ASX RELEASE

12 June 2018

SOVEREIGN METALS LIMITED

ASX:SVM

RESOURCE UPGRADE: MALINGUNDE FLAKE GRAPHITE PROJECT

Sovereign Metals Limited ("the Company" or "Sovereign") is pleased to report the **updated Mineral Resource Estimate ("MRE")** for the soft saprolite-hosted Malingunde Project in Malawi.

The updated MRE provides the basis for a future **low capex and low opex** natural flake graphite operation **focused on the soft saprolite (clay)-hosted component**.

Saprolite + Saprock MRE *(Measured, Indicated & Inferred)**:***

45.7Mt @ 7.2% TGC (4.0% TGC cut-off, 81% Measured + Indicated)

*including **High Grade Component:***

14.5Mt @ 9.7% TGC (7.5% TGC cut-off, 88% Measured + Indicated)

Recent metallurgical test-work has confirmed that a blend of **saprock can be processed along with the very soft saprolite material**, enabling the Company to access additional soft mineralised material not previously considered in the 2017 Scoping Study.

HIGHLIGHTS:

- Malingunde is the world's **largest reported soft saprolite-hosted graphite** Mineral **Resource**[1].
- 81% of the total Mineral Resource (>4.0% TGC) and 88% of the high-grade (>7.5% TGC) component is now classified as **Measured or Indicated**.
- **High-grade component of 14.5Mt @ 9.7% TGC** (saprolite + saprock) to provide the focus for the Malingunde PFS; a significant increase in tonnage driven primarily by inclusion of saprock material.
- Metallurgical test-work confirms that the blended saprolite (~85%) and saprock (~15%) material does not require primary crushing or grinding, providing the potential for substantially **reduced processing costs** compared to hard rock deposits.
- All planned mining inventory is within 35m of surface and will be **free-digging with very low strip ratios**, with the potential for **very low mining costs**.

Dr Julian Stephens, Sovereign's Managing Director commented, "The ability to process a blend of saprock along with the very soft saprolite allows a ~60% increase in high-grade, low-cost material that Sovereign will consider as part of the Malingunde PFS. With this exceptional resource base, the Company will now progress rapid completion of the PFS, leveraging the project's inherent low opex and high margin potential."

ENQUIRIES — ***Dr Julian Stephens – Managing Director***

+618 9322 6322 — ***Dominic Allen – Business Development Manager***

MINERAL RESOURCE ESTIMATE TABLES

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%**

Table 1. Summary of 2018 Malingunde JORC Mineral Resource Estimate (Malingunde + Msinja deposits) at 4.0% and 7.5% TGC cut-off grades.

INTRODUCTION

Saprolite-hosted graphite deposits are sought after as they generally have lower capex requirements and low operating costs compared to hard rock graphite mines. Sovereign explored the Malingunde area in 2015 and 2016, resulting in the discovery of the world's largest reported saprolite-hosted graphite Mineral Resource reported in the maiden JORC MRE in 2017. An additional ~6,000m of aircore drilling in 2017 was undertaken primarily in order to upgrade the Mineral Resource categories.

The global MRE also includes Mineral Resources from the newly discovered Msinja deposit, some 1.5km along strike to the south-east of main Malingunde deposit.

Features of the Malingunde MRE include:

- A high-grade core @ ~10% TGC which forms the focus for the upcoming PFS;
- Very soft, free-digging material for the life of mine and a very low strip ratio will equate to very low mining costs;
- No requirement for primary crushing and grinding, significantly reducing capital requirements and operating costs;
- Proximity to Malawi's capital means access to existing infrastructure – rail, water, power & labour;
- Premium graphite products in terms of flake sizes and concentrate grades will equate attractive concentrate pricing.

Malingunde has the potential to be a world-class asset with the potential for low capital requirements, low operating costs and high revenues per tonne of concentrate, likely resulting in a high margin operation.

MINERAL RESOURCE ESTIMATE

The updated, 2018 Malingunde Mineral Resource Estimate was undertaken by CSA Global and is reported in accordance with the JORC Code (2012 Edition).

The high-grade saprolite and saprock component of 14.5Mt @ 9.70% TGC all occurs within 35m of the natural ground surface. The upcoming PFS is focused on this the high-grade saprolite and saprock component.

The Competent Person and Sovereign believe there are reasonable prospects for eventual economic extraction of the Mineral Resource. Consideration was given to the relatively shallow and soft nature of the mineralisation making it amenable to free-dig open pit mining, existing infrastructure near to the project, including rail, power, labour and water. Metallurgical test-work carried out to date on flake size distribution and purity are considered by the Competent Person and the Company to be favourable for product marketability.

