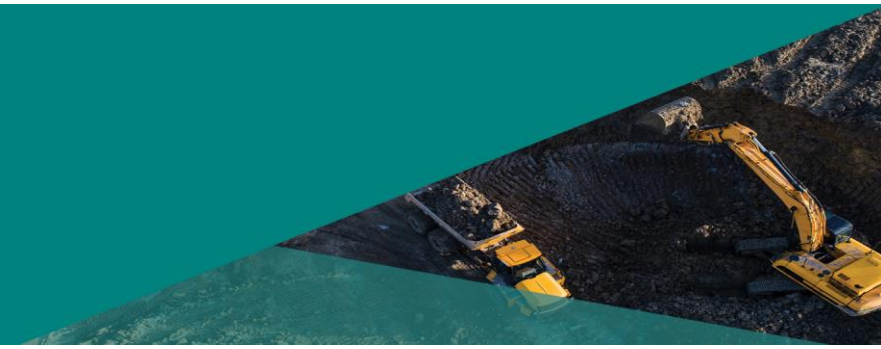
SOVEREIGN METALS LIMITED



2 February 2021

MALINGUNDE GRAPHITE PROJECT TO ADVANCE TO MEET INCREASING EV BATTERY DEMAND

Sovereign Metals Limited (the Company or Sovereign) is pleased to announce it will be advancing its graphite project in parallel with its world-class rutile projects. The Company notes recent improvements in the graphite market and an increasing level of enquiries from investors and other market participants.

Sovereign owns 100% of an extensive portfolio of graphite deposits in Malawi, including the Malingunde Saprolite-Hosted Graphite Project (Malingunde) for which a Pre-Feasibility Study was published in 2018. Malingunde's Mining Licence application process is well underway with the Environmental and Social Impact Assessment (ESIA) now nearing completion.

Sovereign has demonstrated the ability to produce a range of premium-quality products from its graphite project. Spherical graphite with suitable benchmark specifications for lithium-ion battery anodes can be produced from Malingunde concentrates, providing the potential to sell into the rapidly growing lithium-ion battery markets.

Graphite mineralisation is hosted in soft and friable, free-dig saprolite leading to considerably lower carbon footprint in the mining and beneficiation stages compared to hard-rock mines.

HIGHLIGHTS

- Downstream application test-work produced ultra-high purity 99.9995 wt%C graphite versus current standard lithium-ion battery anodes of >99.95 wt%C suggesting **Sovereign's purified material could lead to superior electrochemical performance**.

- 2018 Pre-Feasibility Study **demonstrated strong economics for flake graphite production and showed the project is at the very bottom of the global graphite cost curve**.

- With electric vehicle demand booming globally, the **Company is considering strategic options relating to vertical integration into lithium-ion battery anode production** to capture the anode value chain.

- Sustainability targets and legislation, consumer demands, and more affordable electric vehicles are driving **increased demand for lithium-ion batteries**. The UK has legislated that petrol and diesel cars will not be sold after 2030.

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MINERALS FOR A SUSTAINABLE WORLD

Sovereign is focused on developing sustainable supplies of critical raw materials to enable the global shift in the reduction of carbon emissions:

- **natural graphite** that can be mined, beneficiated, and purified with a considerably lower carbon footprint than hard-rock operations or synthetic graphite production, with the product being suitable feedstock for the rapidly expanding lithium-ion battery sector.
- **natural rutile** is the cleanest, purest form of titanium dioxide with a far lower carbon footprint that other higher energy and carbon intensive "upgraded" titanium pigment feedstocks such as synthetic rutile or titanium slag.

LITHIUM-ION BATTERY SECTOR

The lithium-ion (**Li-ion**) battery sector is the fastest growing market for flake graphite. Flake graphite is spheronised and carbon coated to construct Li-ion battery anodes. Greater capacity batteries, such as those required for electric vehicles, are expected to drive significant and growing demand for natural flake graphite over the coming years.

The key attributes for graphite to be used in the Li-ion battery are high purity and the ability to be spheronised.

