Robust Vittangi Anode Project DFS

- The Detailed Feasibility Study **confirms the Vittangi Anode Project's exceptional potential to supply globally competitive green graphite anode**, suitable for multiple applications including Tier 1 automotive lithium-ion batteries
- Annual estimated **revenue of US$240 million** from steady state **production of 19,500tpa battery anode product Talnode®-C** via integrated operation in northern Sweden
- The robust, high margin operation has a **24-year life of mine revenue of US$5,352 million** and **EBITDA of US$4,081 million**
- Positive pre-tax **NPV_8 of US$1,054 million** with robust margins, post commissioning **payback period of 2.5 years** and pre-tax **IRR of 30%**
- Economics based solely on the updated **Nunasvaara South Ore Reserve of 2.3 million tonnes at 24.1% graphite,** an increase of 17% in tonnage from the PFS Ore Reserve
- Estimated capital expenditure of **US$484 million plus US$44 million contingency (9.1%) and owner's costs** with additional equipment and processes aligned to latest product requirements of **Tier 1 EV battery customers** and expanded infrastructure to support future Niska expansion
- Commencement of **mining planned for 2023 with commercial anode production in 2024**

Battery anode and advanced materials company Talga Group Ltd ("Talga" or "the Company") (ASX:TLG) is pleased to announce the completion of the Detailed Feasibility Study ("DFS" or "Study") for its Vittangi Anode Project ("the Project") in northern Sweden.

The DFS results confirm the Project's exceptional potential to deliver Talga's flagship green graphite anode product Talnode®-C directly to lithium-ion battery customers via a vertically integrated Mine-to-Anode operation, producing 19,500 tonnes per annum ("tpa") from 100,000tpa of Vittangi graphite ore over 24 years life of mine.

Internationally renowned engineering firm Worley (UK) was the lead consultant and responsible for the overall co-ordination of the Study. All key areas of the DFS were executed by Tier 1 engineering consultancies with support from Talga employees and local Swedish consultants. The Study was completed to a Level 3 (± 15% accuracy) classification in terms of capital and operating allowances, and applied the highest environmental standards.

In comparison to the Pre-feasibility Study ("PFS") (**ASX:TLG 23 May 2019**), the capital expenditure estimate has increased primarily due to the incorporation of US$153 million additional anode production equipment and processes to satisfy updated battery requirements of Talga's Tier 1 automotive customers. US$72 million additional infrastructure was also included to facilitate substantial growth opportunities identified in the positive Niska Scoping Study (**ASX:TLG 7 December 2020**). Refer to page 25 of the DFS Summary for a breakdown of the estimated Project capital cost.

The Board of Directors considers that the successful DFS provides a strong platform for Talga to secure project financing and development partners, complete customer agreements and commence construction as per the development schedule. Talga is engaging with potential project development partners, including Luossavaara-Kiirunavaraa Aktiebolag ("**LKAB**") and Mitsui & Co. Europe Plc ("**Mitsui**") where due diligence is progressing under a Letter of Intent (**ASX:TLG 28 June 2021**).

Figure 1 *Schematic illustrations of Talga's vertically integrated Vittangi Anode Project in northern Sweden, with graphite mine & concentrator at Vittangi (left) and anode refinery at Luleå (right).*

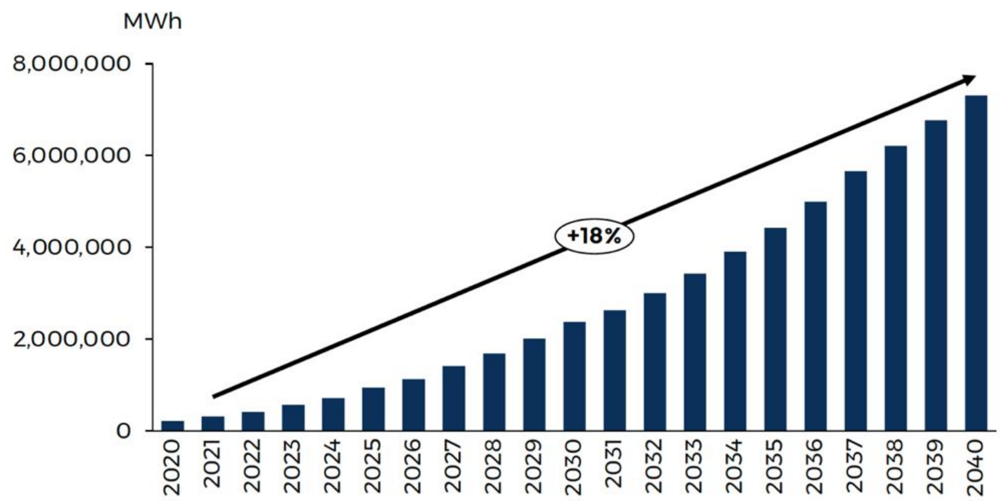
Talga Managing Director, Mark Thompson: *"We are excited to deliver the Vittangi Anode Project DFS to the market and to our partners. The Study is the culmination of extensive work undertaken by Worley and confirms the robust economics of the Project. As part of the Study, we have upgraded equipment and process in response to our Tier 1 automotive customer battery targets and extended the Project life to 24 years with significant additional reserves. This is a sound base from which to commence Swedish battery anode operations while exploring further growth potential.*

Talga's European-based natural green-graphite anode operation is well timed to meet the unprecedented increased battery demand driven by the global megatrend towards electrification and decarbonisation. We are confident that this initial stage of operation will be a stepping stone to Talga's larger role in the global battery and EV supply chain."

The lithium-ion battery market is entering a period of unprecedented demand underpinned by sharply increased production of Electric Vehicles (EV) and steady growth in Energy Storage Systems (ESS) and Computer/Cell Phone/Consumer Electronic (3C) applications.

Established lithium-ion technologies dominate planned battery capacity, and as these uses predominantly graphite anodes, there is a concurrent growth in demand for new graphite anode production. Benchmark Mineral Intelligence forecasts that over the next two decades, anode demand will grow an average of ~18% compound annual growth rate (CAGR).

Figure 2 *Anode Demand Forecast 2020 to 2040 (1 MWh = 1.2 tonne anode), Benchmark Mineral Intelligence.*



Detailed Feasibility Study Estimated Key Outcomes (All in USD)

PARAMETER	UNITS	OUTCOME
Annual ore mining rate	tonnes	100,000
Life of Mine (LOM)	years	24
Average annual production of Talnode®-C	tonnes	19,500
Revenue (LOM)	$million	$5,352
Pre-tax NPV_8 (real)	$million	$1,054
Pre-tax IRR	%	30%
Capex (excluding 9.1% contingency and owners' costs)	$million	$484
Payback (from concentrator commissioning)	years	2.5
Average cash cost of production of Talnode®-C	$/tonne	$2,363
EBITDA (LOM)	$million	$4,081
Net profit before tax (LOM)	$million	$3,481

The DFS was based on the updated Nunasvaara South Ore Reserve of 2.3 million tonnes (Mt) at 24.1% graphite (Cg) estimated by Golder UK. This is an increase of 17% more tonnes over the previous Ore Reserve (**ASX:TLG 23 May 2019**) and represents only ~12% of the global Vittangi JORC (2012) Mineral Resource Estimate (MRE) of 19.5Mt @ 24.0% Cg. The average LOM extraction of graphite ore, and subsequent processing and refining into Talnode®-C, is based solely on this Ore Reserve.

The robust, high margin operation has a forecast revenue of US$5,352 million over 24 years life of mine. Key project metrics include an estimated pre-tax Net Present Value (NPV) of US$1,054 million at an 8% discount rate and a pre-tax Internal Rate of Return (IRR) of 30% with a pay-back period of 2.5 years from commencement of concentrator commissioning.

The Vittangi Anode Project price assumptions are referenced to an extensive industry price forecast and product investigation report commissioned from price reporting agency and market intelligence publisher for the Li-ion battery supply chain, Benchmark Mineral Intelligence. Considering Talnode®-C's performance characteristics and customer feedback, BMI assessed Talnode®-C to be a high-end graphite anode, positioned between its High and Mid-range reference prices for Tier 1 EV anode. Refer to page 18 of the DFS Summary for Market Demand and Supply section.

Exploitation (mining) and environmental permits were submitted to relevant authorities in May 2020. Talga continues to positively engage with authorities as permits progress through the approvals process, and is not aware of any impediment to the exploitation permit applications being granted. The Company is now finalising the environmental permit for the Luleå anode refinery site.

During the course of the DFS, a scoping study was completed to evaluate the potential addition of ~85,000tpa Talnode®-C production from the adjacent Niska resources. This study identified significant commercial synergies to unify deposit development and production plans to maximise potential of the Vittangi project area. This will be subject to separate studies following further discussions with customers and project development partners.

Authorised for release by the Board of Directors of Talga Group Ltd.

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Competent Person Statement

The information in this announcement that relates to Reserve Estimation is based on and fairly represents information that has been compiled by John Walker. Mr Walker is a sub-contractor with Golder Associates Ltd. who act as consultants to the Company. Mr Walker is a Professional Member of the Institute of Materials, Minerals and Mining (Membership No.451845) a Fellow of the Institute of Quarrying (Membership No.22637) and a Fellow Member of the Geological Society (Membership No.1021044). He has been involved in the mining industry for 30 years acting in various roles including production, project development and consulting.

Mr Walker has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this announcement and to the activity 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" ("JORC Code"). Mr Walker consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears. Mr Walker does not hold securities (directly or indirectly) in the Company.

The Niska Mineral Resource estimate was first reported in the Company's announcement dated 15 October 2019 titled 'Talga boosts Swedish graphite project with maiden Niska resource'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the previous market announcement continue to apply and have not materially changed.

The Nunasvaara Mineral Resource estimate was reported in the Company's announcement dated 17 September 2020 titled 'Talga Boosts European Natural Graphite Resources'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement and that all material assumptions and technical parameters underpinning the Resource estimate in the previous market announcement continue to apply and have not materially changed.

The information in this report that relates to the Vittangi Graphite Project - Nunasvaara Resource Estimation is based on information compiled by Albert Thamm. Mr Thamm is a consultant to the Company. Mr Thamm is a member of the Australian Institute of Mining and Metallurgy (Membership No. 203217).

Mr Thamm has sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this document 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 (JORC Code). Mr Thamm consents to the inclusion in this report of the matters based on this information in the form and context in which it appears. Mr Thamm does not hold securities (directly or indirectly) in the Company.

The information in this report that relates to Exploration Targets is based on information compiled by Mr Thamm. Mr Thamm is a consultant to the Company. Mr Thamm is a member of the Australian Institute of Mining and Metallurgy (Membership No. 203217).

Mr Thamm has sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activity which has been 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 (JORC Code). Mr Thamm consents to the inclusion in the report of the matters based on this information in the form and context in which it appears. Mr Thamm does not hold securities (directly or indirectly) in the Company.

The information in this document that relates to exploration results is based on information compiled by Amanda Scott, a Competent Person who is a Fellow of the Australian Institute of Mining and Metallurgy (Membership No.990895). Ms Scott is a full-time employee of Scott Geological AB.

Ms Scott has sufficient experience, which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been 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 (JORC Code). Ms Scott consents to the inclusion in the report of the matters based on her information in the form and context in which it appears. Ms Scott does not hold securities (directly or indirectly) in the Company.

The information in this document that relates to metallurgy results is based on information compiled by Martin Phillips, a Competent Person who is a Member of the Australian Institute of Mining and Metallurgy (Membership No.108230). Mr Phillips is a full-time employee of Talga Group Ltd.

Mr Phillips has sufficient experience, which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been 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 (JORC Code). Mr Phillips consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Mr Phillips holds securities indirectly in the Company.

About Talga

Talga Group Ltd (ASX:TLG) is building a European battery anode and graphene additives supply chain to offer advanced materials critical to its customers' innovation and the shift towards a more sustainable world. Vertical integration, including ownership of several high-grade Swedish graphite projects, provides security of supply and creates long-lasting value for stakeholders.

Company website: **www.talgagroup.com**

Forward-Looking Statements

Statements in this document regarding the Company's business or proposed business, which are not historical facts are forward-looking statements that involve risks and uncertainties, such as estimates and statements that describe the Company's future plans, objectives or goals, including words to the effect that the Company or management expects a stated condition or result to occur. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements. Investors are cautioned not to place undue reliance on forward-looking statements.

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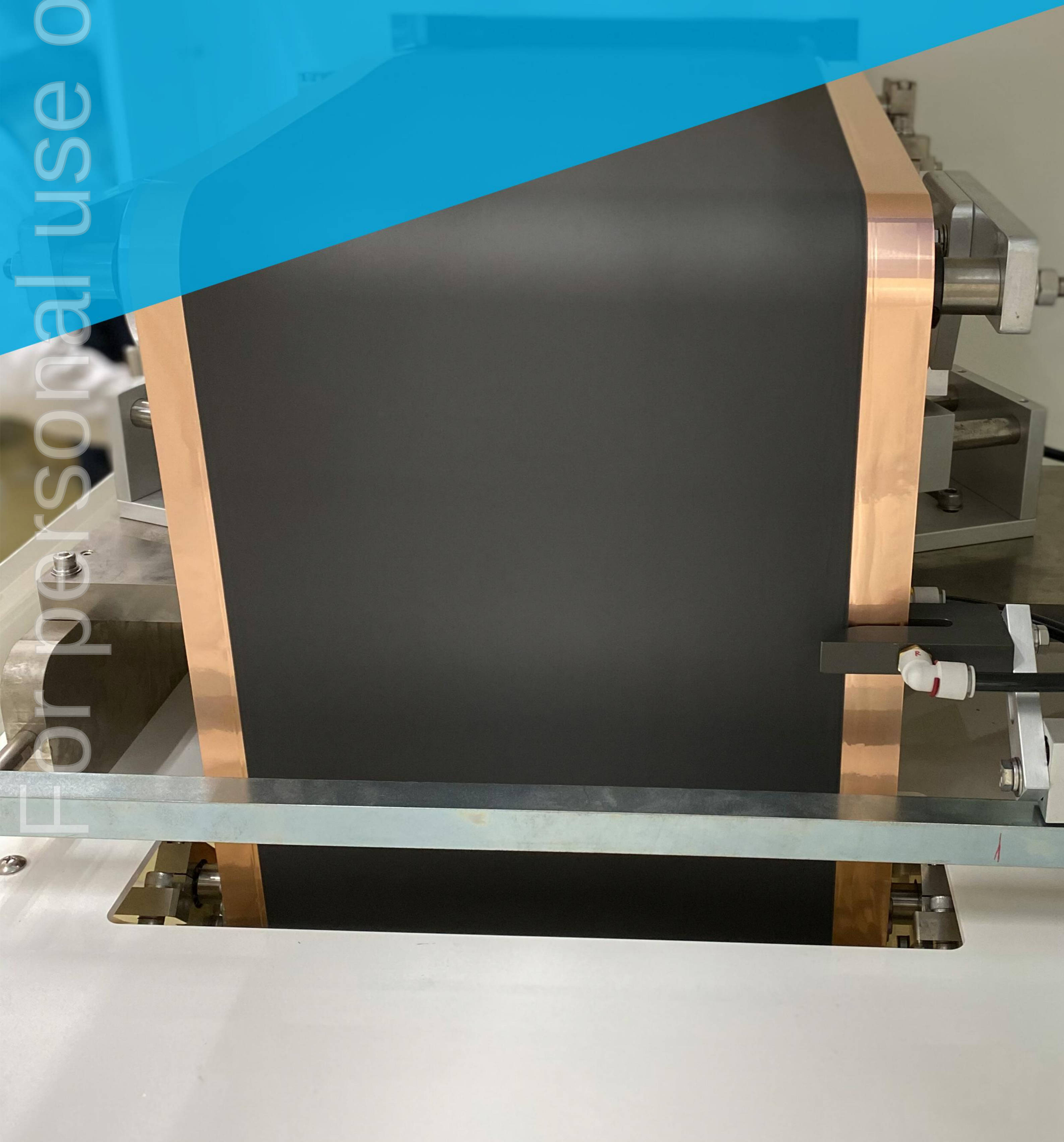
VITTANGI ANODE PROJECT

DETAILED FEASIBILITY STUDY SUMMARY



INTRODUCTION

Talga Group Ltd ("Talga" or "the Company") is building a vertically integrated, European based operation to produce green graphite anode for global battery manufacturers and automotive original equipment manufacturers ("OEMs"). In addition to shortening the strategic supply chain to Europe and offering secure supply, Talga's green graphite anode products can help achieve the de-carbonisation objectives of battery manufacturers, regulators and consumers.

A Detailed Feasibility Study ("DFS" or "Study") has been completed for the development of Talga's Vittangi Anode Project ("Project") in northern Sweden including a graphite mining and mineral processing operation ("Mine") at Talga's Nunasvaara South deposit, located within the Vittangi Project (see Figure 14), and an integrated anode refinery ("Refinery") near the Port of Luleå.

The Study outlines the production of a high-performance lithium-ion ("Li-ion") battery graphite anode product, Talnode®-C, to be sold direct to battery and automotive customers to capture the margins in the anode supply chain.

The Company believes the announcement is a fair and balanced summary of the Study.