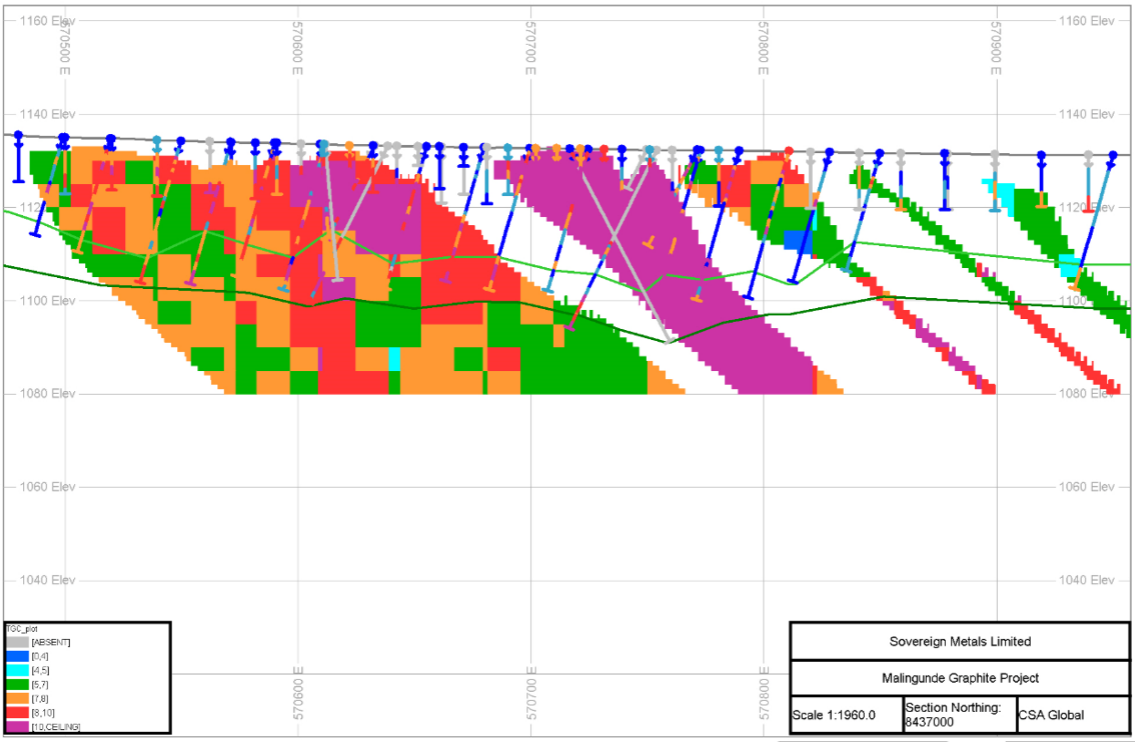

Figure 1. Cross-section 8,437,000mN showing MRE blocks and with TGC grade ranges

SUMMARY OF RESOURCE ESTIMATE AND REPORTING CRITERIA

The following is a summary of the pertinent information used in the Mineral Resource Estimate with full details provided in the JORC Code Table 1 included as Appendix 2.

Geology and Geological Interpretation

The Malingunde Deposit comprises ~4,500 m 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 120 m and locally exceeding 200 m. The Msinja Deposit has a strike length of approximately 1,000 m with about five parallel zones of mineralisation. Across strike, cumulative widths range between 40 and 100 m.

Malingunde occurs in a topographically flat area west of Malawi's capital known as the Lilongwe Plain and a deep tropical weathering profile is preserved. A typical profile from top to base is generally 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). For the purposes of the MRE, all units from saprolite and above are included under the heading "saprolite", with all weathering types within the saprolite being soft and expected to be free-dig during open-pit mining.

Drilling and Sampling Techniques

The MRE is based upon data obtained from 13 diamond core ("DD") drill holes (487.75 m), 384 aircore ("AC") holes (11,595.8 m) and 1,053 hand auger ("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.

Sample Analysis Method

Samples were shipped to Intertek sample preparation laboratory in Johannesburg or Perth. Upon receipt of the sample, the laboratory prepared ~100g pulp samples for shipment (in the case of Johannesburg) to Intertek Perth where they were analysed. A 0.2g charge is analysed for TGC using an Eltra carbon analyser resistance furnace.

Classification Criteria

Classification of the MRE was carried out taking into account the geological understanding of the deposit, quality of the samples, bulk density data and drill hole spacing, supported by metallurgical test results that indicate general product marketability.

The Malingunde MRE is classified as a combination of Measured, Indicated and Inferred, with geological evidence sufficient to confirm geological and grade continuity in the Measured volumes. The Measured Mineral Resource is confined to the saprolite profile. Where the saprock profile is located beneath saprolite classified as Measured, the saprock is classified as Indicated due to fewer drill samples derived from the saprock. The top 10 m of the fresh rock zone is classified as Inferred due to the sparsely spaced drilling, although DD samples were obtained from the fresh rock.

The Malingunde MRE is classified as Measured where drill spacing of 50 m (N) by 20 m (E) supports the geological interpretation and grade interpolation. Eight DD holes were drilled within the Measured footprint and provided detailed geological information as well as samples for metallurgical testwork. Drill spacing of 100 m (N) by 20 m (E) supports the Indicated classification, whilst drill spacing of 200 m (N) by 20 m (E) to 200 m (N) by 50 m (E) supports the Inferred classification.

The Msinja MRE is classified as Inferred, with no metallurgical test-work or diamond drilling conducted to date at Msinja. Blocks in the fresh rock domain are unclassified because no samples have been obtained to date from the fresh rock zone. No density data has been obtained from Msinja samples. The geological setting of Msinja is identical to Malingunde and therefore the use of Malingunde's density and metallurgical data is justified when estimating the Msinja MRE. Drill spacing at Msinja supporting the Inferred classification ranges from 100 m (N) by 20 m (E) to 200 m (N) by 20 m (E).

All available data was assessed and the Competent Person's relative confidence in the data was used to assist in the classification of the Mineral Resource.

Resource Estimation Methodology

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

Top cutting of composited sample assays was applied to constrain extreme grade values when warranted. Top cuts were determined by reviewing histograms and log probability plots of domained assays, and iterative calculations of mean domain TGC grades, testing a range of top cuts. All top cuts were applied to data in the 99th percentile of data. Variograms were modelled from composited data within the most populated domain, with a relative nugget of 33% and short range of 33 m, which accommodates 73% of the population variance. The principal variogram direction is in a shallow plunge along strike to the north.

Grade estimation was by ordinary kriging ("OK"). A minimum of 12 and maximum of 28 composited samples were used in any one block estimate for all domains. A maximum of 6 composited samples per drill hole were used in any one block estimate. No hard boundary domains within the mineralisation domains were used, with all data across the weathering and fresh rock profiles available to support all block estimates per domain. Each mineralisation domain acted as a hard domain boundary such that a composited drill assay in one domain could not interpolate a block grade in an adjacent domain.

The grade model was validated by 1) creating slices of the model and comparing to drill hole samples on the same slice; 2) swath plots comparing average block grades with average sample grades on nominated easting, northing and RL slices; 3) mean grades per domain for estimated blocks and flagged drill hole samples; and 4) cross sections with block model and drill hole data colour coded in like manner.