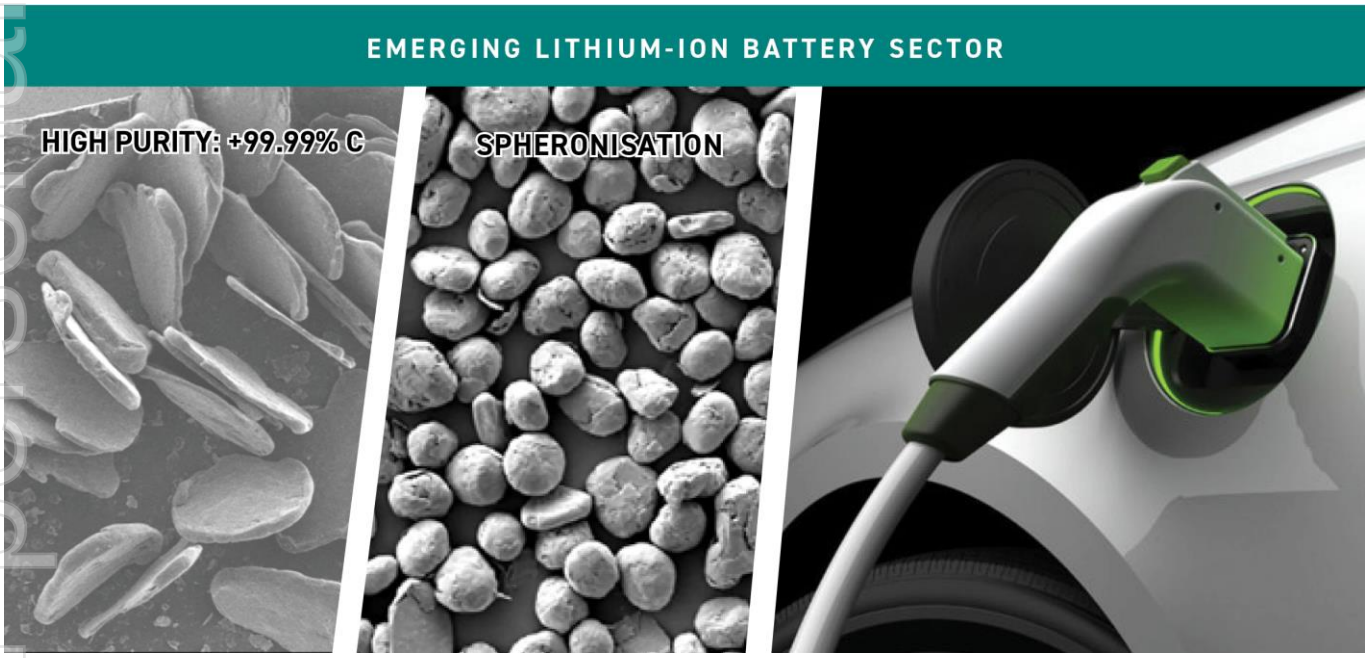

Figure 1. Key graphite attributes for the Li-ion battery sector.

Previous downstream application test work at Malingunde was able to achieve a **5-Nines graphite product (+99.999wt%C)** via a relatively simple purification process. This was a very important milestone as it highlights the potential for Sovereign to enter the high-end Li-ion battery sector as well as high-tech and specialty markets including the nuclear sector.

The purification process utilises a simple high temperature technique, which as a result of inherent uniqueness of the Malingunde flake graphite, requires low energy input to efficiently achieve some of the highest purity graphite in the world.

Spheronisation test-work demonstrated that spherical graphite with suitable benchmark specifications for Li-ion battery anodes can be produced from Malingunde concentrates (see Company announcement "*Testwork Confirms Suitability of Malingunde Concentrates for All Major End Markets*"; 14 August 2017).

The results highlighted a compelling opportunity for entry into the developing Li-ion battery supply chain, providing attractive future value upside for the Company, as new graphite supply will be required to meet the strong demand growth for Li-ion batteries in the future.

PURIFICATION TEST WORK

Sovereign has previously completed downstream application test-work that produced ultra-high purity levels of 99.9995 weight %C (5-nines) from its Malingunde natural crystalline flake graphite (see Company announcement "*99.9995% Purity Graphite Confirms Suitability for Multiple Downstream Applications*"; 19 July 2018).

The Company undertook a comprehensive work program at a renowned, North American ISO-compliant private graphite technology laboratory ("GTL") to assess the suitability of mine gate graphite concentrates from Malingunde for various high-end industries and applications.

The exceptionally high carbon purity and very low levels of critical impurities indicate that this material meets prerequisites for commercialisation in the value-added marketspace. Standard Li-ion battery anodes are currently >99.95 wt%C, suggesting Sovereign's purified material could lead to superior electrochemical performance.

Initial weight – concentrate (g)	Final weight – ash (g)	C lost as CO_2 (g)	Ash (wt %)	LOI (wt %C)
20.0774	0.00010	20.0773	0.000498	**99.999502**

Table 1. LOI950-Platinum crucible data with thermally purified graphite from Malingunde.

Ultra-high purity graphite is used in downstream applications which require strict control over impurities in the material, such as the production of semiconductors and photovoltaics for industries which include Li-ion batteries, aerospace, electronics and nuclear energy.