STUDY CONTRIBUTORS

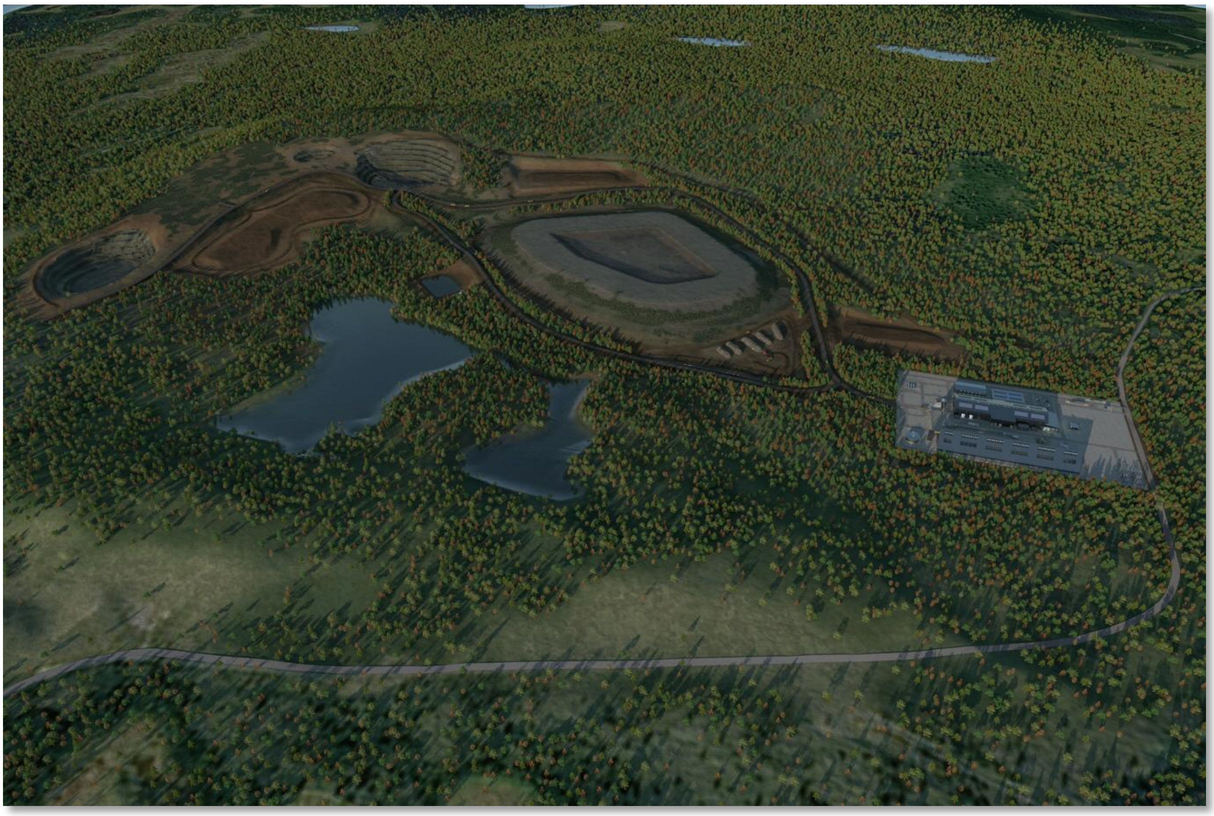
Internationally renowned engineering firm Worley was the lead consultant and responsible for the overall co-ordination of the Study. The key areas of the DFS have been executed by Tier 1 engineering consultancies supported by Talga employees and local Swedish consultants (see Table 1).

The Study was completed to an overall Class 3 estimate (±15% accuracy) with a conservative approach in terms of capital and operating allowances, as well as applying the highest environmental standards.

Table 1 *Contributors to the DFS.*

PRINCIPAL CONSULTANTS	SCOPE AREA
Worley (UK) and Sweco Engineering (Sweden)	Process Plant, NPI, Construction Planning and Cost Estimates
Golder Associates	Ore Reserve and Mine Design
Golder Associates	Integrated Waste Facility
Itasca, Golder Associates	Geotechnical Consultant
Centre Terre et Pierre (CTP)	Purification Process Technology
Core Resources	Process Design Packages
Sweco Sverige AB	Hydrogeology & Surface Water Natura 2000 Consultant
Benchmark Mineral Intelligence	Li-ion Battery Market Demand and Prices
Kyoto Research Institute	Product Specification Evaluation Report
GTK Geological Survey Finland	Beneficiation Bulk Testing Report
Drytech	Dryer Test Report
Powder technology Company - Osaka	Anode Coating Test Report
GeoVista AB	Landowner and Tenements Consultant
Golder Associates AB	Geochemistry & Geochemical Characterisation
Golder Associates AB	Soil & Moraine Surveying, EIA Consultant
Swedish Geological AB	Social Economic Consultant
Mannheimer Swartling	Environmental Legal and Permitting

Figure 1 *Schematic illustrations of Talga's vertically integrated Vittangi Anode Project in northern Sweden, with graphite mine & concentrator at Vittangi (top) and anode refinery at Luleå (bottom).*



MINERAL RESOURCES AND ORE RESERVE ESTIMATE

The bedrock geology of the Vittangi Graphite Project ("Vittangi") area is dominated by greenstones (basalts to andesites), metasediments (quartzite, graphite schist, marble) and metadolerites which form part of the 2.0-2.3 billion year age Vittangi Greenstone Group.

Within Vittangi a prominent graphitic schist unit occurs, the Nunasvaara Member, consisting of exceptionally evenly distributed, highly crystalline, very fine graphite flakes. Exploration of part of this graphite unit has defined the highest grade known JORC compliant flake graphite mineral resource estimate (MRE) in a global context and largest in Europe (**ASX:TLG 27 April 2017**).

The graphite mineralisation of the Nunasvaara South Resource (containing the Nunasvaara South Probable Ore Reserve) comprises sub-vertical, 20-30m+ wide, 1200m-long lithologically continuous units of very fine-grained grey to black graphite rock containing up to 46% graphitic carbon (Cg). The resource, which outcrops, has been modelled to a depth of ~220m and the mineralisation remains open both along strike and at depth.

Vittangi Project Mineral Resource Estimate

The upgraded Nunasvaara MRE calculated by Albert Thamm (Geological Consultant), was published to the Australian Securities Exchange (ASX) on 17 September 2020 (**ASX:TLG 17 September 2020**). This MRE, including JORC Table Sections 1-3, has not changed. The global Vittangi JORC (2012) MRE stands at 19.5 million tonnes (Mt) @ 24.0%Cg for 4.7Mt of contained graphite (see Table 2).

Table 2 *Vittangi Graphite Project Total (JORC 2012) Mineral Resource Estimate (September 2020).*

DEPOSIT	RESOURCE CATEGORY	TONNES	CG [%]	CONTAINED GRAPHITE [TONNES]
Nunasvaara South	Indicated	8,600,000	24.8	2,132,800
	Inferred	1,900,000	22.5	427,700
Nunasvaara North	Indicated	1,800,000	29.4	529,200
	Inferred	2,600,000	14.8	385,000
	Total	**14,900,000**	**23.4**	**3,474,700**
Niska North	Indicated	4,160,000	25.8	1,074,528
Niska South	Indicated	480,000	25.8	123,696
	Total	**4,640,000**	**25.8**	**1,198,000**
TOTAL (indicated and inferred)		**19,500,000**	**24.0**	**4,672,700**

Note:
1. Due to rounding totals may not reconcile exactly.
2. Ore tonnes rounded to nearest hundred thousand tonnes.
3. Nunasvaara Resources at 10%Cg cut-off, Niska Resources at 10%Cg cut-off as at 17 September 2020.
4. The Nunasvaara graphite MRE was disclosed on 17 September 2020 in accordance with the 2012 JORC Code. The Niska graphite MRE was disclosed in October 2019 in accordance with the 2012 JORC Code (ASX:TLG 15 October 2019).
5. The total for the Vittangi Graphite Project has increased to 19.5Mt at 24.0%Cg from the previous 16.9Mt at 25.6%Cg due to the restatement of the Nunasvaara Resources and the changes discussed above.

Figure 2 *Vittangi Graphite Project location showing Nunasvaara deposit with proximate mines, towns, transport infrastructure and electricity transmission lines.*

Figure 3 *Vittangi graphite surface sample with 18650-size Li-ion batteries showing anode layers.*

Ore Reserve Statement

Golders Associates (UK) (Mining Consultants) previously reported the Vittangi Graphite Project Ore Reserve of 1.9Mt at an average grade of 23.5% Cg and 22 year mine life (**ASX:TLG 23 May 2019**). The updated Probable Ore Reserve Statement in this DFS now stands at 2.3Mt @ 24.1% Cg and a mine life of 24 years. 100% of the material in the DFS project schedule is included in the Probable Ore Reserve classification, with no Inferred Resources (see Table 3).

The Ore Reserve Statement JORC Table is included in the Appendix: 'JORC 2012 Table 1, Section 4'.

Table 3 *Vittangi Graphite Project - Ore Reserve Statement.*

DEPOSIT	RESERVE CATEGORY	TONNES	GRAPHITE (% Cg)	CONTAINED GRAPHITE (TONNES)
Nunasvaara South	Proven	0	0	0
	Probable	2,260,140	24.1	544,693
	Total	**2,260,140**	**24.1**	544,693

Note: Due to rounding totals may not reconcile exactly.

The Ore Reserve underpinning the production target and forecast financial information in this announcement has been prepared by a Competent Person in accordance with the requirements in Appendix 5A (JORC Code).

MINE DESIGN AND PRODUCTION

The Mine is scheduled to produce approximately 100,000 tonnes per annum (“tpa”) of run-of-mine (“ROM”) graphite ore over a total mine life of 24 years. The selected pit shell for scheduling is targeting a desired initial product output for minimum environmental impact and is not constrained by geology or resources - which remain open along strike and at depth.

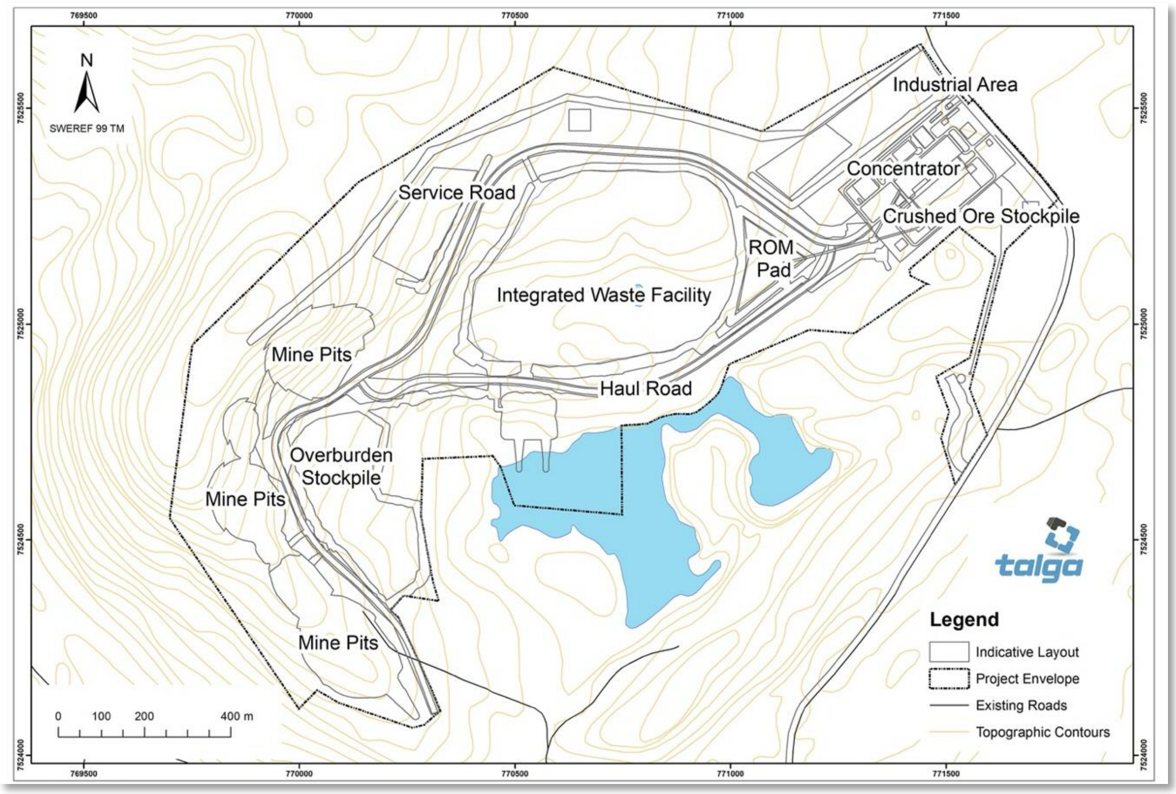
A mining contractor will be used to extract the waste and the graphite ore using standard open pit mining methods, i.e. drilling and blasting followed by loading and hauling. The mined ore will be hauled to the ROM stockpile where it will be crushed (primary to tertiary) then conveyed directly to the concentrator. Mining operations are to be active only during the second and third quarter of each year to minimise impact on winter land use, with 50,000 tonnes ("kt") undercover stockpiling to achieve a continuous feed to the concentrator which will operate year round.

The proposed mine comprises a series of open pits to be mined along the strike of the deposit. Based on achieving a consistent head grade for the processing plant mining operations will start in Pit 4 area and then merge into a single larger open pit comprising Pit 4 through to Pit 1 via a series of pushbacks and extensions. Soils will be stockpiled, seeded and maintained over the duration of the mine operation for use in end of mine cover and rehabilitation.

Overburden, which is non-acid forming and suitable as cover material, will be stored in a designated overburden storage facility. Pit 6 will be worked following the extraction of Pits 1 – 4, and the waste rock rotationally backfilled into Pit 3 and 4 before being covered with soil and revegetated as part of end of mine rehabilitation. Pit 5 contains inferred material and has not been included in the ore reserve or DFS mining schedule.

Drilling and blasting is proposed to take place on a 5m bench height and loading the material in 2 flitches of equal height, which will nominally be 2.5-3.0m high. The mining process will minimise ore loss and dilution, and allow for the 100,000tpa ore mining rate to be achieved cost effectively.

Figure 4 *Summary Layout – Mining and Ore Processing.*

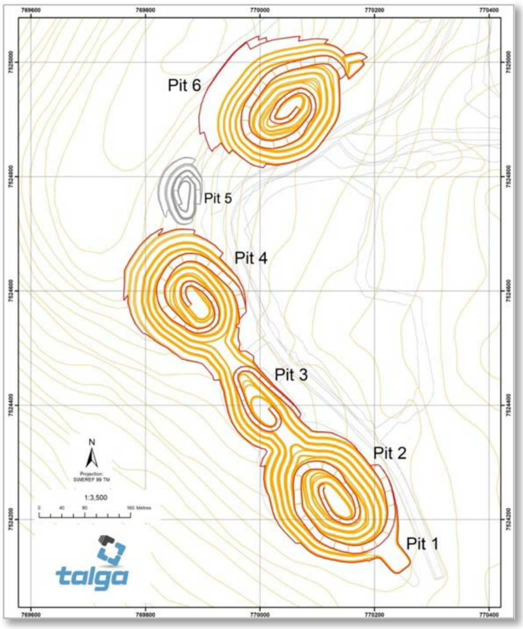


A number of iterations were undertaken to generate mining schedules that over time built up an understanding of the most economic and practical approach for mining the deposit.

Production scheduling was performed on the basis of minimising overall environmental impact of operations, maximising overall NPV, providing consistent plant feed tonnages and grade, minimising large stockpile movements and inventory (low grade and ROM stockpiles), steady state waste tonnes and total material mined and minimising the number of active benches and vertical advance.

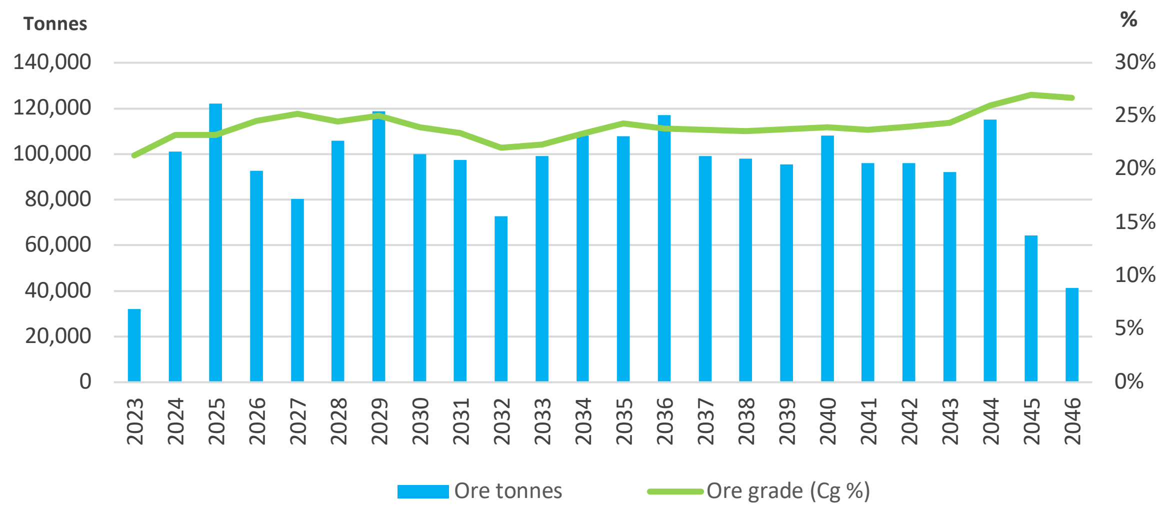
The ultimate pit design of the Nunasvaara South deposit is illustrated in Figure 5 and as indicated the pit will have multiple access points established along the highwall pit limits. The access points are designed in such a way that surface hauling distances to the dump, stockpiles and crusher are optimised.

Figure 5 *Pit Layout – Mining Strategy.*



The deepest parts of the mine are anticipated to reach 72m in Pit 2, around the 250m datum. The contract miner is expected to utilise 40-45 tonne articulated trucks and Talga is investigating the use of electric powered, autonomous equipment in future.

Figure 6 *Production profile of Nunasvaara South in DFS.*



Waste

The average rock waste strip ratio over life of mine is 4:1. Waste from pits 1, 2 and 3 will be used as construction material for the integrated waste facility ("IWF"). Waste from pits 4 and 6 will be backfilled into pits 1, 2 and 3. This approach reduces haul distances, waste dump footprint and reclamation expenses at the end of mine life.

The haulage schedule was generated from the mining schedule. Waste material from Year 1 to Year 8 is sent directly to the IWF and from Year 8 approximately 2.87Mt of waste material is redirected to Pit 4 for waste fill. When Pit 4 location backfill has been completed, waste material is redirected back to the IWF.

Integrated Waste Facility

An IWF has been designed to store the dewatered tailing filtercake using the waste rockfill to create two individual cells ultimately combining into a single solid landform. The entire footprint of the IWF will be lined with a bituminous geomembrane having a track record of successful application in protecting water resources and soil complete with underdrainage. Runoff and drainage from the IWF will be collected and treated in a wastewater plant prior to use as process water.

Closure plans and rehabilitation of the IWF include surface profiling with run off and capping, soil enhancement and vegetation trials towards establishing an effective final form and long-term monitoring. Total footprint area of the IWF will be approximately 18.7 hectares at closure with the intention of providing suitable after-use such as reindeer husbandry, forestry or recreation.

PROCESS DESIGN & PLANT

The Vittangi Anode Project employs a vertically integrated flowsheet with processing facilities designed to produce a nominal 19,500 tonnes per year of high-performance coated Li-ion battery anode product (Talnode®-C) from natural flake graphite ore. Talga's integrated process strategy is designed and optimised around the Company's Tier 1 EV battery customers performance targets.