Cut-off Grades

The MRE has been reported using lower cut-off grade of 4.0% and 7.5% TGC, which is consistent with the grade used to report the previous MRE. The 4.0% lower cut-off grade was selected as it represents a natural geological break in the data, and a figure just above a break-even grade estimated in the 2017 Scoping Study. The 7.5% cut-off grade was arbitrarily chosen in order to provide >15 years of potential feed grading circa 10% TGC.

Mining and Metallurgical Methods and Parameters

No selective mining units were assumed in this resource model. No depletion of the Mineral Resource due to mining activity was required due to no mining having occurred historically.

Sovereign announced metallurgical results to the ASX on a number of occasions between 2016 and 2018, relating to flake size distribution and purity of graphite concentrate. Metallurgical testwork is ongoing as part of the Prefeasibility Study.

Metallurgical data previously reported in 2017, plus new data generated in 2018, support the Mineral Resource classification. The flotation testwork on auger and diamond drill core samples demonstrated that approximately 50-80% of the liberated flakes are larger than 150 µm (100 mesh), and that final overall concentrate grades are in the range of approximately 96-99% Carbon for all weathering domains. The conventional flotation process produced flake graphite concentrates of acceptable quality, potentially for markets such as spherical graphite, expandable graphite, graphite foil, brake lining pads, lubrication and refractories. Performance tests verified that Malingunde graphite concentrates should meet or exceed the specifications for expandable graphite.

The available process testwork in conjunction with drill sample observations from the remainder of the deposit supports the classification of the Malingunde deposit as an Industrial Mineral Resource in terms of the JORC Code Clause 49.

SOVEREIGN METALS LIMITED
ASX:SVM

Competent Person Statement

The information that relates to Mineral Resources is based on, and fairly represents, information compiled by Mr David Williams, a Competent Person, 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 of the matters based on his information in the form and context in which it appears.

The information that relates to Exploration Results is extracted from announcements on 29 August 2016, 12 October 2016, 26 November 2016, 18 January 2017, 21 February 2017, 15 March 2017, 17 January 2018, 18 February 2018, 19 March 2018 and 3 April 2018. These announcements are available to view on www.sovereignmetals.com.au. The information in the original announcements that related to Exploration Results were based on, and fairly represents, information compiled by Dr Julian Stephens, a Competent Person who is a member of the Australasian Institute of Geoscientists (AIG). Dr Stephens is the Managing Director of Sovereign Metals Limited and a holder of shares, options and performance rights in Sovereign Metals Limited. Dr Stephens has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken, 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'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Forward Looking Statement

This release may include forward-looking statements, which may be identified by words such as "expects", "anticipates", "believes", "projects", "plans", and similar expressions. These forward-looking statements are based on Sovereign's expectations and beliefs concerning future events. Forward looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Sovereign, which could cause actual results to differ materially from such statements. There can be no assurance that forward-looking statements will prove to be correct. Sovereign makes no undertaking to subsequently update or revise the forward-looking statements made in this release, to reflect the circumstances or events after the date of that release.

Footnote 1

The Malingunde Mineral Resource is understood by the Company to be the largest known saprolite-hosted flake graphite deposit in the world that has been reported under recognised western Mineral Resource reporting codes (i.e. JORC, NI 43-101, SAMREC).

Appendix 1: Mineral Resource Tables

Mineral Resource statement, Malingunde and Msinja. TGC>4.0%			
		Tonnes (Mt)*	**TGC (%)**
Malingunde	Measured	4.8	8.5
	Indicated	32.3	7.2
	Inferred	20.6	7.3
	Sub-total	57.7	7.4
Msinja	Measured	-	-
	Indicated	-	-
	Inferred	7.3	6.2
	Sub-total	7.3	6.2
All	Measured	4.8	8.5
	Indicated	32.3	7.2
	Inferred	27.9	7.0
All	**Total**	**65.0**	**7.2**

* Tonnages rounded to the nearest Mt. Differences may occur in totals due to rounding

Mineral Resource statement, Malingunde and Msinja. TGC>7.5%			
		Tonnes (Mt)*	**TGC (%)**
Malingunde	Measured	2.7	10.0
	Indicated	10.1	9.8
	Inferred	6.9	9.8
	Sub-total	19.7	9.8
Msinja	Measured	-	-
	Indicated	-	-
	Inferred	1.4	9.2
	Sub-total	1.4	9.2
All	Measured	2.7	10.0
	Indicated	10.1	9.8
	Inferred	8.3	9.7
All	**Total**	**21.0**	**9.8**

* Tonnages rounded to the nearest Mt. Differences may occur in totals due to rounding

Mineral Resource statement, Malingunde and Msinja, by Weathering Profile. TGC>4.0%			
		Tonnes (Mt)*	**TGC (%)**
Saprolite	Measured	4.8	8.5
	Indicated	18.7	7.1
	Inferred	5.4	6.3
	Sub-total	28.8	7.2
Saprock	Measured	-	-
	Indicated	13.6	7.4
	Inferred	3.3	6.3
	Sub-total	16.9	7.2
Fresh	Measured	-	-

	Indicated	-	-
	Inferred	19.3	7.3
	Total	19.3	7.3
Total	Measured	4.8	8.5
	Indicated	32.3	7.2
	Inferred	27.9	7.0
	Total	**65.0**	**7.2**

*Tonnages rounded to the nearest Mt. Differences may occur in totals due to rounding. Saprolite is defined as a combination of the SOIL, FERP, MOTT, PSAP and SAPL weathering domains, as discussed later in this document.

Mineral Resource statement, Malingunde and Msinja, by Weathering Profile. TGC>7.5%			
		Tonnes (Mt)*	**TGC (%)**
Saprolite	Measured	2.7	10.0
	Indicated	5.4	9.6
	Inferred	1.1	9.0
	Sub-total	9.2	9.7
Saprock	Measured	-	-
	Indicated	4.7	10.0
	Inferred	0.6	9.1
	Sub-total	5.3	9.9
Fresh	Measured	-	-
	Indicated	-	-
	Inferred	6.5	9.9
	Total	6.5	9.9
Total	Measured	2.7	10.0
	Indicated	10.1	9.8
	Inferred	8.3	9.7
	Total	**21.0**	**9.8**

*Tonnages rounded to the nearest Mt. Differences may occur in totals due to rounding. Saprolite is defined as a combination of the SOIL, FERP, MOTT, PSAP and SAPL weathering domains, as discussed later in this document.