The purification process utilises a simple high temperature process, which as a result of inherent uniqueness of the Malingunde flake graphite, requires low energy input to efficiently achieve some of the highest purity graphite in the world.

Scanning electron micrograph ("SEM") imagery shows significant flake thickness, with some flakes in the +700µm category as thick as 50µm, which alone identifies them as a very unique source. The SEM data also revealed that the flakes are not intercalated with gangue minerals and any impurities appear to sit on the surfaces as opposed to being intercalated within the flake structure. This is very important for value-added processing because impurities that occur on the surface are typically much easier to remove than those embedded in the flake structure.

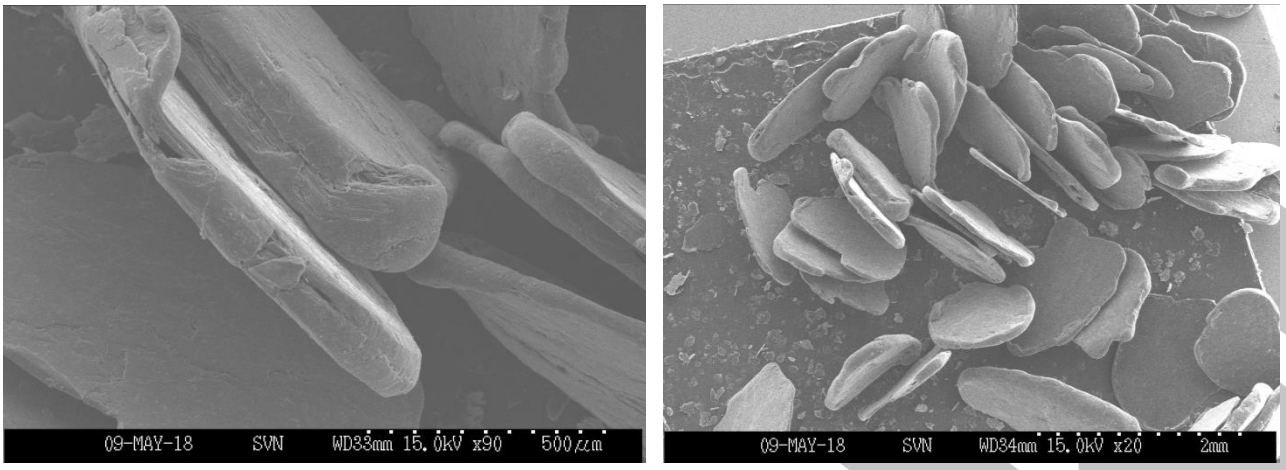

Figure 2. SEM images of super jumbo +700µm Malingunde natural flake graphite.

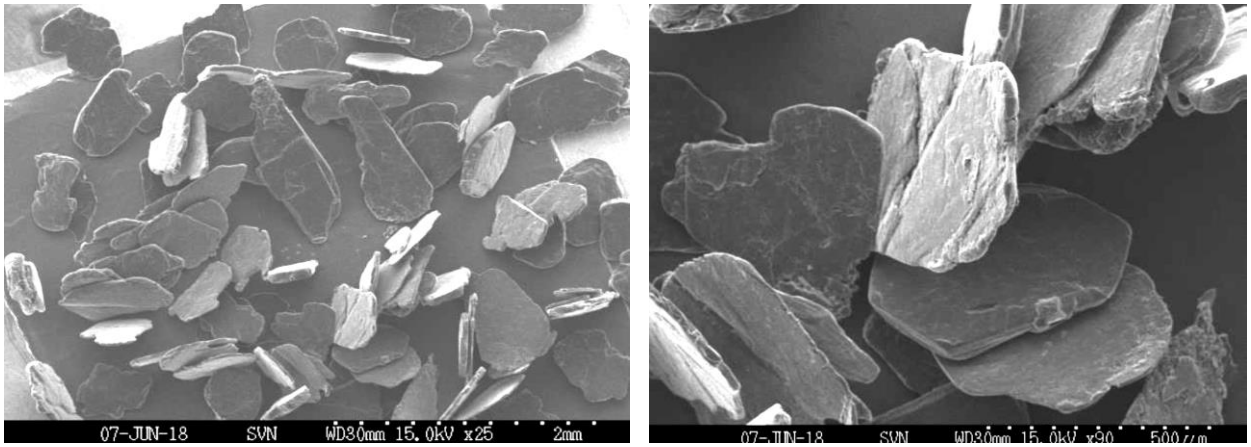

Figure 3. SEM images of jumbo +300µm Malingunde natural flake graphite.

SPECIALTY APPLICATIONS – BATTERIES

An initial laboratory test-work program conducted by an independent German industrial minerals specialist has demonstrated that spherical graphite with suitable benchmark specifications for Li-ion battery anodes can be produced from Malingunde concentrates (see Company announcement "*Testwork Confirms Suitability of Malingunde Concentrates for All Major End Markets*"; 14 August 2017).