Flowsheet Development

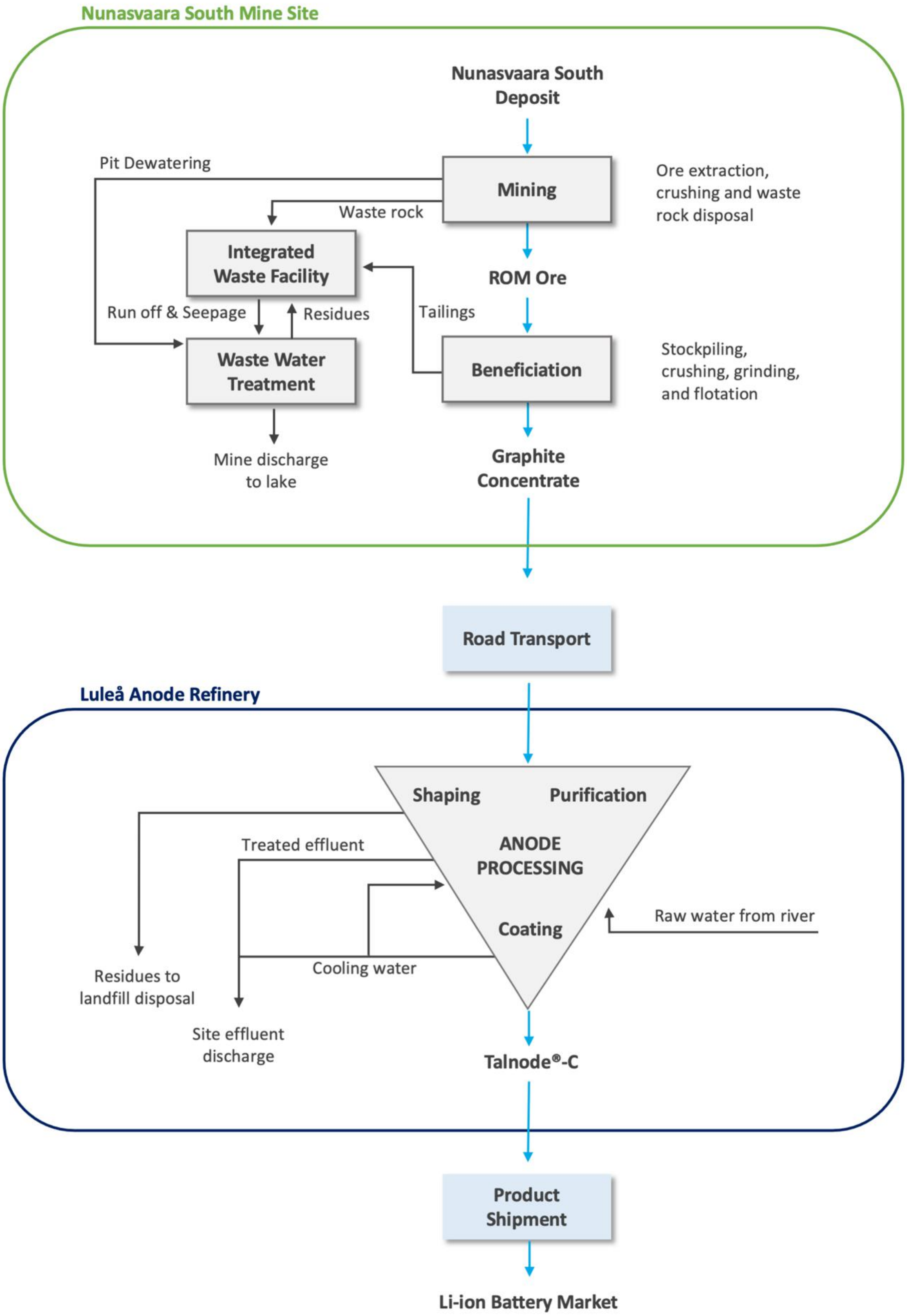
A comprehensive range of battery cell tests and metallurgical programs using Talga's Vittangi Graphite Project ore have been successfully completed with a specific focus on making active anode material for Li-ion batteries. This includes >60 tonnes of trial mined graphite ore (see Figure 7) from the Nunasvaara South ore reserve being successfully toll milled into concentrate, with subsequent production of Talnode®-C samples for customer testing and qualification. This has provided detailed data of the process and equipment similar to that proposed in the DFS.

Figure 7 *Talga 2016 trial mining campaign.*

Mineralogy

Vittangi graphite typically forms aggregates comprised of fine-grained individual graphite particles intergrown with silicate, mica and sulphide minerals. The characteristics of the ore identified in metallurgical programs were high graphite content, high bulk density, high conductivity and high graphite crystallinity. The ore has an extremely narrow flake size distribution and very high anode yield, naturally suitable for demanding Li-ion battery applications. For the DFS modelling work, the composition of ROM ore included results from CSIRO mineralogy report (2015), mining waste rock information by Bergskraft Sweden and pilot plant feed assay data by GTK.

Figure 8 *Integrated anode production process flowsheet.*



Ore Processing

The Vittangi Anode Project will mine approximately 100,000 tonnes ore over a 6-month period each year, to minimise potential socio-environmental impacts during winter months. Initial operations will involve run-of-mine material being hauled to the mobile crushing plant, located adjacent to the plant site and operated by a contractor.

Crusher discharge is then hauled the short distance to the coarse ore stockpile feed bin, from where it will be conveyed to the plant or covered stockpile for all year-round treatment. Sufficient flexibility has been incorporated into the design to match any potential variations in mining rate.

Figure 9 *60 tonne bulk sample of Vittangi graphite ore being milled and concentrated at GTK, Finland.*

Product from the crushing circuit will be conveyed to a fine ore bin to supply a continuous feed stream for the grinding circuit. Due to the 6-month mining period half of the crushed ore will be conveyed to the covered crushed ore stockpile for recovery by front end loader and conveyed to the fine ore bin during winter. To mitigate dust generation critical points will be serviced with dust suppression sprays and a dust extraction system with collected dust then repulped and pumped to the grinding circuit.

The fine ore bin supplies the two ball mill circuits feeding their respective flotation circuits consisting of roughers, concentrate regrind, five stages of cleaners, concentrate filtration and handling, and tailings thickening, filtration and disposal. Each production line of graphite concentrate will discharge onto a conveyor underneath the plate and frame filter unit to convey into the bulk concentrate bagging area (see Figure 10).

Samples of concentrates will be analysed on a regular basis for moisture, size and elemental analysis quality control. 'Bulka' bags of filtered graphite final concentrates will be weighed individually for production inventory including QR code tagging and loaded onto trucks for transport off-site.

Tailings

The outcome of DFS options studies recommends dewatering the concentrator tails and storing at an on-site dry tailings storage facility. The process tailings are thickened and filtered prior to conveying to an open bunker from where they are transported by truck to the IWF on a daily basis.

Figure 10 *Scheme of planned 100,000tpa Vittangi graphite concentrator.*

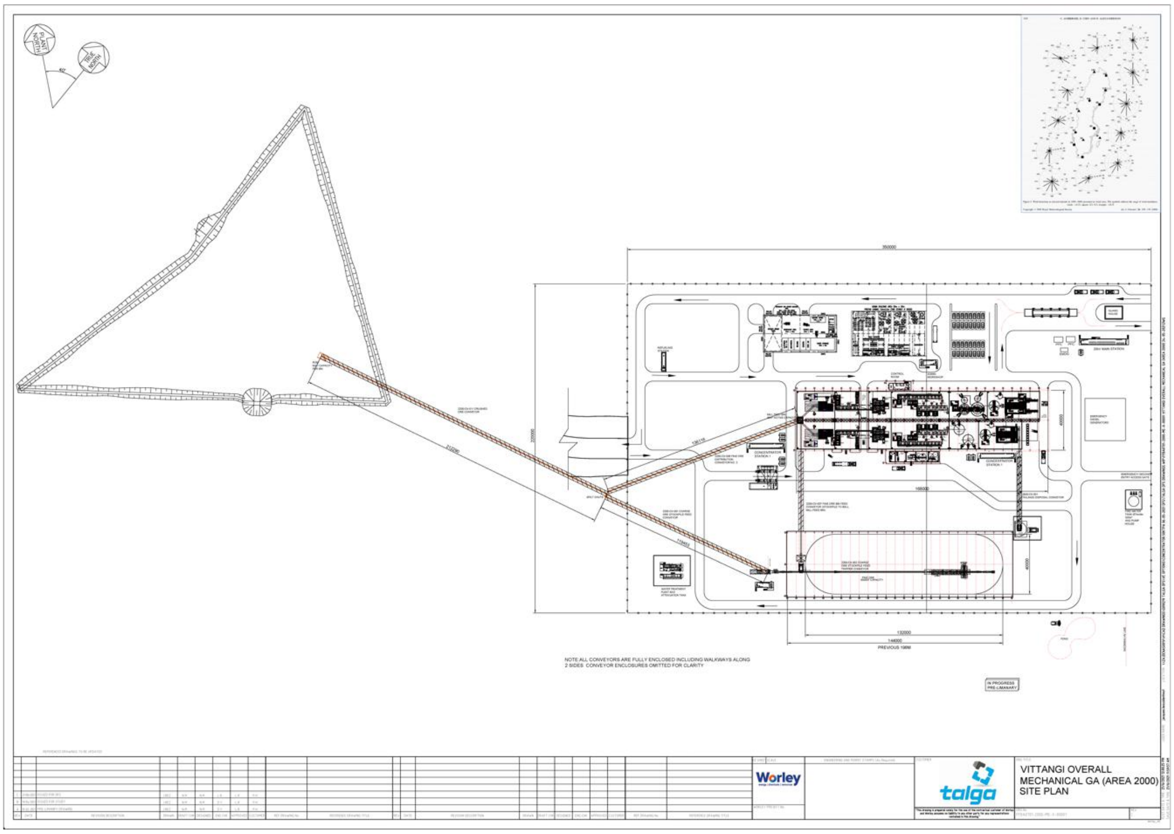
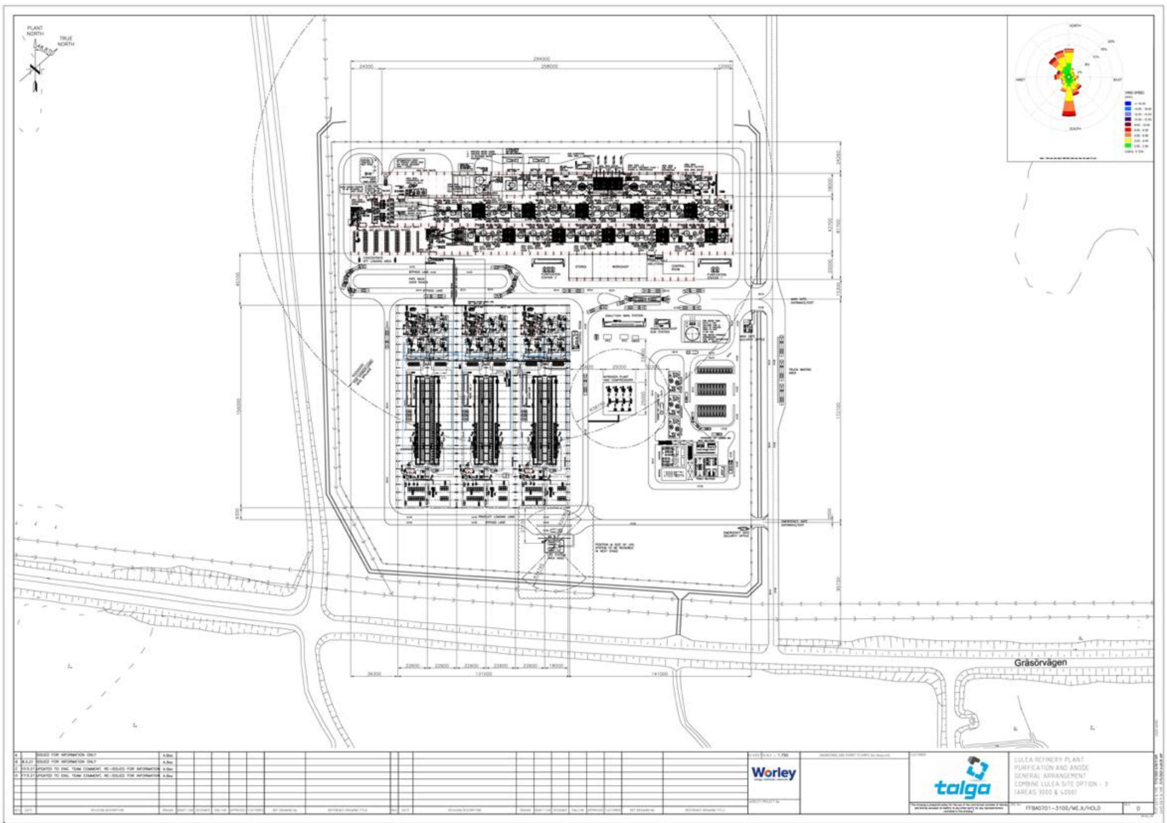


Figure 11 *Scheme of planned 19,500tpa production anode refinery.*



Anode Refinery

The DFS considers an anode refinery to be located at the Luleå Industrial Park producing a nominal 19,500tpa of Talga's coated active anode product, Talnode®-C. This followed a site locations study that included the coastal towns of Boden, Piteå and Skellefteå as well as inland sites Nunasvaara, Kaunisvaara and Svappavaara.

The Refinery will operate all year round treating bagged concentrate arriving as moist filter cake from the Vittangi concentrator. Sufficient flexibility has been designed into the processing facility to maintain the target production rate at varying concentrate carbon grades.

The main technical and processing objectives of the Refinery include a final LOI purity ≥99.95%, a moisture content of <0.1%w/w and an extensive range of high-quality product specifications and quality controls. Extensive testwork on spheronisation of the graphite flakes has been completed with commercial Japanese manufacturers, and has shown favourably narrow size distribution for demanding battery applications.

Talga's Talnode®-C surface coating technology has been developed to produce high quality Li-ion battery anode material, with a significant focus on Tier 1 automotive EV applications.

Testwork on chemical and thermal purification has been completed and both processes show that Vittangi graphite concentrates can be successfully refined into battery grade anode material. Current thermal technologies were found to have higher process losses, energy consumption and capital expenditure.

Whilst Talga has done extensive work on a proprietary chemical purification process with very high yields and low acid use (**ASX:TLG 5 August 2020**) the development timetable has been deemed a risk in moving to engineer, pilot and build the new process. Metallurgical test results for low temperature alkali roasting with some stages of acid washing was confirmed satisfactory to produce a >99.95% final anode product and has been used in the DFS. Talga will continue to develop and innovate purification processes with a view to implementing new chemical and thermal technology in future expansions.

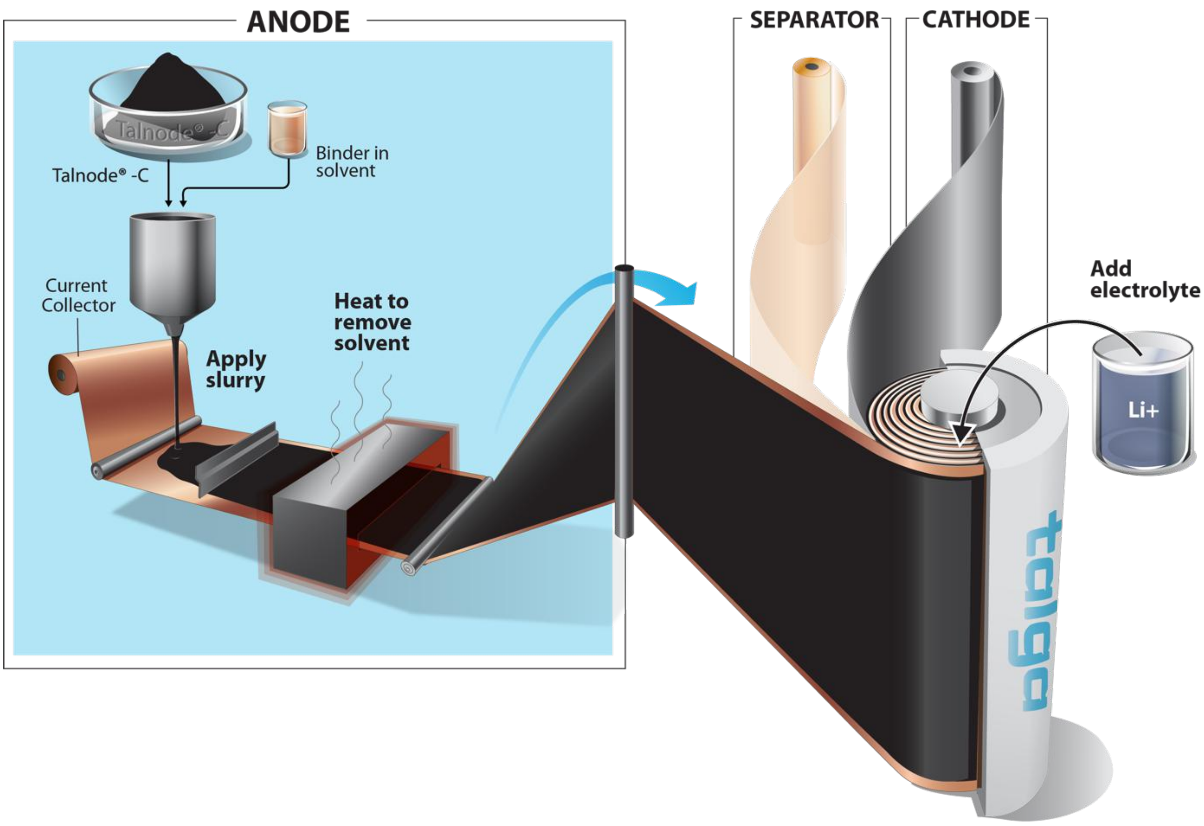
Figure 12 *Talnode®-C customer qualification samples during production.*

As part of the DFS and following recent discussions with Talga's Tier 1 battery customers and auto OEMs on upcoming EV model performance targets, the Company has completed optimisations on the anode process and plant. This has resulted in significant additional purification and anode process steps, and the DFS now incorporates premier Japanese and German equipment in the shaping, coating and pyrolysis units to ensure the long-term quality standards required by Tier 1 battery makers and Talga's EV customers. Additionally this has produced a higher quality anode product suiting the newer generation of fast-charge batteries with performance akin to high-end artificial graphite anodes.

In total, the integrated mine-concentrator and anode refinery process has extremely high yields, with 91% of the concentrate by weight reporting to saleable anode Talnode®-C. Additionally, since 80% of the graphite in Talga's Vittangi ore converts to Talnode®-C, the 'anode resource footprint' is very small on a global basis, requiring only ~5t of ore to produce 1t of anode (high anode yield per tonne of ore). This is due to the uniquely natural anode-sized flakes of Vittangi graphite combined with Talga's processing and anode production technology.

The Talnode®-C product will be delivered to battery cell manufacturers, in powder form, for mixing into a slurry and application onto the copper current collector (see Figure 13).