Appendix 2: JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Hand Auger (HA), Air-core (AC) and Diamond core (DD) drilling form the basis of the Mineral Resource Estimate (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.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Drilling and sampling activities were supervised by a suitably qualified Company geologist who was present at the drill rig at all times. All bulk 1-metre drill samples were geologically logged by the geologist at the drill site. All 1-metre downhole drill samples collected in plastic bags from directly beneath the cyclone underflow were individually weighed and moisture content was qualitatively logged prior to further splitting and sampling. All mass reduction (field and laboratory splitting) of samples were performed within Gy's Sampling Nomogram limits relevant to this style of mineralisation. Field duplicate splits were undertaken nominally every 20th sample to quantify sampling and analytical error. A program of field replicate splitting of selected (~5%) mineralised intervals was completed at the conclusion of the drill program. **HA**: The auger spiral and rods are cleaned between each metre of sampling to avoid contamination. **AC**: The sampling cyclone was routinely cleaned out between each drill hole. Sample recovery was quantitatively assessed throughout the duration of the drilling program. A program of field replicate splitting of selected (~5%) mineralised intervals was completed at the conclusion of the drill program to assess the sampling repeatability **DD**: core recovery was closely monitored during drilling particularly through the mineralised zones. Standard industry drilling mud mixtures were employed to improve core recovery especially through the softer upper clay rich pedolith and saprolith horizons.

Criteria	JORC Code explanation	Commentary
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Flake graphite content is visually estimated as volume % (% v/v) of each 1-metre bulk drill samples during geological logging by Company geologist. A nominal lower cut-off of 5% TGC assay has been applied to define zones of 'mineralisation'.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	**HA:** drilling was performed manually by Sovereign employees using a conventional hand auger employing a combination of 62mm and 50mm diameter spiral auger flight and 1-metre long steel rods. Each 1m of drill advance is withdrawn and the contents of the auger flight removed. An additional 1-metre steel rod is attached and the open hole is re-entered to drill the next metre. This is repeated until the drill holes is terminated or reaches a maximum depth of 12m. The auger spiral and rods are cleaned between each metre of sampling to avoid contamination. **AC:** conventional blade bit aircore drilling was employed to obtain all drill cuttings from surface. Drilling was completed using a P900 truck mounted rig with and separate truck mounted air compressor. Drilling was completed using standard 3-inch or 4-inch diameter/3m length drill rods equipped with inner tubes. Drilling was performed with standard face discharge aircore blade bits. The nominal drill hole diameter for 3-inch and 4-inch holes is 85mm and 114mm respectively. The nominal inner tube inside diameter for 3-inch and 4-inch holes is 37mm and 45mm respectively. Drilling of all 3-inch holes employed a 2-stage compressor rated at 300CFM:200PSI run continuously on high stage. All 4-inch holes were drilled employing a 2-stage compressor rated at 900CFM:350PSI with high-stage generally run below about 15m downhole. **DD:** conventional wireline PQ triple tube (PQ_3) diamond drilling (DD) was employed to obtain all drill core. Drilling was undertaken with an Atlas Copco Christensen CT14 truck mounted drilling rig. The nominal core diameter is 83mm and the nominal hole diameter is 122mm. Coring was completed with appropriate diamond impregnated tungsten carbide drilling bits. Drill runs were completed employing either a 1.5m or 3.0m length PQ_3 core barrel. Core from all drilling runs was orientated using a Reflex ACTIII Electronic Orientation device. The orientation and marking of the bottom of hole (BOH) orientation line along the core was completed whilst the core was still within the drilling split. Core was transferred from the drilling split into PVC splits which were then wrapped with plastic layflat material, securely sealed and placed into core trays.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	**HA:** sample recovery was monitored visually during removal of the sample from the auger flights. **AC:** sample recovery was recorded for all holes. The 1-metre drill samples collected in plastic bags from directly beneath the cyclone underflow were individually weighed and moisture content (dry/damp/moist /wet/saturated) recorded prior to further splitting and sampling. The outside diameter of the drill bit cutting face was measured and recorded by the driller prior to the commencement of each drill hole. Each 1-metre sample interval was separately geologically logged using standard Company project specific logging codes. Logging of weathering and lithology along with drill hole diameter, recovered sample weight, moisture content and dry bulk density measurements of PQ diamond core allow the theoretical sample recovery to be assessed. Analysis of the calculated sample recoveries indicate an average recovery of greater than 75% for all mineralised (>=4% TGC) intervals. **DD:** drilling core recovery was recorded for each drill run by measuring the total length whilst still in the drilling splits prior to being transferred into core trays. Downhole depths were validated against core blocks and drill plods during each shift. Holes MGDD0001, MGDD0004 and MGDD0005 were re-drilled due to core loss within a number of mineralised zones. An overall core recovery of 92% was achieved for all sampled core.