Highlights of results achieved across the program include:

Parameter	SVM result	Benchmark value[1]	Measure
BET *(m^2/g)*	6.6	4 – 8	*Surface area of the particles*
Tap Density *(g/cm^3)*	0.90 – 0.93	> 0.90	*Ability for the particles to compact*
D_{50} *(µm)*	13.4 – 21.8	10 – 25	*Size of particles*
D_{90} : D_{10} ratio	2.1 – 4.0	< 3	*Distribution of particle size*
Purity	> 99.95%	> 99.95%	*Total graphitic carbon content*
Yield	21% – 51%	> 30%	*Yield of particles produced*

1. Per test-work provider

Table 2. Spherical graphite from Malingunde concentrates vs. benchmark specifications for Li-ion anodes.

These initial spheronisation test-work results on Malingunde concentrates are highly encouraging and warrant further Li-ion battery anode related test-work.

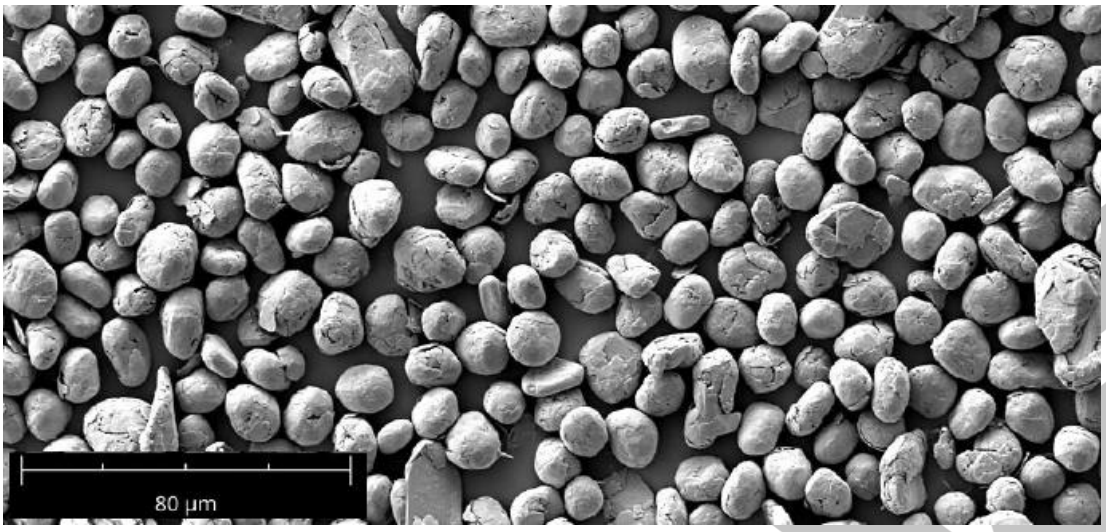

Figure 4: Electron micrograph of Malingunde spherical graphite.

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ELECTRIC VEHICLES WILL DRIVE NEW DEMAND FOR GRAPHITE

The next two decades years will bring significant changes as electrification of vehicles reshapes the automotive and freight markets globally. To power this energy transition, it is estimated that the world will need 20-25 TWh of annual growth in capacity for the next 15 years.[1]

Electric Vehicle (EV) Sales Expected to Grow 700% by 2030

There are now over 7 million passenger EVs on the road and electrification is spreading to other segments of road transport. Automakers are accelerating their EV launch plans, partly to comply with increasingly stringent regulations in Europe and China.

The long-term outlook for EVs remains bright, as fundamental cost and technology improvements outweigh the short-term impacts of the Covid-19 pandemic. Some near-term EV model launches will be delayed, but manufacturers are committed to long-term electrification and by 2022 there will be over 500 different EV models available globally.

Bloomberg estimates that by 2025, EVs hit 10% of global passenger vehicle sales, rising to 28% in 2030 and 58% in 2040.