Figure 13 *Schematic illustration of where Talnode®-C is used in a li-ion battery.*



INFRASTRUCTURE AND LOGISTICS

Both the Mine and Refinery are located near existing infrastructure including an extensive highway network, railway, ports and accessible low-cost, renewable hydroelectricity supply. In light of the positive Niska Scoping Study (ASX:TLG 7 December 2020) some infrastructure upgrades to roads and powerlines have been designed into the DFS to more rapidly prepare and facilitate future expansion.

Location

The Vittangi Anode Project is located in the County of Norrbotten in northern Sweden. The Vittangi Graphite deposits are situated 10km north west from the town of Vittangi, easily accessed via existing road networks, and 20km northeast of LKAB's iron ore mine and railhead at Svappavaara. The Nunasvaara graphite deposits are registered as a Mineral National Interest area.

Sweden has a long standing mining and processing technology history, with experienced and productive workforce, significant infrastructure and advanced logistics throughout the mineral value-chain. Furthermore, Sweden is considered a highly developed investment jurisdiction with the Swedish Government having signalled the high priority of development across every part of the value chain for innovation minerals such as graphite.

Site Access and Road Transport

The mining operation is located 5km along an existing unsealed road which connects to the state road network. An allowance has been included to upgrade this road to a dual lane.

The proposed Refinery location sits within the Luleå Industrial Park currently under development adjacent to Luleå port - owned and fully maintained by Luleå Municipality, and connected to Vittangi via the state highway network. Road transport will be used to transfer concentrate between the Mine and the Refinery, and to import reagents and consumables to both sites, with rail options to be considered for future potential expansions.

Power Supply

The mine will be connected to the regional grid power, utilising renewable hydroelectricity, requiring a new power line to be added from Svappavaara to the proposed Mine substation. The permitting and installation of the new powerline is one of the major items on the critical path to development.

At the Refinery in Luleå, a connection will be made to the grid that is operated by Luleå Energi who are planning the installation of an additional substation for the new area development near the port facility.

Water Supply and Treatment

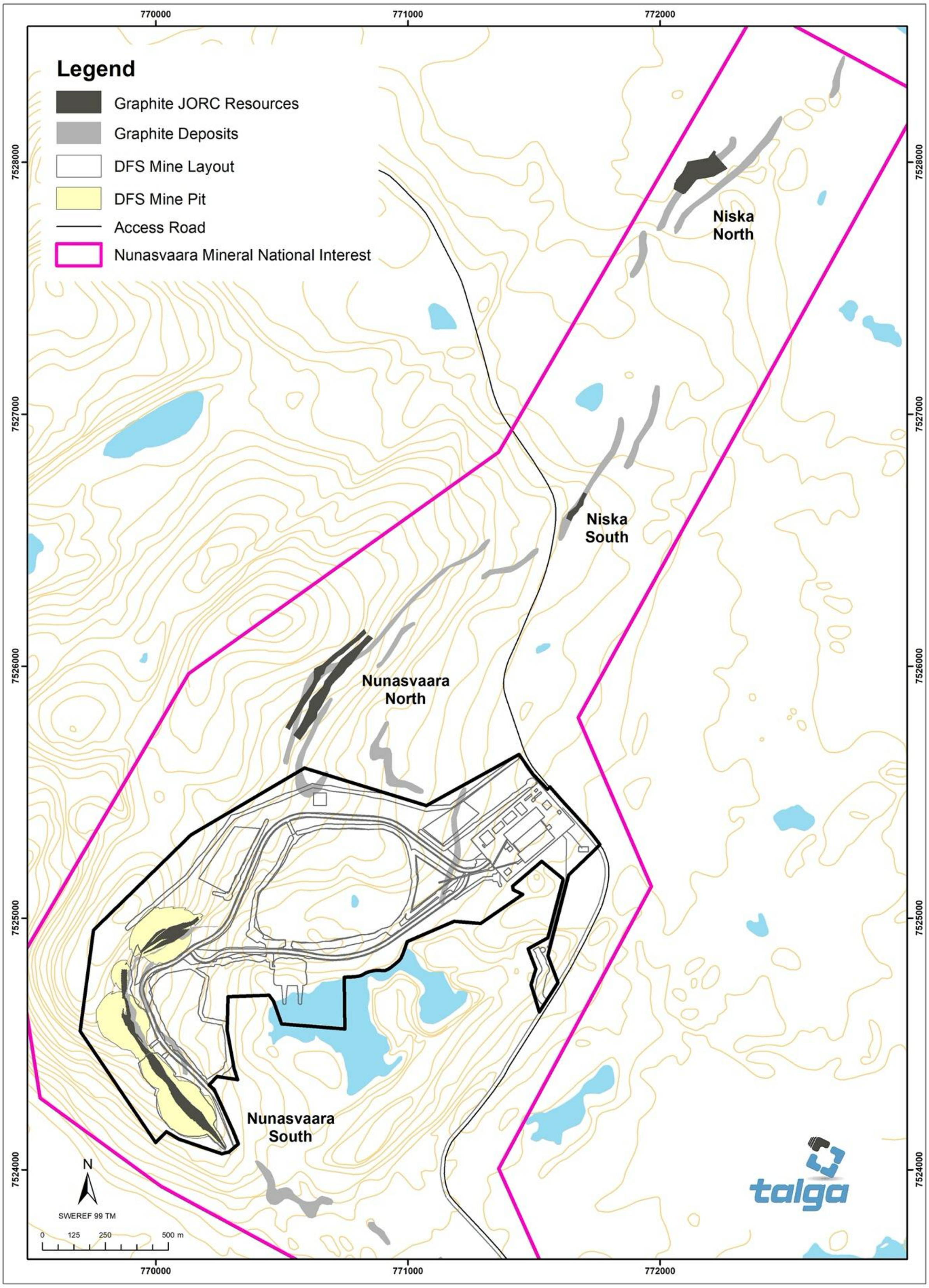
Raw water supply to the Concentrator will comprise recovery from groundwater inflow, pit seepage and recycling. If required, water can also be supplied via a pump station located at Hosiojärvi Lake. Process water for the Refinery will be extracted directly from the local fresh water source, the Luleå River, located approximately 500-1,000m from the refinery site.

All mine pit dewatering and any potentially contaminated runoff, mainly in periods of the spring melt, will be treated for extraction of metals and particulates to match and exceed environmental standard prior to use or discharge to the lake.

Product Transport

Products will be packaged and containerised on-site at the Refinery for distribution to customers. There is easy access to road and rail transport as well as to the Port of Luleå, located adjacent to the proposed Refinery site, and to the nearby Port of Piteå.

Figure 14 *Vittangi Graphite Project. Note only Nunasvaara South is used in this study.*



OWNERSHIP AND TENURE

Tenure and Concession Holders

Nunasvaara Nr. 2 is the exploration concession where the Mine is located and is 100% owned by Talga's Swedish subsidiary, Talga AB. The mineral exploration permit for Nunasvaara was issued by the Mining Inspectorate (Bergsstaten) in accordance with Swedish mineral law (Minerallag (1991: 45)) and provides the holder rights to explore for minerals and first right to apply for an exploitation concession (mining lease) to mine identified mineral resources for a 25-year period.

The application for an exploitation (mining) concession over the planned Nunasvaara South Mine development was submitted to Swedish authorities in Q2 2020. The Company is not aware of any material impediment to the grant of the exploitation concession.

Landowners and Other Right Holders

The mining operation is on freehold property held by both private individuals and entities with surface rights held by the owners of the property. Talga holds a range of land, water and other access agreements with landowners and relevant parties. The area is utilised by landowners for a range of land uses. Within the area there are established indigenous rights to practice reindeer herding during winter with several reindeer herding cooperatives (Sameby) operating in the area.

ENVIRONMENTAL AND COMMUNITY

Environmental Studies

The Mine parameters outlined in the DFS focus on a high-grade low-volume operation designed to leave a minimal environmental foot-print upon closure. A detailed Environmental Impact Assessment (EIA) of the Mine operation has been completed and the Environmental Permit application, along with a Natura 2000 impact assessment, was submitted to Swedish authorities in May 2020. A subsequent application for a Natura 2000 permit has been submitted to the relevant agency.

The completed environmental studies and the EIA intends to ensure that environmental concerns are integrated into the proposed development, focusing on preventing, minimising, mitigating and/or compensating for possible adverse environmental impacts which may arise due to the proposed development. The Company is also preparing an EIA to assess the potential environmental impacts of the proposed Refinery operation.

Closure Planning

Talga is committed to international best practices in closure planning and achieving positive closure outcomes, including undertaking consistent and transparent engagement with stakeholders towards a shared post-closure vision via an integrated process that considers environmental, social and economic aspects. Project decommissioning, closure and rehabilitation strategies have been developed along with preliminary closure plans.

Talga completed trial mining operations in 2015 and 2016 (see Figure 7) after which successful rehabilitation, approved by the relevant government agency, resulted in a timely return of mining bonds. This supports Talga's dedication to achieving sustainable outcomes that benefit our stakeholders, partners and the environment from exploration to closure.

Figure 15 *Talga multi-seasonal environmental water sampling near Vittangi graphite project.*

GHG Emissions Assessment & Management Strategy

A preliminary Greenhouse Gas Assessment has been completed for the Vittangi Anode Project and a more detailed Life-Cycle Assessment, is being finalised for the production of Talnode®-C. Due to the extremely high-grade natural graphite content of Vittangi ore and availability of clean renewable hydroelectricity, Talnode®-C will produce significantly lower greenhouse gas emissions through its production lifecycle than existing battery anode supplies.

Stakeholder Engagement

Talga is committed to being a responsible operator and neighbour who creates value for local communities and stakeholders, while maintaining environmental integrity. The Company has been working proactively with Vittangi area stakeholders since exploration commenced in 2011 and Talga has adopted a structured approach under an extensive stakeholder engagement plan, consistent with international best practice. Positive stakeholder and community relations on all levels - local, regional and national – are key to achieving and maintaining the legal and social licence necessary for the success of the Project and supports the long-term viability of Talga's operations.

Government / EU

Europe's and the European Union's drive to become increasingly self-sufficient in its transition towards carbon-neutrality aligns strongly with Talga's goal to provide low CO_2 battery anode products for greener LI-ion batteries. Towards this goal the European Union has implemented a number of long- and short-term research programs, such as the European Battery Alliance and, where relevant, Talga is lending its active support and participation. Talga is currently a member or participant in multiple battery and green industry European associations and partnerships including but not limited to:

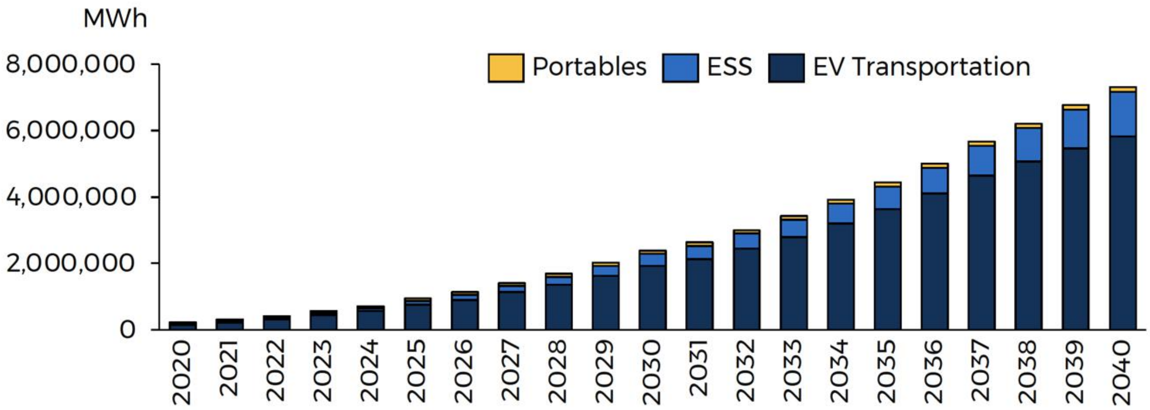
- European Battery Alliance (EBA)
- European Raw Materials Alliance (ERMA)
- BASE - Batteries Sweden (Alliance for Ultrahigh Performance Batteries)
- Euromines (European metals and minerals mining industry)
- Fossilfritt Sverige (national initiative to make Sweden the world's first fossil-free state)
- The Batteries European Partnership
- Battery 2030+ initiative (research initiative focused on sustainable batteries)

MARKET SUPPLY AND DEMAND

Global Demand of Li-ion Batteries

The major growth area for Li-ion batteries (and therefore graphite anode) is for Electric Vehicles (EVs), followed by energy storage systems (ESS) and Portables (e.g. 3C) as illustrated below in Figure 16.

Figure 16 *Li-ion battery demand forecast (MWh). Source: Benchmark Mineral Intelligence.*



Whilst China will continue to dominate Li-ion battery cell manufacturing, North America and Europe are seeing significant demand growth as they move to capture some of China's market share. Governments in both regions have put plans in place to ensure that as much of the battery supply chain as practicable is located within the regions to service local demand.

European Demand of Li-ion Batteries

European battery gigafactories are expected to grow from 51 GWh in 2020 to 626 GWh in 2030 with a CAGR of 28% as forecast by Benchmark Mineral Intelligence (BMI) a globally recognised leader in research data. This makes Europe the fastest growing Li-ion battery market in the world

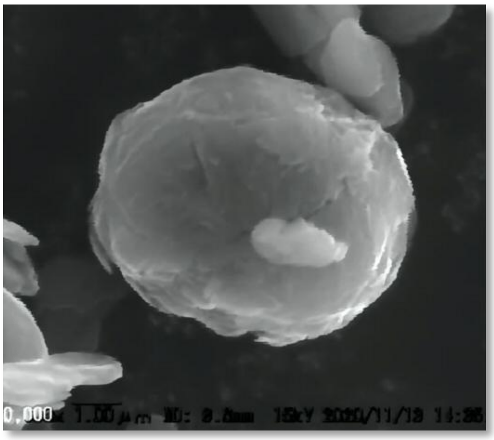
The region's rapidly growing demand for Li-ion batteries is spurred by consumer demand, and multiple European governments offering support for the adoption of EVs over the coming two decades. This support is expressed through proposals for the banning of internal combustion engine (ICE) vehicles, or targets for zero-emission automotive industries matched with subsidies and incentives.

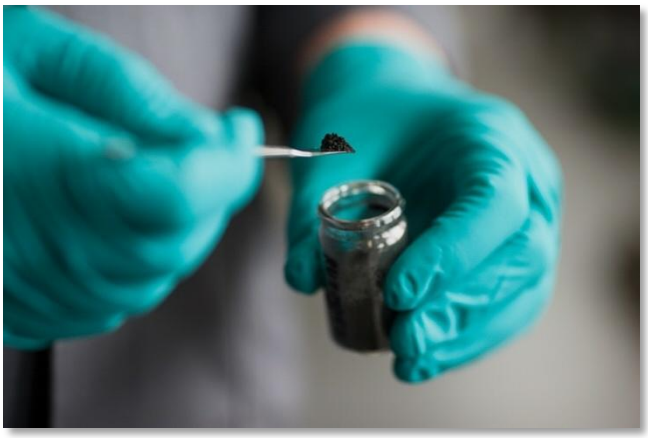
Figure 17 *Planned European Battery Megafactories. Source: R. Zenn January 2021.*

Global Demand of Anode Material

Rechargeable lithium-ion batteries consist primarily of two electrodes: the cathode and the anode. The dominant commercial anode is composed of highly processed and engineered graphite particles, rounded to some degree (shaped or spheronised), purified to >99.95%C purity, carbon coated and heat treated. The resulting active anode material, commonly 10-20 microns in diameter, is slurried with solvents by a battery manufacturer and coated onto copper coil to form the cell anode. In a typical cylindrical cell (NCM cathode) the graphite anode amounts to nearly half of the cell volume.

Figure 18 *Talnode®-C during development.*

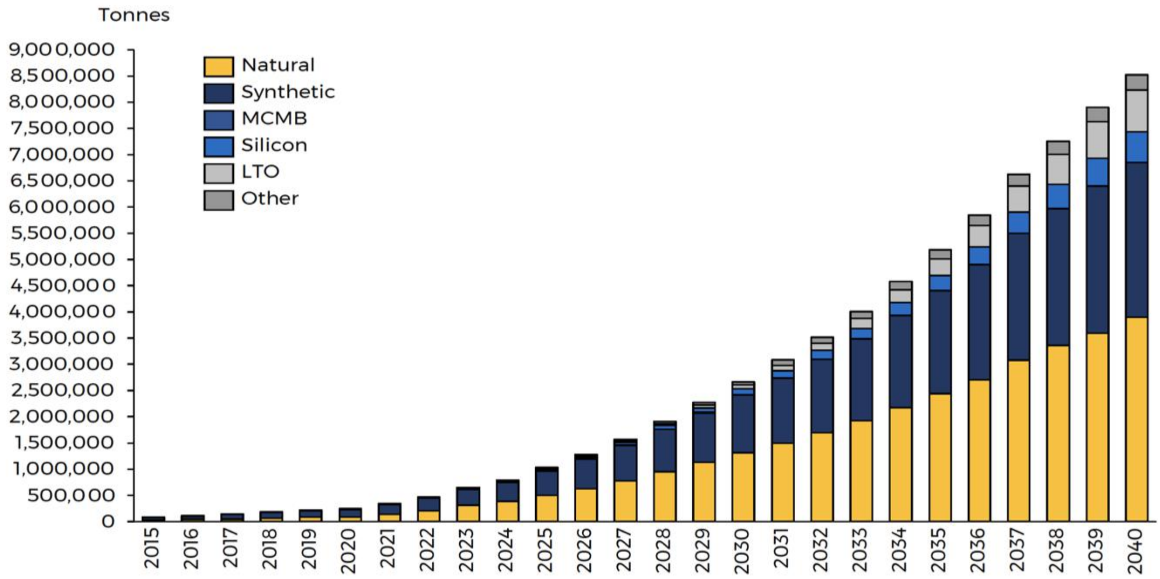




Graphite anode material can be produced from feedstock of either natural flake graphite (mined) or artificial graphite (synthetic process). Shaped and purified graphite anode pre-cursor (SPG) is quoted by market research groups such as BMI, with premiums paid for smaller sizes (10 micron). Coated anode (CSPG) pricing is not commonly published outside China.

The global demand of graphite anode material for Li-ion batteries is expected to grow at an average compound annual growth rate (CAGR) of ~18% over the next two decades. According to BMI current demand for graphite anode material is 224,000 tonnes; by 2040, it is predicted that demand will rise to 8,864,000 tonnes.

Figure 19 *Anode Demand by Type of Anode – (Tonnes). Source: Benchmark Mineral Intelligence.*



Global Supply of Anode Material

China is currently more dominant in the Li-ion battery anode material supply chain than in any other market for components related to EVs. China's share of global anode material capacity is over 85% and most of today's planned expansions in anode capacity are due to take place in China, followed by South Korea.