Criteria	JORC Code explanation	Commentary
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	**HA:** drill holes were terminated where they intersected the upper (perched) water table (approx.. 7-8m) **AC:** drill bit type (face discharge) used were appropriate for the type of formation to maximise amount of drill cutting recovered. Drill bits were replaced where excessive wearing of the tungsten cutting teeth had occurred. Adequate CFM/PSI of compressed air was used to maximise the drying of sample prior to recovering up the drill string. A number of the 2016 PQ diamond core holes were twinned by aircore holes to assess the representivity of AC drill samples. Where the ingress of water in deeper sections of holes resulted in wet samples (usually at the Saprolite/Saprock interface) the drill hole was terminated. **DD:** core recovery was closely monitored during drilling particularly through the mineralised zones. Standard industry drilling mud mixtures were employed to improve core recovery especially through the softer upper clay rich material of the Pedolith and Saprolith zones. Other measures such quantity of water, amount of rotation and drill bit types that are appropriate to soft formation drilling were considered and employed during drilling when required. At the completion of each drill run the steel splits containing the core were pumped out of the retrieved core tube. Core was then carefully transferred from the drill split into plastic sleeves (layflat) which were secured in rigid PVC splits. The layflat was securely bound and sealed (to preserve moisture) with tape prior to transferring PVC splits into plastic core trays.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Twin hole comparison of aircore vs hand auger and diamond core drill hole visually estimated grades indicates that no sample bias exists. There does not appear to be any relationship between aircore sample recovery and TGC % v/v grade.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation mining studies and metallurgical studies.*	All drill holes were geologically logged by a suitably trained Company geologist using standard Company code system. Relevant data for each individual 1-metre sample for aircore or for each geological interval for diamond was initially recorded using a standard A4 paper template and later digitally entered into customised Company MS Excel spreadsheets designed with fully functional validation. Excel files are checked and loaded to MS Access by the Database Administrator. Upon loading into the Access database further validation is performed. In addition, all core is photographed wet and dry for future reference. This information is of a sufficient level of detail to support appropriate Mineral Resource estimation.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging is both qualitative and quantitative. Geological logging includes but is not limited to lithological features, volumetric visual estimates of graphite content and flake characteristics.
	The total length and percentage of the relevant intersection logged	100% of drill hole sample intervals have been geologically logged.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Quarter PQ3 DD core is manually split and/or cut using a motorised diamond blade core saw and sampled for laboratory analysis.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	**HA:** 1-metre samples are composited on geological intervals and then riffle split at 50:50 using a standard Jones riffle splitter. Wet samples are first air dried and then manually broken up prior to compositing or splitting. **AC:** 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. All wet samples were removed from the drill site without splitting and relocated to the Company's premises in Lilongwe. The wet samples were transferred into large metal trays and sun dried. Samples were subsequently hand pulverised and thoroughly homogenised prior to splitting 50:50 with a single tier riffle splitter. One of the off-splits was submitted to the laboratory for assay. All reject splits (i.e. the material not sent for assaying) of each individual 1-metre interval were returned to original sample bag, cable tied and placed in storage for future reference.

Criteria	JORC Code explanation	Commentary
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	**HA samples:** sample preparation is conducted at Intertek's laboratory in Johannesburg. Each entire sample is crushed to nominal 100% -3mm in a Boyd crusher then pulverised to 85% -75µm in a LM5. Approximately 100g pulp is collected and sent to Intertek Perth for TGC analysis. **AC samples:** sample preparation was conducted at either Intertek in Perth or Johannesburg. The entire submitted sample (=< ~3kg) is pulverised to 85% -75µm in a LM5. Approximately 100g pulp is collected and sent to Intertek-Genalysis Perth for chemical analysis. **DD samples:** all sample preparation was conducted at Intertek Perth. Each entire sample is crushed to nominal 100% -3mm in a Boyd crusher then pulverised to 85% -75µm in a LM5.The entire submitted sample (=< ~3kg) is pulverised to 85% -75µm in a LM5. Approximately 100g pulp is collected and sent to Intertek-Genalysis Perth for chemical analysis.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	All sampling was carefully supervised. Ticket books were used with pre-numbered tickets placed in the laboratory sample bag and double checked against the sample register. Subsequent to splitting an aluminium tag inscribed with hole id/sample interval was placed inside the bulk 1-metre sample bag. Field QC procedures involve the use of certified reference material assay standards, blanks, duplicates, replicates for company QC measures, and laboratory standards, replicate assaying and barren washes for laboratory QC measures. The insertion rate of each of these averaged better than 1 in 20.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	All mass reduction (field and laboratory splitting) of samples were performed within Gy's Sampling Nomogram limits relevant to this style of mineralisation. Field duplicate splits of HA/AC samples and quarter DD core were undertaken nominally every 20th sample to assess sampling errors. A program of field replicate splitting of selected (~10%) "mineralised" AC intervals was completed at the conclusion of the drill program. In addition, a number of air core holes were drilled to "twin" existing HA and DD holes, to assess the representivity of the AC drill samples. The results of these programs indicate there are no significant sampling errors.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	All mass reduction of aircore drill samples undertaken during field sampling and laboratory sample preparation were guided by standard sampling nomograms and fall within Gy's safety limits for the type of mineralisation sampled.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	The assaying and laboratory procedures are considered to be appropriate for reporting graphite mineralisation, according to industry best practice. Each entire sample was pulverised to 85% -75µm. Approximately 100g pulp is collected for analysis at Intertek-Genalysis Perth. A sample of 0.2g is removed from the 100-gram pulp, first digested in HCl to remove carbon attributed to carbonate, and is then heated to 450°C to remove any organic carbon. An Eltra CS-2000 induction furnace infra-red CS analyser is then used to determine the remaining carbon which is reported as Total Graphitic Carbon (TGC) as a percentage.
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No non-laboratory devices were used for chemical analysis.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicate, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Field QC procedures involve the use of certified reference material assay standards, blanks, duplicates and replicates for company QC measures, and laboratory standards, replicate assaying and barren washes for laboratory QC measures. The insertion rate of each of these averaged better than 1 in 20.
Verification of sampling & assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Significant mineralisation intersections were verified by alternative company personnel. An independent resource consultant (Competent Person, Mineral Resources) conducted a site visit during December 2016 during the aircore drilling program. All drilling and sampling procedures were observed by the CP during the site visit. These procedures remained in use for the 2017 drilling program.
	The use of twinned holes.	Several of the 2016 PQ diamond core holes were twinned by aircore holes to assess sampling representivity.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All data is initially collected on paper logging sheets and codified to the Company's templates. This data was hand entered to spreadsheets and validated by Company geologists. This data was then imported to a Microsoft Access Database then validated automatically and manually. Assay data is provided as .csv files from the laboratory and loaded into the project specific drill hole database. Spot checks are made against the laboratory certificates.