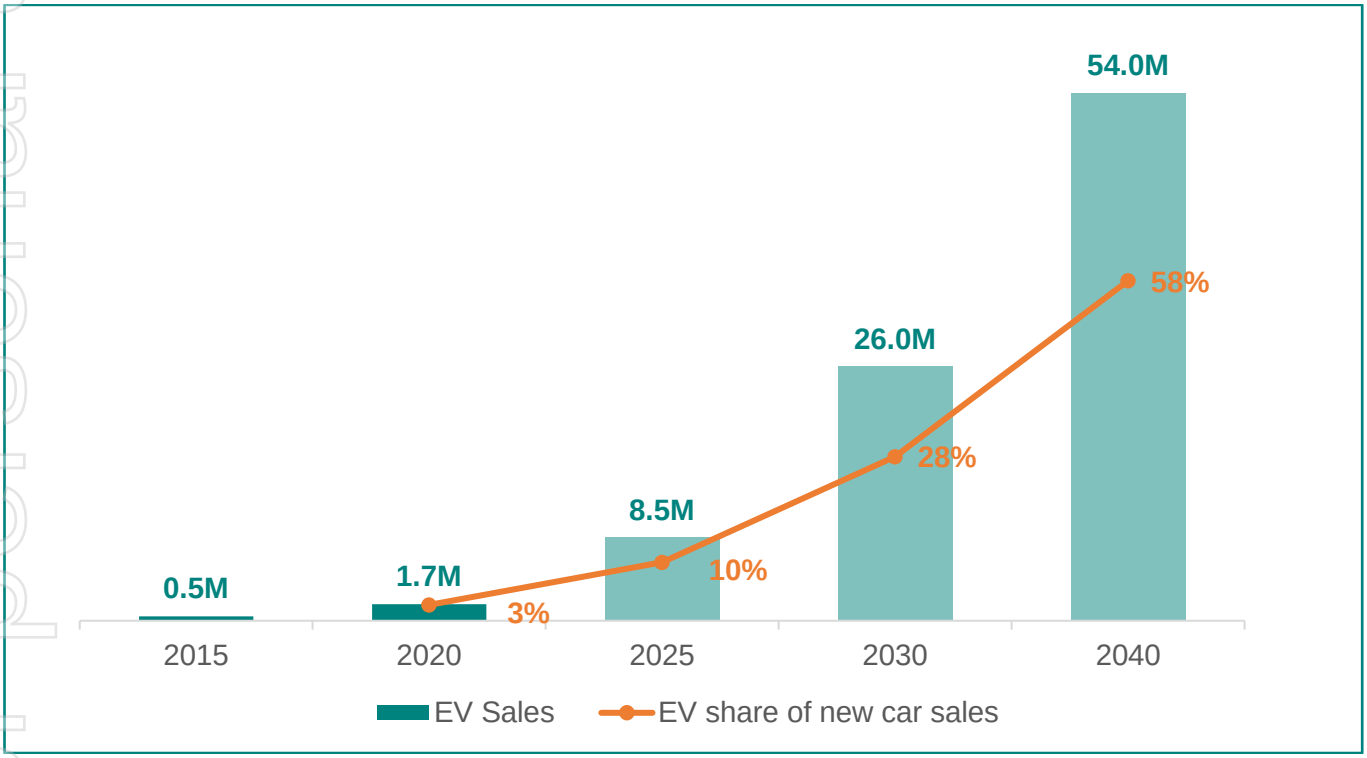

Figure 5: Global EV Sales (*Source: Bloomberg NEF Electric Vehicle Outlook 2020*)

Exceptional European Demand Growth Expected Driven by Regulation

Europe is the fastest growing market in the world for Li-ion batteries and currently sources all its anode materials from Asia. According to Deloitte, Europe will represent 27% of the global EV market by 2030 as policies adopted by the UK and European Union to regulate vehicle emissions and restrict new internal combustion vehicle sales come into force. By 2030, 42% of all new car sales in Europe are forecast to be EV sales.

To meet this demand, European mega-factory capacity is expected to grow by 228%, representing close to 20% of the world's mega-factory capacity by 2029[2].