However, there is growing pressure from western OEMs (both current and planned) for these elements of the EV supply chain to be brought closer to their home operational hubs to reduce working capital requirements, shorten supply chains and mitigate excessive reliance on China-based supply. It is also expected that additional ex-China battery cell manufacturers will join the market within the next five years, generating additional domestic demand for anode material.

New global production centres are also required due to the transport of large volumes of Li-ion batteries being limited by safety requirements and delivery times/shelf-life issues.

Battery Anode Material Supply-Demand Balance

BMI have forecast that there will be a significant deficit in the supply of anode materials for the Li-ion battery industry from 2025 onwards based on the expected growth rates in Li-ion batteries and the lack of supply of raw materials (anode precursor graphite flake and needle coke).

Currently, EV battery anodes use a blend of synthetic graphite with natural graphite to gain benefits from both. As battery manufacturers and OEMs become increasingly focused on the environmental footprint of their supply chain, and the cost of synthetic feedstock increases due to inherent limitations of supply, there is a transition underway to natural-dominant blends. This is due to natural graphite's lower emissions footprint and more favourable raw materials pricing than artificial feedstock (needle coke or petroleum-based by-products).

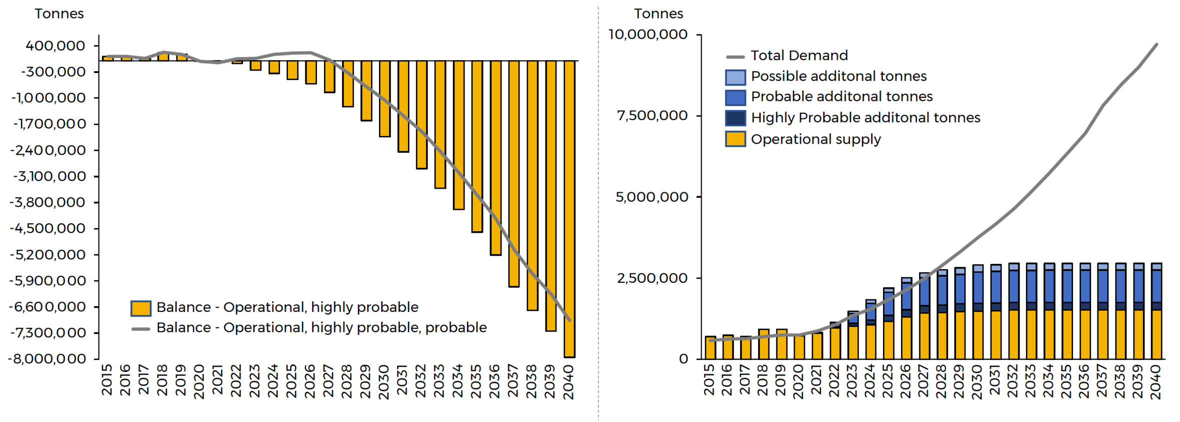
Figure 20 *Vittangi graphite drillcore and commercial cylindrical Li-ion battery showing the internal structure and graphite anode layers.*

Natural Flake Graphite Supply

Over the last 2-3 years, the increased battery demand has led to a rapidly increasing anode pre-cursor graphite capacity in China, causing a temporary oversupply. However the market is forecast to turn into structural deficit by 2023 unless significant new capacity is brought on stream, as global demand growth for coated spherical purified graphite far outstrips operational capacity and planned supply.

This will be underpinned by the geological fundamentals of most flake graphite deposits, which produce a 'basket' of different flake sizes, with only a fraction suitable for downstream processing into anode materials. The remainder is sold into a vast range of industrial products outside the battery market. Therefore, natural graphite mines that yield only low amounts of anode per resource tonne cannot meet demand, and prices must rise to incentivise new supply.

Figure 21 *Natural Flake Graphite Supply Demand Balance. Source: Benchmark Mineral Intelligence.*

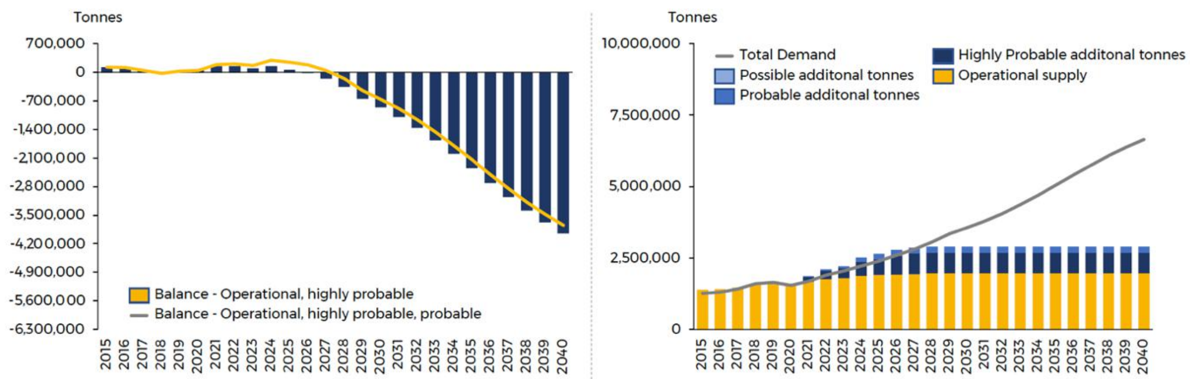


Needle Coke Supply

Artificial graphite is fabricated by the heat treatment of petroleum coke, coal-tar pitch, or oil, and is most commonly used by the steel and aluminium industry as electrodes for arc furnaces. In recent years, an increasing amount of petroleum and pitch-based needle coke is being used to make artificial graphite anode material for Li-ion batteries.

With the increase in demand for Li-ion batteries, competing with existing metal market demand, the market is forecast to move into a structural deficit by 2026. With insufficient capital commitments being made to sustain the battery market, forecast show an increasingly pronounced deficit in artificial graphite anode toward the end of the decade, exacerbated by steel market demand. The supply deficit is forecast to have a significant implication on anode material pricing.

Figure 22 *Needle Coke Supply Demand Balance. Source: Benchmark Mineral Intelligence.*



Industry Price Forecast

Li-ion anode products are not traded on a commodity exchange and are made specifically to meet a customer's battery cell chemistry requirement, such as use in an EV or a smart phone. There is no universal specification for anode material and each battery application has different demands. Even similar specification anodes can have markedly different performance and market suitability due to particle characteristics, processing and coating intellectual property (IP) held by the anode producer.

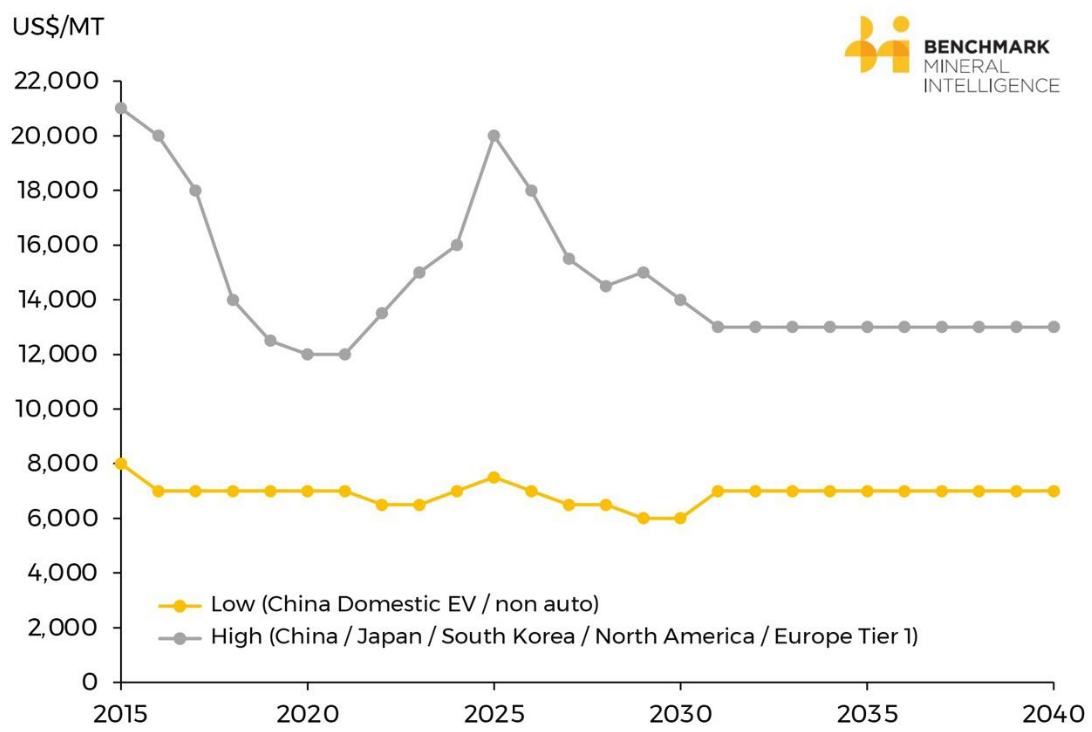
The high price contracts for anode products are with Tier 1 battery producers in Japan, South Korea, North America and Europe who use superior cell chemistries and require higher performance anode materials to match. The low price contracts for anode products are with Chinese domestic producers that use cheaper cell chemistries and require lower performing anode materials.

As such, there is a wide range in anode pricing depending on usage, with the price of anode products set in private contracts negotiated between producers and customers. Premium products can fetch double or more the price of lowest quality product. Contracts are commonly long-term and based on a highly integrated model between seller and buyer.

Additionally, the cost to produce or buy the pre-cursor material for anode production has a significant effect on the price. Pre-cursor raw material prices will depend on supply and demand for graphite and needle coke across a wide range of competing markets including steel/aluminium smelter electrodes, refractories and batteries.

An industry assessment completed by BMI has assessed a range of prices for natural and synthetic based anode products used in Li-ion batteries. The forecast tracking High Tier 1 and Low (China domestic EV / non-auto) natural anode specifications show steep price increases in 2025 as supply deficits peak, with incentive pricing to bring on new supply of raw materials required to meet the supply-demand imbalance. Longer term, from 2030 to 2040, prices are forecast to level out, contingent on new supply having come onstream.

Figure 23 *Natural Coated Spherical Graphite (CSPG) Price Forecast (FOB China US$/t). Benchmark Mineral Intelligence.*



MARKETING

Talga is positioned to be a European vertically integrated producer of low CO_2 anode products to battery manufacturers for the production of greener Li-ion batteries. The Company's green graphite anode material, trademarked as Talnode®-C, is currently being assessed by numerous battery manufacturers and automotive OEMs in a range of Li-ion batteries for various applications including Tier 1 EV's.

Talnode®-C's performance characteristics are particularly suited to battery industry demand for fast-charging capability and increased temperature range. OEMs are also interested in a low internal resistance anode as it offers greater capacity retention as batteries are used over time.

As part of the feasibility study work Talga has further refined its coated Talnode®-C product, with optimised coating treatments for EV battery cells completed based on input from its automotive customers. Positive customer qualification results and feedback to date supports Talnode®-C's product positioning, marketing strategy and commercialisation plan.

Talnode®-C Commercial Sample Production

Talga has successfully scaled up its capability to supply increased quantities of Talnode®-C (20-50kg samples) to battery customers during project development. Commercial customer samples are currently being produced across Talga's existing demonstration and pilot facilities, and with toll partners in Europe and Japan (**ASX: TLG 19 April 2021**).

Figure 24 *Talga anode in battery qualification trial for renowned performance automotive brand.*

With customer programs advancing there is a need for increased commercial Talnode®-C sample quantities, particularly in the case of EV battery testing where large scale cell production and testing by automotive OEMs is required. To address this, Talga is building an EV Anode (EVA) plant to produce green graphite anode material for EV batteries in the sample quantities required by customers.

The fully funded and permitted EVA plant will be located within the facilities of metals research institute Swerim in Luleå, Sweden, near Talga's proposed commercial anode refinery site and adjacent to the existing Port/Steel Mill complex and is scheduled to commence production in Q1 2022. The EVA plant represents a critical step for Talga in progressing automotive OEM procurement processes to enter the low-emissions focused EV supply chain.

On a commercial scale, Talnode®-C will be produced via a vertically integrated model that incorporates mining at Talga's owned high-grade Vittangi graphite deposits and world-leading refining processes. The commercial production model has been designed to provide security of supply for customers, reduced production costs and increased margins.

Talnode®-C Positioning and Marketing Strategy

Talga's European operations currently include an in-house battery technology sales team and product development arm, marketing Talnode®-C direct to Li-ion battery manufacturers and EV customers.

- ***High performance:*** Talnode®-C anode allows for fast charge, high power and low-temperature performance sought by the EV and 3C markets, making the value proposition of Talga unique for improving Li-ion battery performance.
- ***Competitive cost of production:*** Based on Talga's pre-feasibility and detailed feasibility studies, production of Talnode®-C will have low production costs and achieve high margins. A key driver is Talga's lower energy intensity compared to traditional processing methods and access to low-cost power. The unique graphite flake mineralogy of Vittangi and innovative production process produces a significantly higher overall yield of anode per tonne of ore mined.
- ***Security of supply:*** Talga benefits from supply chain security because it is integrated with all steps in a proximate and stable jurisdiction and not reliant on China or needle coke feedstocks.
- ***Low Emission footprint:*** Talga anode production benefits from some of the world's lowest emission electricity and leading anode per tonne ore yields to minimise its CO_2 signature. Additionally, due to its Swedish location, Talga is well-placed to capitalise on the European Commission's 2020 legislation proposal for a "battery passport", which will mandate EU producers to verify the material provenance, chemistry and identity of batteries as a way of measuring sustainability and environmental impact.

Reference Pricing for Talga Anode Product Revenue

The Vittangi Anode Project price assumptions are referenced to an extensive industry price forecast and product investigation report commissioned from price reporting agency and market intelligence publisher for the Li-ion battery supply chain, BMI. Graphite anode prices are at an all-time low and are forecast to return to historical highs in line with the forecast supply deficit in 2024-25. Prices are then expected to decline up until 2030 before assuming a long-term flat trajectory.

Considering Talnode®-C's performance characteristics akin to premium-priced synthetic graphite anode and customer feedback, BMI assessed Talnode®-C to be a high-end graphite anode, positioned between its High and Mid-range reference prices for Tier 1 EV anode (see Figure 23). This study reference price, underpinning the Project NPV and financial model, is variable over LOM and at a discount to the high end anode benchmark. The calculated average weighted input price over the 24 years of LOM is US$12,312/t anode and is forecast as a flat price of US$11,875/t anode from 2030.

The BMI price assessment assumes pricing FOB China and no tariff advantage on duties imposed on Asian anode materials which may come into place under the European Battery Passport. Additionally, green anode products could achieve a price premium based on low emissions footprint and benefit from support mechanisms, both at EU and national-levels, whilst avoiding financial penalties (e.g., levies and quotas) given for non-compliance. Therefore, Talga sees further upside to the forecast over the longer-term if carbon pricing is fully captured in the graphite anode supply chain.

FINANCIAL EVALUATION

The DFS financial assessment of the Vittangi Graphite Project, encompassing an updated JORC 2012 Ore Reserve (Probable) of 2.3Mt at 24.1% TGC, clearly demonstrates the economic robustness of the Project with an estimated NPV_8 of US$1,054M (real, pre-tax) and IRR of 30% (pre-tax).

The key financial and physical performance indicators of the Project are outlined in Table 4 below.

Table 4 *Estimated Key Financial and Physical Outcomes (All in USD).*

PARAMETER	UNITS	OUTCOME
Annual ore mining rate	tonnes	100,000
Life of Mine (LOM)	years	24
Average annual production of Talnode®-C	tonnes	19,500
Revenue (LOM)	$million	$5,352
Pre-tax NPV_8 (real)	$million	$1,054
Pre-tax IRR	%	30%
Capex (excluding 9.1% contingency and owners' costs)	$million	$484
Payback (from concentrator commissioning)	years	2.5
Average cash cost of production of Talnode®-C	$/tonne	$2,363
EBITDA (LOM)	$million	$4,081
Net profit before tax (LOM)	$million	$3,481

Capital Costs

Capital costs (excluding contingency and owners' costs) have been estimated as detailed in Table 5. These have been prepared on the basis of ± 15%. A contingency allowance of 9.1% has been included in the financial model.

Table 5 *DFS Capital Cost Estimate.*

CAPITAL COST (US$M)		UNIT	
Mine & Ore Processing	Mining & Crushing	$M	$15.2
	Concentrator	$M	$79.2
Anode Refinery Plant	Purification	$M	$82.3
	Coating	$M	$167.8
Indirect Costs	Concentrator	$M	$8.9
	Purification	$M	$12.8
	Coating	$M	$20.5
Sub-total Mine and Processing Plants		$M	**$386.7**
Infrastructure		$M	**$97.6**
TOTAL		$M	**$484.3**

Operating Costs

LOM operating costs have been prepared on the basis of ± 15% and are summarised in Table 6 below.

Table 6 *DFS Production Operating Cost Estimate.*

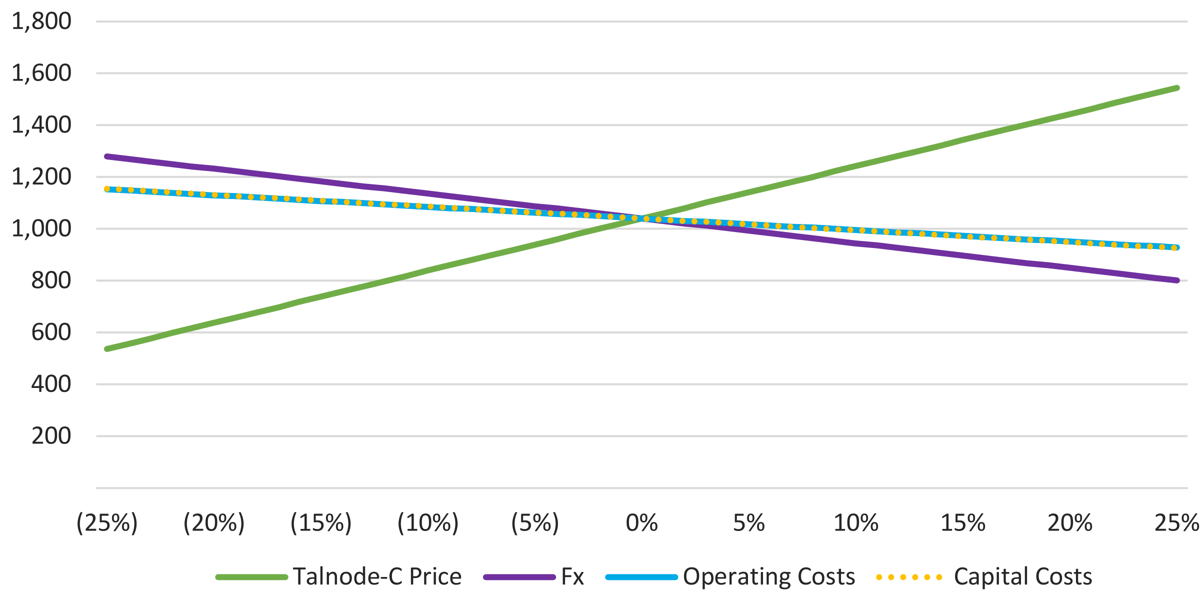
CASH COSTS (US$M)	UNIT	LOM
Overburden	$M	$ 9.6
Mining	$M	$ 76.0
Mineral Processing	$M	$222.7
Tails Handling	$M	$14.6
Anode Processing	$M	$678.0
Transport	$M	$26.2
TOTAL	**$M**	**$1,027.1**

Project Sensitivities

A financial sensitivity analysis was undertaken to evaluate the potential impact on the Project economics by varying the key parameters of Talnode®-C price, discount rate, operating costs and capital cost. The results of the analysis are shown in Figure 25 and highlight the Project's insensitivity to capital and operating costs while having higher sensitivity to the Talnode®-C price.