Criteria	JORC Code explanation	Commentary
	Discuss any adjustment to assay data.	No adjustments have been made to assay data.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Collar points were set out using the Company's R2 Rover DGPS (accuracy 0.04m x/y), and upon completion of drilling all collars were picked-up again using the same survey tool. The accuracy of R2 Rover unit is quoted to be 0.04m x/y and 0.09m z. Down-hole surveying was undertaken on selected holes to determine drill hole deviation. Surveys were carried out using a Reflex Ez-Trak multi-shot survey tool at nominal 30m intervals down hole on selected holes was used to show that significant deviation does not occur over the relatively short length of the aircore holes. As such drill hole deviation is not considered material throughout the program.
	Specification of the grid system used.	WGS84 (GRS80) UTM Zone 36 South
	Quality and adequacy of topographic control.	The Company's DGPS survey tool has sub 0.1m accuracy in the X, Y and Z planes. This is considered sufficiently accurate for the purposes of topographic control. In addition, the Company has installed several independently surveyed control pegs and undertakes QC surveys on these points before every survey program. Given the low topographic relief of the area it is believed that this represents high quality control. Previous checking of Hand Auger holes with the Shuttle Radar Topographic Mission (SRTM) 1-arc second digital elevation data has shown that the Leica GPS System produces consistently accurate results.
Data spacing & distribution	*Data spacing for reporting of Exploration Results.*	Drill holes occur along east-west sections spaced at between 100-400m north-south between 8,434,400mN to 8,437,800mN. Spacing along drill lines generally ranges between 15m and 40m. Between sections 8,436850 and 8,437,150 drill lines are spaced at 50 m intervals with holes along section lines at 20 m spacing.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	The Company's independent resource consultants completed a Mineral Resource Estimate (MRE) for Malingunde in 2017 following the completion of the 2016 drilling program. The drill hole sample data sourced in 2017 has allowed an update to the MRE (this document).
	Whether sample compositing has been applied.	No sample compositing has occurred.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known considering the deposit type*	No bias attributable to orientation of sampling upgrading of results has been identified.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No bias attributable to orientation of sampling upgrading of results has been identified. Flake graphite mineralisation is conformable with the main primary layering of the gneissic and schistose host lithologies. Drill hole inclination of -60 degrees are generally near orthogonal to the interpreted regional dip of the host units and dominant foliation.
Sample security	*The measures taken to ensure sample security*	Samples are securely stored at the Company's compound in Lilongwe. Chain of custody is maintained from time of sampling in the field until sample is dispatched to the laboratory.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data*	The Competent Person (Mineral Resources) reviewed sampling techniques and data during the December 2016 site visit. The field crew were following company sampling procedures and the CP did not note any issues of significance during the inspection. It is considered by the Company that industry best practice methods have been employed at all stages of the exploration.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement &	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites,*	The Company owns 100% of 4 Exclusive Prospecting Licences (EPLs) in Malawi. EPL0355 renewed in 2017 for 2 years, EPL0372 renewed in 2018 for 2 years and EPL0413 renewed in 2017 for 2 years. EPL0492 was granted in 2018 for an initial period of three years (renewable).

Criteria	JORC Code explanation	Commentary
land tenure status	*wilderness or national park and environment settings.*	
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The tenements are in good standing and no known impediments to exploration or mining exist.
Exploration done by other parties	*Acknowledgement and appraisal of exploration by other parties.*	No other parties were involved in exploration.
Geology	*Deposit type, geological setting and style of mineralisation*	The graphite mineralisation occurs as multiple bands of graphite gneisses, hosted within a broader Proterozoic paragneiss package. In the Malingunde and Lifidzi areas specifically, a deep tropical weathering profile is preserved, resulting in significant vertical thicknesses from near surface of saprolite-hosted graphite mineralisation. Malingunde occurs in a topographically flat area west of Malawi's capital known as the Lilongwe Plain and a deep tropical weathering profile is preserved. A typical profile from top to base is generally 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).
Drill hole information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northings of the drill hole collar; elevation or RL (Reduced Level-elevation above sea level in metres of the drill hole collar); dip and azimuth of the hole; down hole length and interception depth; and hole length*	No new exploration results are included in this release.
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case	All drill holes within the resource area have previously been reported in releases to the ASX providing collar easting, northing, elevation, dip, azimuth, length of hole, and mineralised intercepts as encountered. All drill holes were used to prepare the MRE.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high-grades) and cut-off grades are usually Material and should be stated.*	No new exploration results are included in this release. All drill holes within the resource area have previously been reported.
	Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	No new exploration results are included in this release. All drill holes within the resource area have previously been reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are used in this report.
Relationship between mineralisation widths & intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.*	Interpretation of mineralised zones in aircore holes supported by DD (2016) orientated core measurements indicate that mineralised zones are shallow-moderate north-east dipping.
	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Flake graphite mineralisation is conformable with the main primary layering of the gneissic and schistose host lithologies. Drill hole inclination of -60 degrees are generally near orthogonal to the regional dip of the host units and dominant foliation and hence specific drill hole intercepts for -60 degree holes may only approximate true width. The averaged strike of mineralised zones is approximately 160° grid whereas all -60 inclined aircore holes were orientated at grid east.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'.	Refer to the statement above.