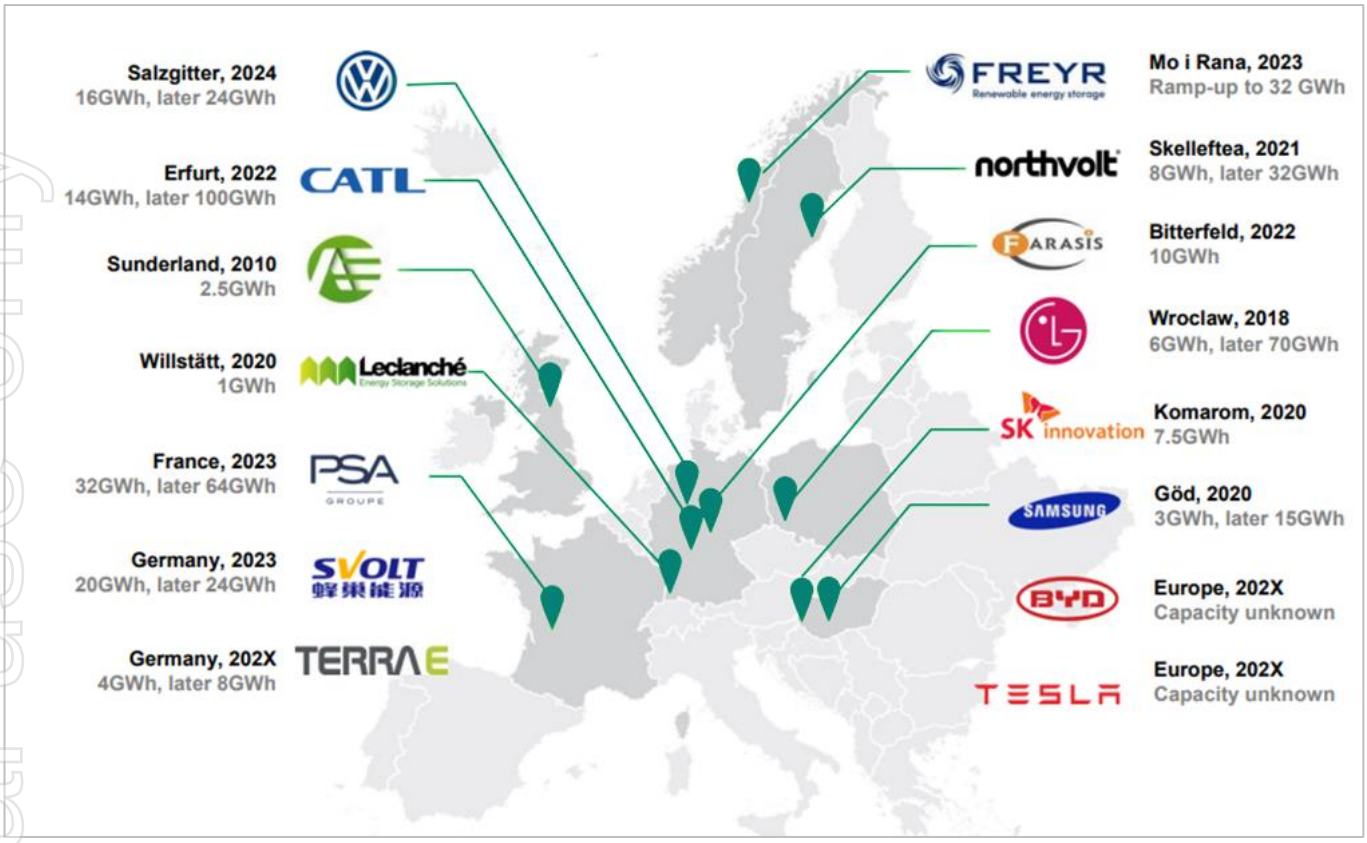

Figure 6: European Battery Makers *(Source: After Roland Zenn)*

Graphite is the Major Active Material in Li-ion Batteries

Strategic mineral supplies from sustainable sources are vital to OEMs' capacity to produce batteries, cars and energy storage systems[1]. With up to ten times more graphite by volume than lithium in a Li-ion battery, to meet demand for batteries, approximately 3.5 million tonnes graphite anode is required by 2029, up from 600,000 tonnes today[3].