The base case discount rate of 8% used in the DFS is aligned with the discount rate used in the PFS and was considered prudent and suitable, taking into account the location of the Project.

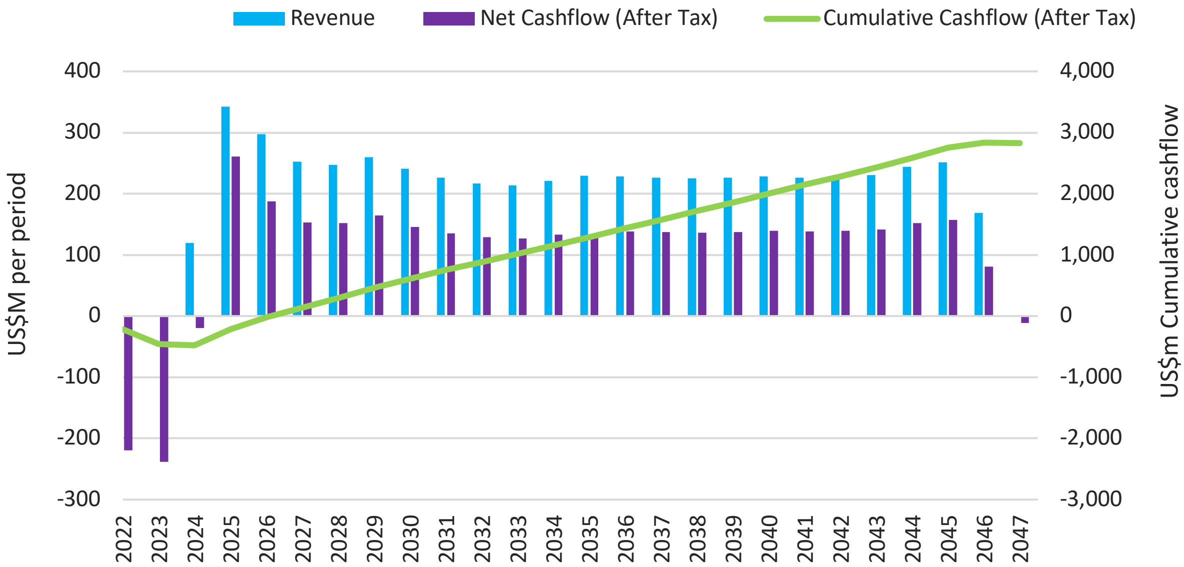
Figure 25 *Vittangi Anode Project Sensitivities.*



Cashflows over LOM

Figure 26 provides the revenue and net cashflow position of the Vittangi Anode Project over the proposed life of the mine (US$2.8 billion cash cumulatively).

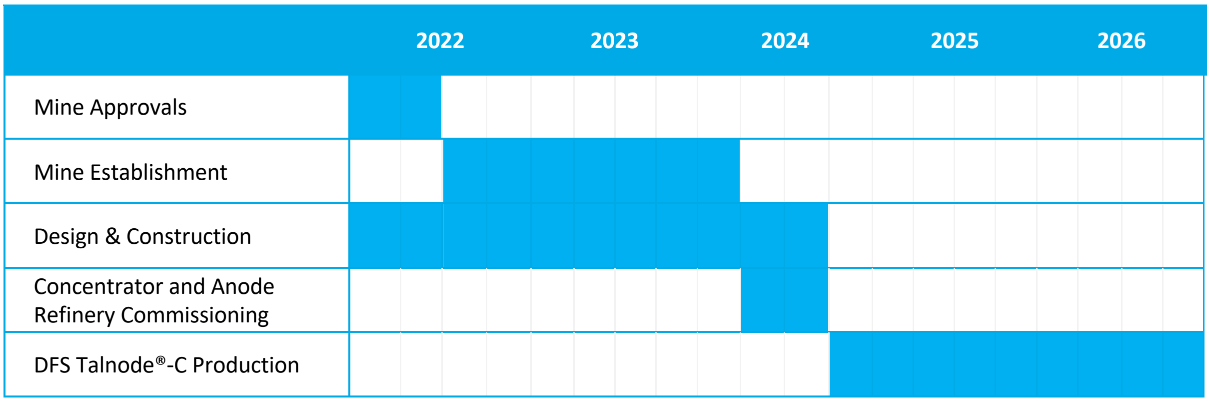
Figure 26 *Vittangi Anode Project Estimated Cashflows.*



DEVELOPMENT SCHEDULE

The proposed Project development schedule is shown in Figure 27. The Company notes the development schedule is indicative only and subject to funding, obtaining relevant permits and approvals, and the Company making a decision to mine as discussed in this announcement.

Figure 27 *Indicative Development Schedule - Summary*



Project Funding

The Project is well-placed to supply into European demand for sustainable and locally sourced anode materials as the global trend of electrification gathers pace.

With a forecasted increase in the demand for Li-ion batteries and governments announcing future bans on ICEs, battery manufacturers and automotive OEMs are looking to secure stable sustainable battery material supply chains. Various strategic, commercial and industry partnership models have emerged and continue to evolve, providing a range of funding opportunities.

The Project will most likely be funded via joint venture partnership, however conventional equity and debt are considered additional funding options. The ultimate funding strategy will be based on numerous factors at the time of the final investment decision and with the assistance of Morgan Stanley (the Company's financial and transaction adviser). These factors include conditions of the equity capital markets, relative debt financing opportunities, and negotiations with project partners and financiers.

Talga is advancing Project funding discussions with third parties including under a Letter of Intent ("LOI") with international high-tech mining and minerals group Luossavaara-Kiirunavaraa Aktiebolag ("**LKAB**") and Mitsui & Co. Europe Plc ("**Mitsui**"), a subsidiary of global trading and investment company Mitsui & Co., Ltd. (**ASX:TLG 2 November 2020**).

Following Covid-related delays to the DFS, Talga LKAB and Mitsui have made substantial progress towards the potential completion of a joint venture agreement and agreed a minor extension to the LOI to finalise diligence and commercial terms (**ASX:TLG 28 June 2021**). Talga is also working towards purchase agreements with multiple large battery and automotive manufacturers, including additional potential funding opportunities for the Project.

At the date of this announcement the Company has a market capitalisation of around AU$403 million, cash of approximately AU$58.4 million (as at 31 March 2021), no debt, and a proven track record of attracting new capital.

Based on the above, the Company has formed the view that there are reasonable grounds to assume the likelihood of successfully raising finance sufficient to cover the estimated capital and working capital costs for the Project as and when required.

Going forward, the Company will continue to assess all possible commercial mechanisms to determine the optimum financing solution for the Project.

JORC 2012

TABLE 1, SECTION 1-4

talga

VITTANGI GRAPHITE PROJECT PROBABLE ORE RESERVE STATEMENT

Summary of basis for Ore Reserve Statement by Golder Associates

(Information provided in accordance with ASX listing rule 5.9.1)

MATERIAL ASSUMPTIONS

The updated Ore Reserve statement prepared by Golder Associates is based on modifying factors including geotechnical, hydrogeological, hydrological, ecological, socioeconomic and cost estimates that describe the development of the Vittangi Graphite Project. Material assumptions and outcomes derived from the completed Detailed Feasibility Study ("DFS") and applied in the estimation of the Probable Ore Reserve are outlined below.

A portion of the Nunasvaara South Indicated Mineral Resource has been converted to a Probable Ore Reserve subject to detailed mine planning and economic evaluation based on modifying factors determined as part of the DFS. The status of the modifying factors is considered sufficient to support the classification of the Probable Reserve when based upon the Indicated Resource.

Approximately 18% of the Nunasvaara South Indicated Mineral Resource has been converted to a Probable Ore Reserve.

The DFS production target is based solely on the reported Ore Reserve estimates.

Material assumptions applied for the Ore Reserve estimate

INPUT PARAMETERS		UNIT	VALUES
Financial	Currency	$	US$
	Discount rate	%	8
	Graphite (purified concentrate)	US$/t product	4,000
	Total royalties	%	3.2
	Product grade	%	>99.9
Mining	Cut-off Grade (COG)	% Cg	11
	Mining Dilution	%	5-9
	Ore Recovery	%	95
	Fixed mining costs	US$/t	Incl. in mining costs
	Ore Mining cost base	US$/t	5.03
	Mining cost adjustment factor	US$/t per 5m depth	0.01
	Fuel cost	US$/l	Incl. in mining rates
	Rehabilitation of waste dump	US$/t of waste	1.44
Overall Slope Angles	Oxide	W, NW Degrees / E, SE Degrees	40, 40
	Transitional	W, NW Degrees / E, SE Degrees	40, 40
	Fresh	W, NW Degrees / E, SE Degrees	40, 40
Processing	ROM Feed rate	Tonnes per annum	100,000
	Reserve Grade	% Cg	24.1
	Process recovery	%	90
	Processing cost	US$/t ore	310

CRITERIA FOR CLASSIFICATION

The Mineral Resource estimate used as a basis for the conversion to an Ore Reserve was calculated by the Competent Persons and published to the Australian Securities Exchange (ASX) on 17 September 2020. The Mineral Resource classification, which forms the basis of the Ore Reserve classification, was determined by the Competent Persons in accordance with the JORC 2012 Code.

The current global Mineral Resource Estimate across the Vittangi project is 19.5 million tonnes (Mt) @ 24% Cg for 4.7 Mt of contained graphite which includes 4.6 Mt at 25.8% Cg within the Niska deposit (not included in the DFS). For the Resource a 10% cut-off was applied and the Resource extends from surface to ~220m depth. 77% of the total Resource is classed as Indicated, and Nunasvaara accounts for 70% of the Indicated Resource.

A portion of the Indicated Mineral Resource was classified as a Probable Ore Reserve after consideration of the appropriate modifying factors and results reflect the Competent Person's view of the deposit. Only Indicated tonnes are used in conversion to Ore Reserves. Inferred tonnes are excluded from the design and/or labelled as waste. Resources are inclusive of Ore Reserves. No Measured Mineral Resources are included in the Probable Ore Reserves category.

MINING METHOD

The DFS considers an open pit mining scenario that will extract ore using conventional drill and blast processes due to the relatively simple structural and shallow nature of the chosen pit shell in the deposit. The operation is planned to use standard small-scale truck and shovel equipment on a contractor basis and operate 6 months per year. The process plant will operate 12 months per year. This proposed mining method is considered appropriate for the deposit style.

Approximately 100,000 tonnes of ore will be hauled annually to a stockpile area (ROM) proximal to the processing plant (located centrally to the pit) and waste material will be hauled to the waste emplacements (located in close proximity to the pit). During periods where the quantity of ore mined exceeds the quantity processed, temporary long-term stockpile areas may be utilised.

A full review of the site geotechnical operations and design parameters was completed by Golder Associates in 2020. Recommendations were developed for the mine design for factors of safety above 1.3 to above 1.6 for an overall Slope Angle range of 45 to 49°. The mine design was then based inside these limits using the relevant overall slope angle for each geotechnical slope domain. Minimum mining bench width is 15-25 m due to implementation of small equipment and to provide flexibility.

No Inferred material was utilised for the Reserve estimate. Following regularization, Pits 1-5 dilution accounted for 9.3% with an ore loss of 5.6% and in Pit 6 the dilution accounted for 9.6% and an ore loss of 9.2%. During the pit optimisation process, an additional 5% ore loss was incorporated to reflect the additional dilution along the ore waste boundary because of blasting and grade control limitations. After optimization and regularization mining recovery was factored at 95%.

PROCESSING METHOD

The recovery process is regarded as appropriate and conventional for the style of mineralization. The DFS sets out crushing followed by grinding, rougher floatation, regrinding, cleaner floatation and concentrate dewatering to produce a high-grade graphite concentrate for downstream refining into Li-ion battery anode.

Three stages of crushing will be employed using mobile equipment under contractors. Primary, secondary and tertiary crushing will be in the ROM pad area located 250m to the west of the process concentrator buildings. Ore will then be loaded and crushed in a primary crusher down to < 150 mm then directly fed into the secondary and tertiary crusher where it will be crushed down to < 35 mm size. This material will be fed into the primary mill and after a primary grind the pulp will be subjected to a primary rougher flotation.

Approximately 55-60% of the mass will report to the primary concentrate depending on the ROM ore grade. This mass will be re-ground followed by five stages of cleaning, producing a concentrate varying in purity depending on property requirements associated with Talga's final anode design. Concentrator recovery is expected to average approximately 90%.

The cleaning circuit will employ a cleaner tail recycle to the preceding cleaning circuit, with final cleaner tails exiting from this cleaner. Rougher and cleaner tails will be dewatered in a common thickener, filtered and exit the concentrator as a moist filter cake. The concentrate will then be transported to Talga's anode refinery and chemically purified into battery grade >99.9% material as part of the anode production process.

Appropriate Ore and waste Metallurgical Characterization work from representative core was completed by Core Metallurgy and CSIRO. A processing simulation and a number of trial mined ore bulk sample and pilot testing programs were used to develop the process flowsheets. Core Metallurgy Pty Ltd (based in Queensland Australia) undertook the design process and would be regarded as having an appropriate level of experience to determine the process design, recovery factors and product specification.

CUT-OFF GRADES

For Ore Reserve estimation, cut-off grades have been calculated based on positive cash flow generation. The economic cut off was determined as 11% Cg. Approximately 117kt (0.8%) of mineralised material falls below the cut-off so all mineralised material was considered as ore for the Whittle optimization process.

ORE RESERVE ESTIMATION METHODOLOGY

As part of the Resource estimate, drill hole spacing was used to determine confidence levels for Indicated and Inferred categories based on data availability, and results of this work were used to classify the reported Mineral Resources. Data quality was also factored into the classification process.

As part of the Mineral Resource modelling process, a geological block model (with parent block size 5m x 4m x 2.5m) was developed from the drill hole database with the classification parameters set as a variable. The geological model was adapted to produce a mining model which was then optimized using Whittle software. Golder, in consultation with Talga, opted for the maximum discounted cashflow (NPV) selection criteria with a Cg price of US$4,000/t selected as the optimal shell. The process considered all revenues and costs and included mining and processing parameters. From this, optimisation shell mine design was conducted at appropriate geotechnical design and modifying factors.

MATERIAL MODIFYING FACTORS

Permits

The Vittangi Graphite Project comprises one exploration concession (Nunasvaara Nr.2). The mineral exploration permit for Nunasvaara Nr.2 was issued by the Mining Inspectorate (Bergsstaten) in accordance with Swedish mineral law (Minerallag (1991: 45)) and provides the holder rights to explore for minerals and first right to apply for an exploitation concession (mining lease) to mine identified mineral resources for a 25-year period.

An application for exploitation concession was submitted in May 2020. Nunasvaara Nr.2 intersects multiple individual land titles comprising freehold property, with surface rights held by the owners of the property or under agreements to Talga.

Native Title and Stakeholder Engagement

Stakeholder engagement has been undertaken by Talga since commencement of exploration in the area in 2012 and the company is on course to meet or exceed Swedish legislative expectations for stakeholder engagement.

Consultation has been completed with the Sami indigenous groups and constraints have been put on the mining schedule to ensure seasonal reindeer migration and husbandry will be maintained. This includes a commitment to avoid mining activities during periods of the year during which the reindeer movements are expected. Reindeer herding impact assessments have been completed by the indigenous peoples group representatives, and an extensive Stakeholder Engagement Plan is being implemented.

Environmental Permitting and Approvals

The primary permits required to enable development of the mine are an Exploitation Concession (under the Minerals Act) and an Environmental Permit (under the Environmental Code). Applications for both the Exploitation Concession and Environmental Permit were submitted in May 2020, followed by an application for Natura 2000 permit. Assessment of the applications by agencies and the relevant court are expected to take, based on the timing of other assessments, 12 to 18 months.

The project has seen one trial mining campaign fully approved (conducted over 2015 and 2016) and appropriately restored. A further trial mine has been approved which is planned for 2021 and 2022. There have also been a number of drilling projects and other operating permits as the project develops. An appropriate level of confidence has been demonstrated for the developer to reach economic potential by way of permitting and licensing for the project.

Infrastructure and Transport

From the mining planning undertaken during the DFS, an appropriate level of land is available to site and develop the supporting infrastructure to the mine. A suitable level of study has been undertaken for the design and build of these facilities.

The required site infrastructure is attributed to three primary areas:

- Mining – open cut pit, waste rocks storage, haul roads, tails management facility, mining contractor area, soil storage and ROM pad.
- Ore Processing – processing plant, water storage and catchment of dams.
- Administrative Buildings – office and admin block, warehouse, security facilities, site access, road and carpark.

In addition to the standard infrastructure requirements, a new power line will be added from Svappavaara to the mine substation to connect the site to the regional power grid. A minor upgrade to the existing lines from the E45 highway has been confirmed to deliver sufficient power (8MW).

Recovery from groundwater inflow, pit seepage and recycling will comprise the raw water supply to the mine site and associated water supply pipelines are required.

Contract mining would be implemented and supported by local labour. Accommodation would be available in the local communities which currently support a reasonable level of mining activity in the area. The project is well supported by sealed road network and nearby railway. It is expected that a linking road from the local highway to the mine area will be upgraded to dual lane. Product transport will take place in standard flatbed trucks for transport to the anode refinery in Luleå.