Criteria	JORC Code explanation	Commentary
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of the drill collar locations and appropriate sectional views.*	Refer to figures in the body of this report.
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high-grades and/or widths should be practiced to avoid misleading reporting of exploration results.*	Exploration results are not reported here. All drill hole sample data were used to support the Mineral Resource estimate.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to: geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No additional meaningful and material exploration data has been excluded from this report that has not previously been reported to the ASX.
Further work	*The nature and scale of planned further work (e.g. test for lateral extensions or depth extensions or large-scale step-out drilling).*	The next phase of exploration is to complete aircore drilling on regional saprolite targets identified through hand auger drilling.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Refer to diagrams in the body of this report.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Data used in the Mineral Resource estimate is was sourced from an MS Access database. The database is maintained by Sovereign. Relevant tables from the database were exported to csv format, and then imported into Datamine Studio RM software for use in the Mineral Resource estimate.
	Data validation procedures used.	Validation of the data import include checks for overlapping intervals, missing survey data, missing assay data, missing lithological data, and missing collars.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	The Competent Person (Mineral Resources) visited the project in December 2016. The aircore drilling rig was in operation and the Competent Person reviewed drilling and sampling procedures. Planned drill sites were examined and assessed with respect to strike and dip of the interpreted geological model. Sample storage facilities were inspected. Discussions were held with the Sovereign geological staff regarding all drilling and sampling procedures and outcomes. Selected diamond drill core was inspected, with all weathering types pertinent to the Mineral Resource reviewed. There were no negative outcomes from any of the above inspections, and all samples and geological data were deemed fit for use in the Mineral Resource estimate.
	If no site visits have been undertaken indicate why this is the case.	Not applicable, site visit was undertaken.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	There is a high level of confidence in the geological interpretation in the Measured Mineral Resource volumes, based upon lithological logging of diamond drill core, aircore chip samples and hand auger samples. Multi-spectral satellite imagery and airborne geophysical data provided guidance for the initial geological interpretation of the strike continuity of the deposit.

Criteria	JORC Code explanation	Commentary
		Drill hole intercept logging and assay results (aircore, hand auger and diamond core), structural interpretations from drill core and geological logs of aircore and hand auger drill data have formed the basis for the geological interpretation.
	Nature of the data used and of any assumptions made.	Assumptions were made on depth and strike extension of the gneiss, using drill hole assays as anchor points at depth and at intervals along strike. Geological mapping also supports the geological model. Seven weathering domains were modelled and support the grade interpolation and Mineral Resource classification.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	No alternative interpretations were considered because the geophysical models and diamond core support the current interpretation.
	The use of geology in guiding and controlling Mineral Resource estimation.	Graphitic Graphite mineralisation is hosted within a graphitic gneiss, which is mapped along its strike length within the project area and within the license area. Grade (total graphitic carbon, TGC%) is assumed to be likewise continuous with the host rock unit. Mineralised waste and non-mineralised waste zones were modelled within the graphitic gneiss.
	The factors affecting continuity both of grade and geology.	The graphitic gneiss is open along strike and down dip. The interpretation of the mineralisation domains is based upon a pre-determined lower cut-off grade for TGC, which is equivalent to the graphitic gneiss domain boundary. A variation to the cut-off grade will affect the volume and average grade of the domains, however there are no geological reasons identified to date to support higher grade TGC domains within the graphitic gneiss.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	The Malingunde Deposit comprises 4,500 m 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 120 m and locally exceeding 200 m. The Msinja Deposit has a strike length of approximately 1.0 km with about five parallel zones of mineralisation. Across strike cumulative widths range between 40 and 100 m. The depth extent of the MRE is approximately 50 m although the mineralisation is believed to extend considerably deeper, but is not considered as an exploration target at this stage.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	Datamine Studio RM software was used for all geological modelling, block modelling, grade interpolation, Mineral Resource classification and reporting. GeoAccess Professional and Snowden Supervisor (V8.7) were used for geostatistical analyses. All samples were composited to 2 m intervals. All drill hole assay data (diamond, aircore and hand auger) were utilised in the grade interpolation. A block model with parent cell sizes 10 m (E) x 25 m (N) x 5 m (RL) was constructed for Malingunde, compared to typical drill spacing of 20 m (E) x 50 m (N) within the Measured volumes.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Inverse distance squared (IDS) estimation was run as a check estimate of the ordinary kriging (OK) grade estimation. No depletion of the Mineral Resource due to mining activity was required due to no mining having occurred historically. The Malingunde MRE was previously reported in 2017 and the current MRE has not presented an adjustment of any significance to tonnes or grade, but has improved the confidence levels as demonstrated in the classification of the MRE.
	The assumptions made regarding recovery of by-products.	No by-products were modelled.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	No estimation of deleterious elements or non-grade variables of economic significance were modelled.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Grade estimation was by ordinary kriging (OK) with inverse distance squared (IDS) estimation run as a check estimate. A minimum of 12 and maximum of 28 composited samples were used in any one block estimate for all domains. A maximum of 6 composited samples per drill hole were used in any one block estimate. Cell discretisation of 3 x 3 x 3 was used. No hard estimation domain boundaries at weathering domain interfaces were used, although each mineralisation domain was a separate domain for grade interpolation.
	Any assumptions behind modelling of selective mining units.	No selective mining units were assumed in this model.
	Any assumptions about correlation between variables.	TGC grade was the only variable estimated.