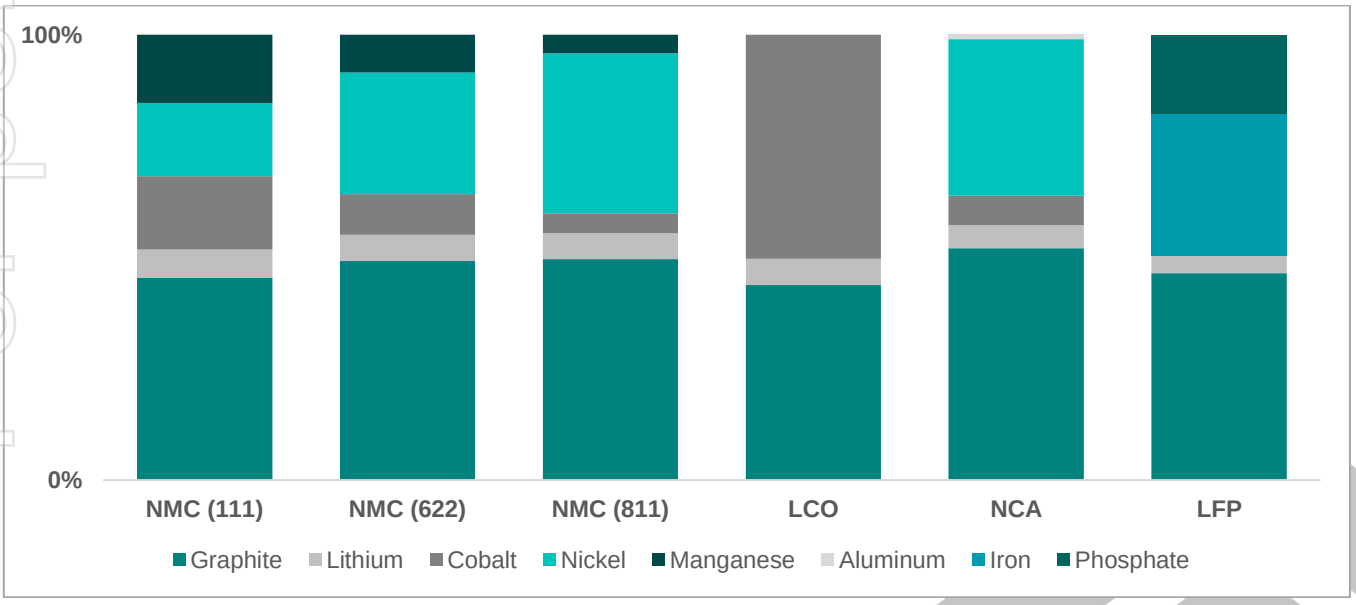

Figure 7: Composition of Major Li-ion Cathode Types *(Source: MRS Energy & Sustainability: A Review Journal)*

Graphite demand (natural and synthetic) is expected to exceed global supply by 400,000 tonnes as early as 2026. New production is needed to come online to meet the strong growth market.

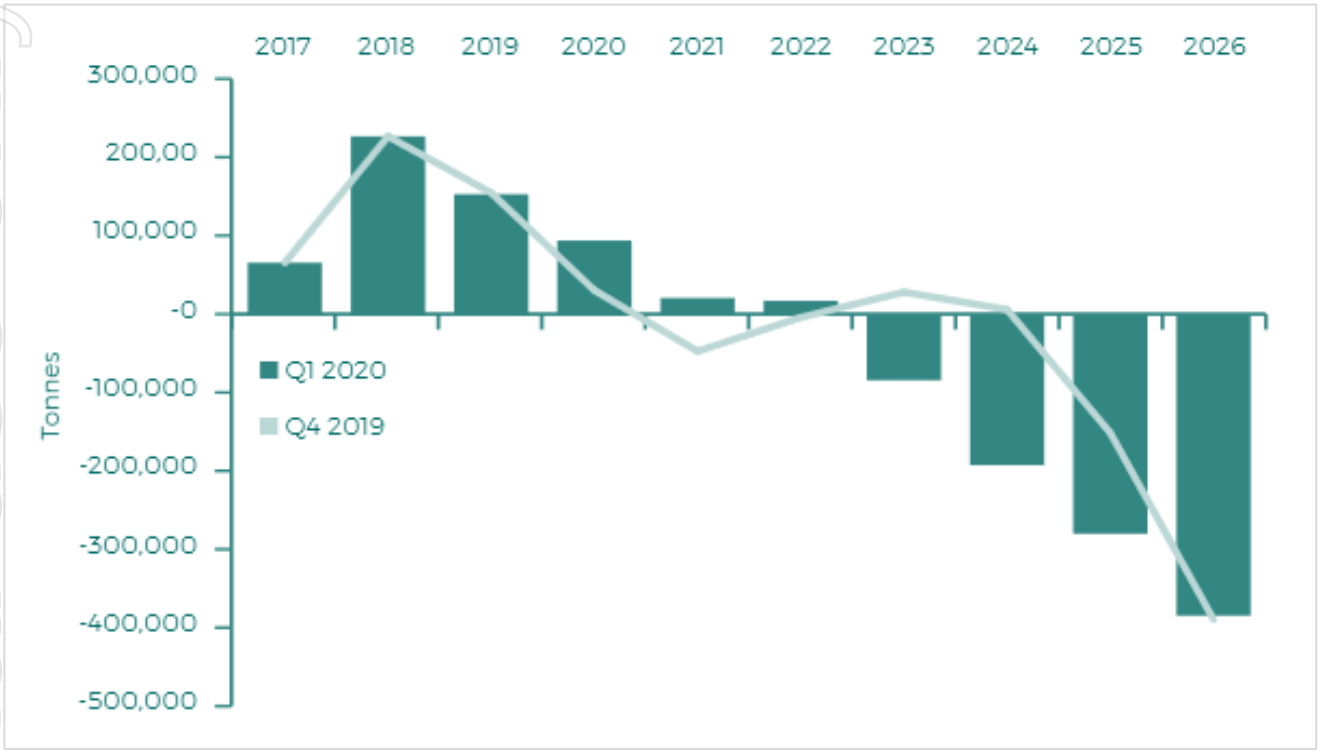

Figure 8: Flake Graphite Market Balance *(Source: Benchmark Mineral Intelligence Flake Graphite Forecasts; April 2020)*

