context in which the report and those statements appear. DRA has authorised the contents of its report and context in which they are respectively included and has authorised the contents of its report for the purposes of paragraph 1.3 of Annex I to the AIM Rules.

Table 19.1 Competent Person by section

Section	Name Of Competent Person	Company Name
CPR	John Riordan	DRA
Geology & Resource	David Williams	CSA Global
Ore Reserves	Ryan Locke	Orelogy
Mining	Ryan Locke	Orelogy
Metallurgy & Processing	Oliver Peters	Metpro Management
Cost Estimate - Capital	Matthew Langridge	DRA
Cost Estimate – Operating	John Riordan	DRA

20 DECLARATIONS

CPs are not, nor intend to be, directors, officers or employees of SVM and have no material interest, past or current, in any of the projects or SVM. The relationship with SVM is solely one of professional association between client and independent consultant. The review work and this report are prepared in return for professional fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this Report

This report was prepared by DRA and accompanying CPs (qualifications set out in section 19) in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 Edition). The report has also been prepared in accordance with ASIC Regulatory Guides 111 (Contents of Expert Reports) and 112 (Independence of Experts) and the AIM Note for Mining, Oil and Gas Companies, June 2009 (and updates pursuant to AIM Notice 56).

DRA is not aware of any material change in any of the data used in this evaluation that would cause us to materially alter the estimates set forth herein.

21 REFERENCES

Minnovo Pty Ltd. (2018). *Malingunde Graphite Project Prefeasibility Study Report. S091-REP-PR-001 A.* Perth: Minnovo Pty Ltd.

22 GLOSSARY

Abbreviation	Description
°C	Degrees Celsius
µm	Micrometre or Micron
AC	Air-core
ALS	ALS Metallurgical Laboratory
amsl	Above Mean Sea Level
ARD	Acid Rock Drainage
AS	Australian Standard
ASX	Australian Stock Exchange
AUD	Australian Dollar
ave	Average
BCM	Bulk Cubic Meter
BOO	Build Own Operate
Capex	Capital Expenditure
CFR	Cost and Freight
CEAR	Central East African Railways
cm	Centimetre
CPR	Competent Persons Report
CSR	Corporate Social Responsibility
d	Day
D	Discharge
d/y	Days Per Year
DD	Diamond-core Drilling
DEM	Digital Elevation Model
DFS	Definitive Feasibility Study
DL	Detection Limit
dmt	Dry Metric Tonne
DRA	DRA Pacific
EAD	Environmental Affairs Department (of Malawi)
EAP	Employee Assistance Program
EBITDA	Earnings Before Interest, Taxes, Depreciation And Amortisation
EHS	Environment, Health, And Safety
EIA	Environmental Impact Assessment
EL	Exploration Licence
EMP	Environmental Management Plan

Abbreviation	Description
EPC	Engineering, Procurement, Construction
EPCM	Engineering, Procurement & Construction Management
ERP	Emergency Response Plan
ESIA	Environmental And Social Impact Assessment
ESR	Environmental Scoping Report
FEED	Front End Engineering And Design
FEL	Front End Loader
FOB	Free on Board
FS	Feasibility Study
G&A	General & Administration
GHG	Greenhouse Gas(es)
GISTM	Global Industry Standards on Tailings Management
h	Hour
H'	Diversity Index
h/d	Hours Per Day
h/y	Hours Per Year
HA	Hand Auger
ha	Hectare
HR	Human Resources
HRMP	Human Resources Management Plan
HSE	Health, Safety and Environment
HSEMS	Health Safety and Environmental Management System
HSMP	Health and Safety Management Plan
IBC	Intermediate Bulk Container
ICP-MS	Inductively Coupled Plasma Mass Spectrometer
ICP-OES	Inductively Coupled Plasma Optical Emission Spectrometry
IFC	International Finance Corporation
IRR	Internal Rate of Return
IT	Information Technology
JORC	Australasian Joint Ore Reserves Committee
JPY	Japanese Yen
k	Kilo or Thousand
kg	Kilogram
km	Kilometre
KPI	Key Performance Indicator
kt	Kilo Tonne (Thousand Metric Tonne)
kW	Kilowatt (Power)
kWh	Kilowatt Hour
L	Litre
LCT	Locked Cycle Testwork

Abbreviation	Description
LME	London Metals Exchange
LoM	Life of Mine
LSE	London Stock Exchange
m	Metre
M	Million
m2	Square Metre
m3	Cubic Metre
Ma	Mega annum (million years)
MG	Mine Gate
mm	Millimetre
MNREM	Ministry of Natural Resources, Energy and Mining
MRA	Malawi Revenue Authority
MRE	Mineral Resource Estimate
mRL	Metre Reduced Level
Msal	Meters Above Sea Level
MSDS	Material Safety Data Sheet
Mt	Million Tonnes (Metric)
Mt/y	Million Tonnes Per Year
MW	Megawatt
N/A	Not Applicable
NA	Not Available
ND	Not Detected
NPI	Non Process Infrastructure
NPV	Net Present Value
OHS&E	Occupational Health, Safety & Environment
OK	Ordinary Kriging
PEA	Preliminary Economic Assessment
PFD	Process Flow Diagram
PFS	Pre-Feasibility Study
PPE	Personal Protective Equipment
QA/QC	Quality Assurance And Quality Control
RAP	Resettlement Action Plan
ROM	Run-Of-Mine
RRT	Resource Rent Tax
s	Second
SG	Specific Gravity
SGS	SGS Metallurgical Laboratory
SOP	Standard Operating Procedure
SVM	Sovereign Metals Limited
t	Tonne (Metric)

Abbreviation	Description
t/h	Tonnes Per Hour
t/m3	Tonnes Per Cubic Metre
t/y	Tonnes Per Year
TBC	To Be Confirmed
TC	Total Carbon
TC	Treatment Charge
TDS	Total Dissolved Solids
TGC	Total Graphitic Carbon
TSF	Tailings Storage Facility
UOM	Unit of Measure
US$	United States Dollar
USD	United States Dollar
V	Volt
VAT	Value Added Tax
VTEM	Versatile Time Domain Electromagnetic
w/v	Weight/Volume
w/w	Weight/Weight
WBG	World Bank Group
WHO	World Health Organization
XRD	X-Ray Diffraction
XRF	X-Ray Fluorescence