Criteria	JORC Code explanation	Commentary
	Description of how the geological interpretation was used to control the resource estimates.	Drill hole intercept logging and assay results (aircore, hand auger and diamond core), structural interpretations from drill core and geological logs of aircore and hand auger drill data have formed the basis for the geological interpretation. The drilling mostly targeted the SAPL and SAPR weathering horizons, with limited sampling below the upper level of the fresh rock (FRESH) domain. 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.
	Discussion of basis for using or not using grade cutting or capping.	Top cutting of composited sample assays was applied to constrain extreme grade values when warranted. Top cuts were determined by reviewing histograms and log probability plots of domained assays, and iterative calculations of mean domain TGC grades, testing a range of top cuts. All top cuts were applied to data in the 99th percentile of data.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	The grade model was validated by 1) creating slices of the model and comparing to drill hole samples on the same slice; 2) swath plots comparing average block grades with average sample grades on nominated easting, northing and RL slices; 3) mean grades per domain for estimated blocks and flagged drill hole samples; and 4) cross sections with block model and drill hole data colour coded in like manner. No reconciliation data exists to test the model. The estimated tonnes and grade compare favourably with the previous MR model.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	Visual analysis of the drill analytical results demonstrated that the lower cut-off interpretation of 4% TGC corresponds to a natural break in the grade population distribution. The lower cut-off of 4% TGC is approximately equivalent to the graphitic gneiss domain boundary, from logging of diamond drill core, aircore and hand auger chips.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	It is assumed the deposit, if mined, will be developed using open pit mining methods. No assumptions have been made to date regarding minimum mining widths or dilution. The largest mineralisation domains in plan view have an apparent width of up to 250 m which may result in less selective mining methods, as opposed to (for example) mining equipment that would need to be used to mine narrow veins in a gold mine. The insitu rock mass within the saprolite weathering zones are relatively friable and present an attractive mining scenario where drill and blast is generally not required for excavation of ore.
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Sovereign announced metallurgical results to the ASX on a number of occasions during 2016 and 2017, relating to flake size distribution and purity of graphite concentrate. Metallurgical testwork is ongoing as part of the Prefeasibility Study. Metallurgical data previously reported in 2017, plus new data generated in 2018, support the Mineral Resource classification. The flotation testwork on auger and diamond drill core samples demonstrated that approximately 50-80% of the liberated flakes are larger than 150 µm (100 mesh), and that final overall concentrate grades are in the range of approximately 97-99% Carbon for all weathering domains. The conventional flotation process produced flake graphite concentrates of acceptable quality, potentially for markets such as spherical graphite, expandable graphite, graphite foil, brake lining pads, lubrication and refractories. Performance tests verified that Malingunde graphite concentrates should meet or exceed the specifications for expandable graphite. The available process testwork in conjunction with drill sample observations from the remainder of the deposit supports the classification of the Malingunde deposit as an Industrial Mineral Resource in terms of the JORC Code Clause 49. The Competent Person recommends continued variability flotation testing to verify product quality across the deposit.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing	A large portion of the Mineral Resource is confined to the saprolitic weathering domains, and any sulphide minerals have been oxidised in the geological past. Therefore acid mine-drainage is not anticipated to be a significant risk when mining from the oxidised domain. Acid-mine drainage would be considered if mining of the fresh-rock domain was to be undertaken in the future. No major water courses run through the resource area, although a fresh water dam is located at the southern end of the Malingunde deposit, with the deposit believed to have strike continuity below the dam

Criteria	JORC Code explanation	Commentary
	operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	and extends to the Msinja deposit to the south-east. No Mineral Resources are reported within the dam limits. The Malingunde and Msinja deposits are located within a farming area and has villages located along the strike of the deposit. Sovereign holds regular discussions with local landholders and community groups to keep them well informed of the status and future planned directions of the project. Malingunde is in a sub-equatorial region of Malawi and is subject to heavy seasonal rainfall, with rapid growth of vegetation in season.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.	Density was calculated from 213 billets of core taken from across the deposit, with density measured using wax coated immersion method performed by Intertek Perth. Density data was loaded into a Datamine drill hole file, which was flagged against weathering horizons and mineralisation domains.
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vughs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.	All bulk density determinations were completed by the waxed immersion method.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	An average density value of 1.7 t/m3 was determined for the soil domain, 1.8 t/m3 for the ferruginous pedolith (FERP) domain, 1.8 t/m3 for the mottled zone (MOTT) domain, 2.0 t/m3 for the pallid saprolite (PSAP) domain, 2.0 t/m3 for the saprolite (SAPL) domain, and 2.2 t/m3 or 2.3 t/m3 for the saprock (SAPR) rock profile, dependent upon the depth of the profile. A value of 2.4 t/m3 was assigned to the upper 10 m of the fresh rock profile, which is reported as an Inferred Mineral Resource. A small data population did not allow for discernible differences in density between the waste and mineralisation zones to be determined.
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.	Classification of the Mineral Resource estimates was carried out taking into account the geological understanding of the deposit, quality of the samples, density data and drill hole spacing, supported by metallurgical test results that indicate general product marketability. The Mineral Resource is classified as a combination of Measured, Indicated and Inferred, with geological evidence sufficient to confirm geological and grade continuity in the Measured volumes. The Malingunde MRE is classified as Measured where drill spacing of 50 m (N) by 20 m (E) supports the geological interpretation and grade interpolation. Eight DD holes were drilled within the Measured footprint and provided detailed geological information as well as samples for metallurgical testwork. Drill spacing of 100 m (N) by 20 m (E) supports the Indicated classification, whilst drill spacing of 200 m (N) by 20 m (E) to 200 m (N) by 50 m (E) supports the Inferred classification. Drill spacing at Msinja supporting the Inferred classification ranges from 100 m (N) by 20 m (E) to 200 m (N) by 20 m (E).
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	All available data was assessed and the competent person's relative confidence in the data was used to assist in the classification of the Mineral Resource.
	Whether the result appropriately reflects the Competent Person's view of the deposit	The current classification assignment appropriately reflects the Competent Person's view of the deposit.
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	No audits or reviews of the current Mineral Resource estimate have been undertaken, apart from internal reviews carried out by CSA Global and Sovereign.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a	An inverse distance estimation algorithm was used in parallel with the ordinary kriged interpolation, with results very similar. No other estimation method or geostatistical analysis has been performed. Relevant tonnages and grade above nominated cut-off grades for TGC are provided in the introduction and body of this report. Tonnages were calculated by filtering all blocks above the cut-off grade and sub-setting the resultant data into bins by mineralisation domain. The volumes of all the collated blocks were multiplied by the dry density value to derive the tonnages. The graphite metal values (g) for each block were calculated

Criteria	JORC Code explanation	Commentary
	qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.	by multiplying the TGC grades (%) by the block tonnage. The total sum of all metal for the deposit for the filtered blocks was divided by 100 to derive the reportable tonnages of graphite metal.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	The Mineral Resource is a local estimate, whereby the drill hole data was geologically domained above nominated TGC cut-off grades, resulting in fewer drill hole samples to interpolate the block model than the complete drill hole dataset, which would comprise a global estimate.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	No mining has taken place to date therefore no production data is available to reconcile model results.