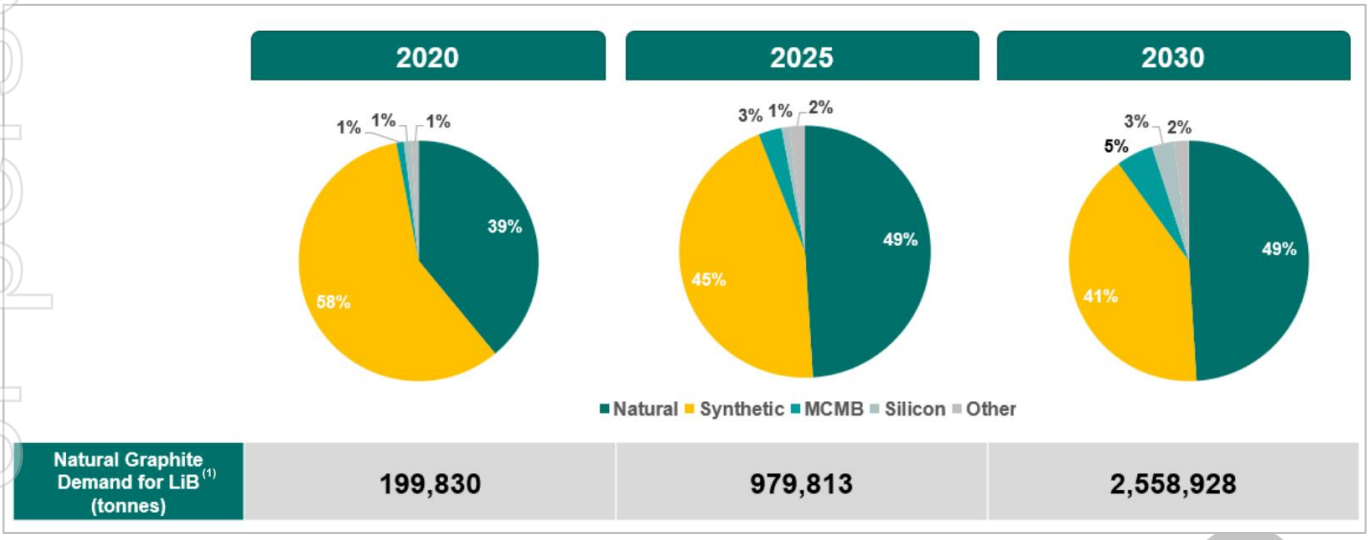

Figure 9: Anode Material Usage Indicating the Shift to Natural Graphite *(Source: Benchmark Minerals Intelligence)*

Industry's interaction with supply chain participants indicates the progression towards higher proportions of natural graphite used in battery anodes will be supported by its lower cost and superior environmental credentials. Environmental footprint of EVs will become increasingly important as EV penetration accelerates, noting that synthetic graphite is made from the by-product of energy intensive coking and oil refinery processes.

CONCLUSIONS

Sovereign's natural graphite and rutile projects in Malawi meet many of the key ESG objectives and sustainability criteria set by the investment community and major governments around the world. Both minerals are hosted in soft and friable, free-dig saprolite leading to considerably lower carbon footprint in mining and beneficiation compared to hard-rock mines and synthetic products.

Additionally, both graphite and rutile have significant further downstream benefits in terms of carbon reduction with natural graphite being a major input for Li-ion batteries used in the booming EV market and natural rutile able to displace carbon, energy and waste intensive synthetic rutile and titanium slag in pigment production.

The Company is further considering strategic options relating to provision of graphite products for battery anode production to capture the anode value chain.

Sovereign is pleased to be advancing its graphite projects in parallel with its world-class rutile projects, with various down-stream test-work programs planned, enabling it to be positioned to provide new graphite supply to meet the strong demand for Li-ion batteries required for a sustainable future.

Sources

1. *Nouveau Monde Graphite (TSXV:NOU) – Corporate Presentation (January 2021)*
2. *Benchmark Mineral Intelligence (September 2020)*
3. *Talga Group Limited (ASX:TLG) – Investor Presentation (15 December 2020)*

Competent Person Statement

The information that relates to previous Downstream Testwork Results is extracted from an announcement on 19 July 2018. This announcement is available to view on www.sovereignmetals.com.au. The information in the original announcement that related to Downstream Testwork Results was based on, and fairly represents, information provided to 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 of SGS Canada Inc. ("SGS"). SGS and Metpro are engaged as arms-length consultants to 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'. 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 announcement.

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.

This Announcement has been authorised for release by the Company's Board of Directors.