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 downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample "representivity" and the appropriate calibration of any measurement tools or systems used.* • *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 30g 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.*	• Diamond drillholes were sampled based on observed graphite mineralisation. • Historic drillholes, WL 56 with core diameter of 39mm, were half-cut and sampled over 2m intervals. Samples were assayed for carbon via an IR-detector and sulphur and trace elements via an unknown method. • Talga drillholes were completed using WL 66 coring equipment with a core diameter of 50.5mm which were either quarter-cut or half-cut for sampling. Quarter-core sampling was utilised where duplicate samples have been taken. • Sampling was carried out under Talga's sampling protocols and QAQC procedures as per industry best practice. • Drillholes have been sampled on geological intervals or nominal 1m or 2m intervals where appropriate (approx. 3kg/sample). All samples have been crushed, dried and pulverised (total prep) to produce a sub sample for multi-element analysis by four-acid digest with ICPMS/OES, total graphitic carbon by Leco and fire assay and AAS for gold.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
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.).*	• Talga's diamond drilling completed by Northdrill Oy from Finland. • Diamond drilling completed using WL66 core drilling equipment. • Core orientations, where taken, have been completed using a Reflex ACT 3 core orientation tool. • Talga's downhole surveying completed using a Reflex EZTrac survey instrument or a Deviflex Gyro instrument.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• For historic drillholes, core recovery was recorded by the geologists logging the core. • For Talga's drilling, core recoveries are measured by the drillers for every drill run. The core length recovered is physically measured for each run, recorded and used to calculate the core recovery as a percentage of core recovered. Any core loss is recorded on a core block by the drillers. • No additional measures have been taken to maximise sample recovery. • A sampling bias has not been determined.
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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• For historic drillholes, geological logging was conducted to a reasonable standard noting alteration, structures, lithology, mineralisation and core loss. • For Talga's drillholes, geological logging of diamond core captures lithology, colour, weathering, alteration, mineralogy, mineralisation and structural observations. • All drillholes are photographed in both wet and dry states.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representative nature to the*	• For historical drillholes, core was half-cut, prepared into nominal 2-metre composite samples. Samples were assayed for sulphur and trace elements via an unknown method at LKAB's laboratory in Malmberget. Carbon was assayed via an IR-detector at SSAB's laboratory in Luleå. No other information regarding sample preparation or quality control procedures is known. Check assaying of two historical LKAB cores showed <0.3%C variation to historical data. • For Talga's drilling all samples are either quarter-core or half-core except for

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	samples. • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	duplicate samples in which case quarter-core samples have been taken. • The sample preparation follows industry best practice sample preparation; the samples are finely crushed with 70% passing <2mm then reduced in a splitter whereby a reject sample and a 250g sample is produced. The 250g sample is then pulverised with 85% passing <75 microns which completely homogenises the sample. A sub-sample of pulp is taken for digestion in a four-acid digest, total graphitic carbon and fire assay for gold. Samples with high carbon content were pre-roasted to 700°C prior to analysis for gold. • Duplicate sampling, where taken, has been completed at a rate of 1:40 where practicable; duplicate results for all holes are satisfactory. • Certified reference material standards and blanks have been inserted at a rate of 1:20 or 1:30 where practicable; standard and blank results for all holes are within accepted limits. • The sample sizes are considered appropriate for the type of mineralisation (graphite) under consideration.
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.* • *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.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• For historical drillholes, the exact method used to determine sulphur and multi-element analyses is not known so no comment can be made as to its appropriateness. For carbon analysis, it was noted that an IR-detector was utilised; whilst there is no other information other than the type of detector, IR-detectors are still industry standard for carbon analysis today and as such the method used historically is considered appropriate. • For Talga's drillholes, all samples are assayed using a four-acid digest multi-element suite (33 or 48 elements) with ICPOES or ICPMS finish. The acids used are hydrofluoric, nitric, hydrochloric and perchloric with the method approaching near total digest for most elements. • Selected samples are assayed for total graphitic carbon via Leco furnace. Graphitic carbon is determined by digesting the sample in 50% HCl to evolve carbonate as CO_2. Residue is filtered, washed, dried and then roasted at 425°C. The roasted residue is analysed for %C by

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		high temperature Leco furnace with infrared detection. • All samples are assayed for gold by firing a 25g sample with an AAS finish. Samples with a high carbon content are pre-roasted to 700°C prior to analysis for gold. • The analytical methods are considered appropriate for this style of mineralisation. • No geophysical tools or handheld instruments were utilised in the preparation of this release. • Duplicate sampling has been completed at a rate of 1:40 where practicable; duplicate results for all holes are satisfactory. • Certified reference material standards and blanks have been inserted at a rate of 1:20 or 1:30; standard and blank results for all holes are within accepted limits. • Laboratory QAQC methods include the insertion of certified reference material standards, blanks, and duplicates.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Both Amanda Scott and Albert Thamm, competent persons to this report, have visually reviewed the diamond core and correlated results with the observed geology. • Drillhole NUN16004 & NUN16005 are twin holes; NUN16005 was drilled approximately 1m behind NUN16004 after it was abandoned due to drilling difficulties. NUN16004 has been used as a metallurgical hole and not been assayed to date but lithological logging shows excellent consistency and repeatability between the two holes. • All geological and location data is currently stored in Excel spreadsheets. Data entry has been by manual input and validation of the small amount of data has been done by checking input on screen prior to saving. • No adjustments or calibrations have been made to any assay data used in this report.
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.* • *Specification of the grid system used.*	• Historic drillholes and Talga's 2012 drilling have been surveyed with DGPS. Talga's subsequent drillhole locations have been determined using a Garmin handheld GPS unit with an accuracy of +/- 1m. Drill azimuths were laid-out with a hand-held Suunto compass that has a precision of +/- 0.5 degrees.

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	• *Quality and adequacy of topographic control.*	• Downhole surveys have been completed using a Reflex EZTrac or a Deviflex Gyro downhole survey instrument at regular intervals. • Grid system is Swedish Coordinate system SWEREF99. • Topographic control has been established by handheld GPS and cross-correlation with digital laser topographic imagery.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• The current data spacing or drill profile separation is approximately 50-100m. • The data spacing and distribution is considered sufficient to establish a degree of geological and grade continuity. • Sample compositing has been applied for the current MRE; see Section 3 below.
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.* • *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.*	• All drillholes have been drilled perpendicular to the interpreted strike of the mineralisation and lithology. • No sample bias as a consequence of orientation-based sampling has been identified.
Sample security	• *The measures taken to ensure sample security.*	• For historic drillholes, sample security measures are not known. • For Talga drillholes, sample chain of custody is managed by the Company. All holes are stored in a locked facility.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• An external review of the sampling, logging and core handing techniques was completed in December 2016 by Albert Thamm ahead of the 2017 MRE being completed and there are no changes to information since that time.

Table 1 Section 2 Reporting of Exploration Results

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral tenement and land tenure status	• *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, wilderness or national park and environmental 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 Nunasvaara South deposit is located on licence Nunasvaara nr 2 and the Nunasvaara North prospect is located on licence Vittangi nr 2. All licences are owned 100% by the Company's Swedish subsidiary, Talga AB. • The licences are wholly-owned by the Company and are located in forested areas. The area is used for seasonal grazing by local indigenous Sami reindeer herders. The Natura 2000 registered Torne River is located approximately 1km to the south of the current MRE for Nunasvaara South. • The licences are in good standing with the local mining authority, Bergsstaten.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Graphite was first identified at Nunasvaara in the early 1900s and has received occasional exploration by private parties and the Swedish Geological Survey since that time. In the early 1980s, LKAB completed diamond drilling and test mining at Nunasvaara South and since then, the area has been explored by Anglo American and Teck Cominco for copper and base metals prospectivity. Talga completed diamond drilling at Nunasvaara in 2012, 2014 and 2016 and the nearby Niska graphite deposits in 2019.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The mineralisation at Nunasvaara and Niska comprises two sub-vertical, lithologically continuous units of very fine grained, dark-grey to black graphite containing 10-46% graphitic carbon. The units range in thickness from ~15-100m. The hangingwall is comprised of mafic volcanoclastics and tuffaceous units and the footwall to the mineralisation is a mafic intrusive (dolerite-gabbro). The graphite units are regionally extensive over many kilometers and are interpreted to have developed in a shallow freshwater basin in the early Proterozoic (Circa 2.0 billion years). Subsequent deformation, possibly related to domal intrusive bodies, have metamorphosed and tilted the units to the sub-vertical orientations present today. The majority of the graphite at Nunasvaara is very fine grained, highly crystalline and very high grade. Metallurgical testwork completed

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		by the Company shows a range of commercial graphite and graphene products can be produced.

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 northing 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*
	  ○ *hole length.*
	• *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.*
		• Drillhole locations used in the current MRE are shown in the figures contained within the text of this report and comprehensively reported in previous ASX releases related to the drilling results at Nunasvaara South, Nunasvaara North and Niska.

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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• A lower cut-off grade of 10% graphitic carbon has been applied to the current MRE. • No top cut-off grade has been applied to the current MRE. • No metal equivalents have been used in this report.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to*	• The geometry of the graphite mineralisation at Nunasvaara South, Nunasvaara North and Niska is well understood and all drilling has been completed perpendicular to the strike of

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
	the drillhole angle is known, its nature should be reported. • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	the mineralisation.
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 drill hole collar locations and appropriate sectional views.*	• Appropriate maps, photographs and tabulations are included in the main 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 toavoid misleading reporting of Exploration Results.*	• The report provides the total information available to date and is considered to represent a balanced report.
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.*	• Previous exploration results, including all drilling results and previous JORC Indicated and Inferred Mineral Resource Estimates, Probable Ore Reserve and a PFS for Nunasvaara have been previously reported. No other exploration data is considered material at this stage.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out 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.*	• Plans for further drilling of shallow targets along strike and deeper targets underneath the current resources are being planned for completion in 2021. Further large-scale metallurgical testwork is ongoing and trial mining planned. • Diagrams highlighting the areas and targets for future drill testing are included in this report.

Table 1 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 validation procedures used.*
		• Data package was supplied and downloaded as a Dropbox™ company dataset. The dataset was also supplied on a USB. The data package included historic, 2012-2014, 2016 and 2019 drill data, resource and pit design files, QAQC resources and other previous drilling and resource estimate reports.
		• Drill data consisted of Microsoft Excel files for collar, survey, lithology and assay data.
		• The data was validated for the following:
		  • missing data issues
		  • missing interval issues
		  • overlapping sample interval issues
		  • depth issues
		  • id issues
		  • survey issues
		  • logging issues
		• A second validation was completed in a 3D interpretation in Vulcan geological modelling software.
		• Data plotted correctly on the topographical surface and on the collar location as planned and supported on the documentation supplied.
		• Some trenches were not registered on topographical surface.
		• Downhole survey was checked for significant deviation. No issues were identified.
		• Assay were checked for anomalies between geology and total graphitic carbon grade ("Cg"). No anomalies were identified. Drill core with no sample assays were inserted with undefined (-999) Cg grade to relate the assay data file to the geology logging.

Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Albert Thamm ("Competent Person") is a Geological Consultant and undertook a site visit in December 2016 ensuring industry standards of the resource estimation process from sampling through final block model are maintained. • These visits involved meeting with site geologist, the core storage and laboratory to visually inspect and better understand the scale and nature of the subsurface geology, the core recovered and the logistics of assay.

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Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.*
	• *Nature of the data used and of any assumptions made.*
	• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*
	• *The use of geology in guiding and controlling Mineral Resource estimation.*
	• *The factors affecting continuity both of grade and geology.*
		• Confidence in the interpretation of the Nunasvaara stratigraphy is considered to be high given:
		  ◦ Domain interpretation was completed with a consideration for field logs, geochemical data and surrounding holes
		  ◦ Drill hole domains interpretation were validated visually and statistically
		• Consideration is always given to mining and estimation practicalities to ensure models are fit for purpose and realistic.
		• Graphite is geochemically distinct compared to the host gabbros and dolerite dykes and is defined using a graphitic carbon grade cut-off of 10%Cg.
		• Wireframe solids and surfaces of the mineralised domain are used to generate an empty geological block model. These act as 'hard' boundaries during estimation for both mineralisation and waste domains.
		• Geology and grade are generally highly continuous in mineralised graphite horizons.
		• Numerous dolerite dykes which are sub-parallel to the mineralisation vary in thickness from less than 20cm to over 3m.

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 Nunasvaara South mineralisation strikes 137º/317º for a total distance of 3.6km with a dip of 75º towards 230º. The Nunasvaara North mineralisation strikes at about 40º/220º for a distance of 0.5km and dips steeply towards 310º to near vertical. • The mineralisation pinches and swells to a maximum thickness of 100m at Niska. Average true mineralisation thickness varies between 15m and 30m at Nunasvaara. • The mineralisation extends from surface to a maximum depth of 220m often covered by up to 2m of overburden material. • Mineralisation is open laterally and at depth.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade*	• Samples are collected at varying sample intervals based on the graphite mineralisation ("ore") domain or waste. Sample data was flagged by domains using wireframe solids for mineralisation

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	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. • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	("ore") low grade ("lgore") and dykes and waste. • All assay data has been composited to 2m based on the domain. 2m composite samples were used in the estimation with minimum composite sample of length of 1m. • Initial statistical analysis was carried to provide geostatistical parameters for domain modelling. • All volume modelling, variogram modelling and estimations were carried out using Maptek ™Vulcan 3D mining software. • Two block models were constructed based on the main principal strike direction 40º and 140º. • Block model was constructed using geological surfaces as hard boundaries. Parent block sizes 25mx4mx10mRL based on half the nominal drill hole spacing within an area with sub blocks of 5m x 0.2m x 0.5m. Block models were aligned with strike direction. • Block discretisation is 5x5x2. • Total Graphitic Carbon ("Cg") and Sulphur ("S") were estimated as in-situ grades. Both Cg and S were estimated separately. • Geostatistical analysis was carried out on a domain basis in the Nunasvaara South with the highest density of drill data and this produced robust well defined variogram structures with a very low nugget effect (~2% of total sill). Ranges were generally short with maximum direction showing a range of 77m. • Similar search ellipse orientations and search parameters for Cg and S grade were used for estimation based on a combination of variography and drill spacing. • Due to differences in variogram ranges in the three directions, search ellipse dimensions were kept anisotropic weighting was applied via the variogram models in all directions. • A multiple search pass strategy was adopted, whereby the search range was expanded if first search failed to find enough samples to estimate blocks. Estimation search strategies have sought to ensure robust estimates while

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		minimizing conditional bias.
		• In the first search pass, a minimum of 8 composite samples and maximum of 12 with no more than 4 samples per drill hole were required to estimate a block. Blocks not estimated in the first pass were re-evaluated in the second and subsequently third passes.
		• The second and third passes relaxed the minimum number of samples used per estimate as well as increasingly larger search radii. Blocks not estimated in the second pass were re-evaluated in the third pass. Blocks not estimated in the third pass were assigned the mean grade of the specific pit area drill sample data.
		• Only data belonging to a domain was used to estimate that domain and hard boundaries were used. Ordinary Kriging was used to estimate Cg for mineralisation.
		• The low-grade footwall zone at Nunasvaara north was estimated using an inverse distance weighting method (to power 2).
		• No top cuts were applied.
		• Validation of the final resource has been carried out in a number of ways, including:
		  • Visually comparing block model estimated grade against drill hole by section
		  • Comparison by mineralisation zone
		  • Comparing statistically, by domain, block model grades versus sample and composite grades
		• All modes of validation have produced acceptable results.
		• Modelling results have been compared to the previous resource estimates. The increase in the resource is predominantly due to additional resources delineated from the 2016 and 2019 drilling.

Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• All mineralised tonnages are estimated by applying a mean bulk density of 2.7g/cc, with natural moisture. LOI assay is routine.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A natural mineralisation cut-off occurs at 10%Cg and was used to define the mineralised envelope.

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		• The updated resource estimates were based on a lower cut-off of grade of 10%Cg and 30%Cg was chosen to provide equivalence with the more recent Niska Resource estimate and represent the optimal cut-off required to achieve the desired product specifications at the time. • No material change in resource occurs by using a lower cut–off except in a low-grade footwall horizon.
Mining factors or assumptions	• *Assumptions made regarding possible 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.*	• Talga currently envisages using an open pit mining method with a possible option for underground mining. • Feasibility level studies have optimised resource extraction. The mining method and height was chosen to maximise recovery. • Open pit at extraction rates approximately of 100,000 tpa with the deepest part of the early-stage pit to reach -80 meters. Mining will utilize articulated trucks. • Current design parameters are a bench height of 20m, with a berm width of 5m, battered to give an overall pit slope of 47º. • Assessment is underway of alternative mining methods to the final pit without blasting. It is assumed that a cutting and sawing method will result in achieving a batter angle of 80º and a berm width of 2.5m. Trial mining was successfully completed with this method in 2015 and 2016. • Studies may include underground mining options as an alternative, typically as 25m spaced levels using long hole open stoping with backfill (**ASX:TLG 5 August 2020**). • No geotechnical data supporting this alternative mining method exists.
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*	• Metallurgical sample testing has been conducted on ore extracted from trial open pit mining. • Results of metallurgical testing have been quantified in the 2019 PFS and subsequent public reports suggesting reasonable prospects for economic extraction. • A sample of 60t of ore extracted from the trial mine at Vittangi was subjected to crushing-grinding-flotation test work. The

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	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.	first program conducted grinding tests on the Vittangi composite material to determine the grinding times needed to achieve P80 of 75 µm, 150 µm and 250 µm in a laboratory scale rod mill ahead of flotation. Regrind and cleaner flotation was also tested. The test produced a high concentrate grade of 95.1% Cg at a high recovery rate of 91% as part of 2019 PFS testwork. Further larger scale metallurgical tests have subsequently successfully produced premium anode by optimising metallurgy for surface area. • The DFS sets out a contracted 2-3 stage crushing process followed by grinding, rougher floatation, regrinding, cleaner floatation and concentrate dewatering to produce a high-grade concentrate. • Appropriate Ore and waste Metallurgical Characterisation work from representative core was completed by Core Metallurgy in Australia, CTP (Belgium), CSIRO (Australia) and Independent Metallurgical Laboratories (IMO)(Australia). A number of testing programs and core processing simulation was used to develop the process flowsheets. Core Metallurgy Pty Ltd (based in Queensland Australia) undertook the design process and would be regarded as having an appropriate level of experience to determine the process design, recovery factors and product specification.
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 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*	• Within the concession area there are established indigenous rights to practice reindeer herding during the winter season with several cooperatives (Sameby) operating in the area. • Reindeer Herding Impact Assessments have been or are being completed by the two reindeer herding cooperatives. Stakeholder engagement has been undertaken since commencement of exploration in the area in 2012. Multiple trial mining campaigns and drilling programs have occurred during this time, all receiving the relevant permits and stakeholder consent required to proceed. • An extensive Stakeholder Engagement Plan is being implemented. • This includes a Consultation Plan, already in place, for initial consultation for the

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	considered this should be reported with an explanation of the environmental assumptions made.	Environmental permit and Natura 2000 permit. • The Swedish Geological Survey ("SGU") has completed a demarcation of the Company's Vittangi graphite resources as a mineral deposit of national interest. This designation adds support of the exploitation of Vittangi as a mineral deposit to government authorities when reviewing any competing land uses. • Under Chapter 3, Section 7 of the Swedish Environmental Code, deposits of valuable substances or materials can be defined as being of national interest, meaning municipalities and central government agencies may not authorise activities that might prevent or significantly hinder exploitation of the mineral deposit. The national interest area covers the entirety of Talga's currently defined Vittangi graphite resources.
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.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk densities used in the Mineral Resource Estimate are based on a mean bulk density of 2.7g/cc for all mineralisation. • The bulk density determination was as both the mean and geomean of drillcore measurements using the Archimedes principal. Laboratory measurements by ALS Malå report within this tolerance. The same density measurements were applied as prior resource reporting. Waste BD measurements with the wireframed mineralisation have been excluded.

Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.*
	• *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*
		• The Mineral Resource has been classified in the Indicated and Inferred categories, in accordance with the 2012 Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC Code).
		• A range of criteria has been considered in determining this classification including:
		  • Geological continuity
		  • Data quality
		  • Drill hole spacing

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	distribution of the data). • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Modelling techniques • Estimation properties including search strategy, number of informing data, average distance of data from blocks and estimation output from the interpolation • Indicated resources are typically supported by a drill hole spacing not exceeding 50m. • Inferred resources are largely based on confidence in geological continuity, wider drill spacing or isolated mineralisation with limited drill and sample data. • The results of the validation of the block model shows acceptable correlation of the input data to the estimated grades. • The Mineral Resource Classification reflects the views of the Competent Person.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• Various aspects of the data acquisition, assaying, geological modelling and resource estimation have been independently reviewed at various times over the life of the project, including this estimate, by a second CP. This included audit of standard insertion, core storage, sampling intervals recorded vs reported and review of QA/QC protocol. Reviews are commissioned annually as part of the Annual Report compilation. The Mineral Resource has been reviewed externally by Golders as part of the formulation of the Nunasvaara South Ore Reserve.
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 qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify*	• Calculated accuracy and confidence in the Mineral Resource Estimate are not explicitly stated. • However, relative accuracy is reflected in the resource classification, based on relative kriging variance output from the estimation algorithms. • The Indicated Mineral Resource Estimates are considered to represent a local estimate as there is reasonable confidence in the location of mineralisation and waste domains. • Inferred Mineral Resource Estimates are less certain, particularly on strike and at depth due to limited drill hole data density.

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	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. • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

Table 1 Section 4 Estimation and Reporting of Ore Reserves

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Mineral Resource estimate has been updated as part of the internal FS study and reported in accordance with the JORC (2012) code. • The current global Mineral Resource Estimate across the Vittangi project is 19.5 million tonnes (Mt) @ 24.0% Cg for 4.7 Mt of contained graphite which includes 4.6 Mt at 25.8% Cg within the Niska deposit (not included in the FS). A 10% cut-off was applied. The Resource extends from surface to ~220m depth. • 77% of the total Resource is classed as Indicated (70% for Nunasvaara only). Only Nunasvaara South Indicated tonnes are used in conversion to Ore Reserves. Inferred tonnes are excluded from the design and/or labelled as waste. • Resources are inclusive of Ore Reserves.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Mr John Walker, (FGS, MIMMM, FIQ), Principal Mining Engineer for Golder Associates conducted a site visit to the Nunasvaara site, Vittangi, and core storage at SGU's Mineral Resources facility in Malå between 4th – 5th September 2018 accompanied by senior Talga personnel. The field visit reviewed the project setting and was used to determine any mine area constraints, suitable locations for storage facilities, haul roads and site access. The visit incorporated: ○ Review of historical local excavations ○ General topography and land relief ○ Environmental setting and constraints ○ Previous trial mining area

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		○ Restoration of previous trial mined area ○ Exploration drillhole collars ○ Stored sized stone from previous mining operations ○ Review of existing infrastructure and proposed infrastructure for the mine ○ Discussions with Talga geotechnical advisors ○ Review of logistics for concentrate movements
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• An internal FS study was conducted during 2020/2021. Previous PFS reports have been fully reviewed as has the historical information. The internal FS has been concluded along with all supporting study work in hydrogeology/mining/processing and environmental technical areas. The Ore Reserve estimate relates to the current updated position of work for the technical disciplines of geology, processing, hydrogeology, geotechnics, environmental in assessing the economic viability of mining the deposit.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• For Ore Reserve estimation, cut-off grades for ore have been calculated based on positive cash flow generation. The economic cut off was determined as 11% Cg. ~117kt (0.8%) of mineralized material falls below the 11% Cg cut-off and so all mineralized material was considered as ore for the Whittle optimization process.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control*	• As part of the Resource estimate drill hole spacing was used to determine confidence levels for Indicated and Inferred categories based on data availability. Results of this work were used to classify the reported Mineral Resources. Data quality was also factored into the classification process. • As part of the Mineral Resource modelling process a geological block model with parent block size 5m x 4m x 2.5m was developed from the drill hole database with the classification parameters set as a variable. • The geological model was adapted to produce a mining model which was then optimized using Whittle software. Golder, in consultation with Talga, opted for the maximum discounted cashflow (NPV)

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	and pre-production drilling. • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	selection criteria. For Area 1 (relates to Pits 1 to 5) a revenue factor (RF) of 0.47 for a Cg price of USD 4,000/t was selected as the optimal shell. For Area 2 (relates to Pit 6) a RF of 0.44 for a Cg price of USD 4,000/t was selected as the optimal shell. • The process considered all revenues and costs and included mining and processing parameters. • From these optimisation shells, mine design was conducted using appropriate geotechnical design and modifying factors. • Due to the relatively simple structure and shallow nature of the pit shells in the deposit, conventional open pit mining has been selected as the method of extraction and for determining Ore Reserves at the Vittangi Project. The Study sets out that the mine will utilise standard small-scale truck and shovel equipment on a contractor basis and operate 6 months of the year (Apr – Sept). Annual requirements for primary, secondary and tertiary comminution will also occur during these 6 months. The process plant will operate 12 months per year. • The Study sets out primary access roads, ore excavation, waste rock backfill from year 8, a tailings storage area, and mine infrastructure for the operation. • A full review of the site geotechnical operations and design parameters was completed by Golder Associates during Jan 2019. Data gaps were identified, including the key rock structure and strength data gaps that have been addressed in a geotechnical investigation program in 2020 and are incorporated in the present mine design. A geotechnical study setting the design criteria has been provided. • A suitable level of study (Sweco, 2020) has been undertaken and informs the mine design criteria. For Hydrogeological factors the groundwater inflows to the open pit have been considered and pumping infrastructure has been sized based on the groundwater inflows and 1:100-year storm events. Further hydrogeological analyses is required as a next stage work package to inform the drawdown. • Recommendations were developed for

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		the mine design for Factors of Safety above 1.3 to above 1.6 (overall slope scale-dependent) for an overall Slope Angle range (excluding ramps) of 45 to 49°. • The mine design was then based inside these limits using the relevant overall slope angle for each geotechnical slope domain. The design versus the shells were in acceptance at -5.5% reduction in total material. Geotechnical domaining and design criteria was updated by Golder 2020. • The project Resource was upgraded during 2020, to JORC 2012 classification. The total Mineral Resource Estimate across the Vittangi project is 19.5 million tonnes (Mt) @ 24.0% Cg for 4.7 Mt of contained graphite which includes 4.6 Mt at 25.8% Cg within the Niska deposit (not included in the FS). A 10% cut-off grade was applied. The Resource extends from surface to ~220m depth. Of this total Resource, Nunasvaara (South) Mine (Project area) reported a Resource comprising Indicated of 10.4Mt @ 25.6%Cg for 2.66Mt contained graphite and Inferred of 4.5Mt @ 18.3%Cg for 0.82Mt contained graphite. • As part of the project development the Nunasvaara South mine resource was identified as suitable for progression to mine design and mine planning. No Inferred material was utilised for the Reserve estimate. • The original geological model is based on a block size of 25 m x 4 m x 10 m (xyz) with sub-blocking to 5 m x 0.2 m x 0.5 m. The block model was regularised to a new block size of 5 m x 4 m x 2.5 m (xyz). Following regularization Area 1 (Pits 1-5) dilution accounted for 9.3% with an ore loss of 5.6%. Area 2 (Pit 6) the dilution accounted for 9.6% and an ore loss of 9.2%. During the pit optimisation process an additional 5% ore loss was incorporated to reflect the additional dilution along the ore waste boundary because of blasting and grade control limitations. • After optimization and regularization Mining recovery was factored at 95%. • Minimum mining bench width is 15-25 m due to implementation of small equipment and depending on situation.

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		• All Inferred material is considered as waste. • A suitable level of infrastructure exists as a basis for the proposed mining operations. The Study sets out achievable infrastructure plans to support the project.

Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.*
	• *Whether the metallurgical process is well-tested technology or novel in nature.*
	• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.*
	• *Any assumptions or allowances made for deleterious elements.*
	• *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.*
	• *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*
		• The recovery process is regarded as appropriate and conventional for the style of mineralization. The Study sets out crushing followed by grinding, rougher floatation, regrinding, cleaner floatation and concentrate dewatering to produce a high-grade concentrate.
		• Three stages crushing will be employed using mobile equipment. Primary, secondary and tertiary crushing will be in the ROM pad area located 250m to the west of the process concentrator buildings.
		• The mining contractor will provide tertiary crushed ore (sized ≤ 4 mm) in temporary stockpile on the ROM-pad ready for conveying to either the concentrator or crushed ore storage facility.
		• The concentrator process is set out as below.
		  ○ Material from the tertiary crusher will be fed into the primary mill with cyclones controlling the product size progressing to the next stage of processing.
		  ○ After a primary grinding the pulp will be subjected to a primary rougher flotation. Approximately 55-60% of the mass will report to the primary concentrate depending on the ROM ore grade. This mass will be re-ground followed by five stages of cleaning, producing a concentrate varying from 85-95 % Cg depending on the concentrate properties requirements associated with Talga anode design and customer demands. The cleaning circuit will employ a cleaner tail recycle to the preceding cleaning circuit. The final cleaner tails exiting from this cleaner.
		  ○ Rougher and cleaner tails will be dewatered in a common thickener, filtered and exit the concentrator as a moist filter cake.

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		• The concentrate will then be transported to the anode refinery for a series of processes including shaping, purification, coating and pyrolysis to produce battery grade >99.95% active anode product. Purification will be undertaken by alkali roasting with water/acid leaching, filtration and drying. • Appropriate Ore and waste Metallurgical Characterization work from representative core was completed by Core Metallurgy, CSIRO, Roger Townend and SGS in Canada. A number of testing programs and core processing simulation were used to develop the process flowsheets. Core Metallurgy Pty Ltd (based in Queensland Australia) undertook the design process and would be regarded as having an appropriate level of experience to determine the process design, recovery factors and product specification. • To support the process design, a bulk excavation was undertaken during between June to September 2015 and August to October 2016. The test trial mine extracted 2,000m^3 graphite rock from the Indicated resource. Core Metallurgy carried out a Bulk Graphite Flotation Pilot Plant campaign to produce a high-grade Graphite Concentrate for further downstream processing test work. • Bulk samples were also processed during 2016/2017. Samples used for this test work program were taken from the trial mine. The technical report 1080E by Core sets out the testing program undertaken. Further variability site investigation and laboratory work is programmed as part of the implementation plan. • Further tests have been conducted to determine the tailings material characterisation.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps*	• The project developer is on course to meet with the Swedish legislative expectation for environmental permitting. • The project has seen one trial mining campaign (conducted over 2015 and 2016) and appropriately restored. A further trial mine has been approved which is planned for 2021 and 2022. There have also been a number of drilling projects and other permits as the project develops.

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	should be reported.	• An appropriate level of confidence has been demonstrated for the developer to reach economic potential by way of permitting and licensing for the project. • Design information and geochemical characterization of waste rock storage, tailings management and water balance and associated discharges to the water environment are in early stages. Static and kinetic testing is underway on samples from representative lithologies for ore, waste and tailings. Mitigation and management commitments have been developed as part of the permitting process. • Based on the updated kinetic testing, predictions of mine and waste drainage quality has been updated. Further wastewater treatment testwork has been undertaken, demonstrating that the proposed treatment technology performs suitably well in site conditions (cold temperature). Protected areas will be avoided by the project. Areas with natural values (class 2 and class 3), including those that contain vulnerable species, will be compensated during operations. Any short-term impacts will be rehabilitated following closure. A Natura 2000 assessment has been completed. Further habitat assessments in line with IFC Performance Standards guidelines for natural habitat or critical habitat and related mitigations are planned. A review of red listed species has been completed and various species and habitat surveys are ongoing or planned. • Ecosystem Services are yet to be evaluated with developed mitigations, but an ecosystem services review is planned. • Groundwater modelling has been completed in steady state for a worst-case scenario to inform the EIA. A review is planned to evaluate any further scenarios and combined effects that will be required to inform groundwater management. • Certain risks have been identified as a requirement for water discharge management and control for Mining infrastructure in context with the potential to impact on the Natura 2000 site (Torne and Kalix River). These areas are being addressed as part of the

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		Environmental Management Plan as the project develops. • Air quality and noise modelling do not predict unmitigable impacts. Mitigation for noise including noise barriers to protect a nature conservation area during construction and during the first phase of production. • Green House Gas assessment (LCA) has been completed and review in context of IFC Performance Standards is planned. • Active management and monitoring will be required of sedimentation in runoff, discharge from pits and augmentation of the water levels in the lake. Sampling will be required throughout the mine life and beyond to monitor the protection of the Natura 2000 site which is down gradient of some discharge points to the environment. • A detailed environmental monitoring plan has been developed. • A conceptual closure plan has been prepared, which includes an analysis of pit lake formation following closure and the potential mitigation and management required.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.*	• Infrastructure by way of agreements and cost estimates for bulk water and power supplies (8MW) have been progressed sufficiently for the proposed operation. • From the mining planning undertaken during the Study, an appropriate level of land is available to site and develop the supporting infrastructure to the mine. A suitable level of study has been undertaken for the design and build of these facilities. • The project is well supported by a local road network to the point of export for the concentrate. It is expected that a linking road from the main local roads network to the mine area will be updated. • Contract mining would be implemented and supported by local labour. Accommodation would be available in the local communities which currently support a reasonable level of mining activity. • For the tailings a thickening and dry stacking method has been selected for tailings management. Testing has been undertaken on the tailings samples to confirm the sizes of the tailings thickener

CRITERIA	JORC CODE EXPLANATION	COMMENTARY
		and filter press. ~1.9Mt of tailings material over the LOM has been incorporated in the mine planning phase of the Study.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Capital costs have been compiled by Worley Parsons UK and estimated by various subconsultants. A class 4 estimate for the project was generated March 2021; thereafter it was uprated to class 3. The cost classification is confirmed as appropriate for estimating Reserves. This includes a basis of estimate. Contingency has been included as 9.1% on a deterministic basis in the financial model. The Capex valuation is USD 484.3M excluding risk and contingency. Quotations on major equipment items account for 76% of the total. • A tender for the initial 5 Years mining was used to gain contractor quotes and derive OpEx costs for both fixed and variable unit estimates. These rates were then utilized over the remaining mine life years 6 to 24. • Incremental mining costs were provided for increasing depth and distance from source to destination. This was used in the priced bill of quantities as received from two mining contractors. Costs included grubbing, stripping, drill & blast, ore & waste mining inclusive of haulage, crushing and delivery to the process area. • The estimate addresses both direct and indirect costs associated with the operation. • Costs have been based on appropriate designs consistent with a Class 3 (FS) estimate as defined by the Association for the Advancement of Cost Engineering (AACE) and the AusIMM Cost Estimation handbook. • No allowances for deleterious elements are expected to be required or accounted for. • Exchange rates were developed using public-domain sourced forecasts from multiple sources and incorporated in the financial model year 2021. • Transportation charges are based on calculated annual haulage requirements for mining, waste disposal and product. The DB Schenker transport costs for Vittangi to Lulea have been applied. • Treatment, refining charges and royalties

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		were applied by treating them as a deduction of the sales price as depicted in the financial model. These account for 3% NSR Royalty, Gov 0.05%, Landowner 0.15%. Total Royalty 3.2%.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• Ore production and grades are determined by an optimised mine design, mine production, and haulage schedule. • Recoveries are applied to the ore and concentrate as per the flowsheet to derive the Talnode®-C product. • Talnode®-C pricing in the Study is based on a Talga commissioned report by Benchmark Mineral Intelligence. • The base price and the economics for the Reserve have been assessed on the Talphite® Purified Uncoated Price of $4,000 using a Revenue factor of 0.47 for Area 1 (pits 1 to 5) and 0.44 for Area 2 (Pit 6) as the pit shell selections. This basis has determined an approximate valuation around US$1,800/ tonne which is well within the economic envelope for the project.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Talga commissioned Benchmark Mineral Intelligence to conduct a project-specific market analysis. • The report considered anticipated demand and supply from existing and planned projects. • Future price drivers and forecasts are included in the report and used as the basis for the financial model inputs.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• A discounted cashflow model was used which modelled anticipated revenue, capital, and operating costs to a Class 3 (FS) level. • 8% discount rate was used. • Exchange rates were developed using public-domain sourced forecasts from multiple sources. • The results were reported in real terms (i.e. no inflation applied), however inflation is included as an optional sensitivity to report nominal results. • Project sensitivity (+/-20%) was

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		conducted on Exchange rate, OPEX, CAPEX, and Talnode®-C price. The results showed that variations to costs had little impact on project returns (pre-tax NPV8).
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• The project developer is on course to meet with the Swedish legislative expectations for stakeholder engagement. • Consultation has been completed with the Sami indigenous groups and constraints have been put on the mining schedule to ensure seasonal reindeer migration and husbandry will be maintained. This includes a commitment to avoid mining activities during periods of the year during which the reindeer movements are expected. • Reindeer herding impact assessment has been completed by the indigenous peoples group representative. • Socio economic assessment has been completed. Influx of workers will need to be managed by the company as vacant housing is limited and services should be assessed to ensure capacity to cope with influx. Key risks are achieving consent from the indigenous people and diligently minuting all interactions with these key stakeholders.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the*	• See risks section undernoted. • The primary permits required to enable development of the mine are an Exploitation Concession (under the Minerals Act) and an Environmental Permit (under the Environmental Code). Due to the location of the mine within the catchment of the Torne and Kalix river system Natura 2000 conservation area, the Environmental Permit considered potential impacts to the Natura 2000 area and a Natura 2000 permit application has been submitted. • Applications for both the Exploitation Concession and Environmental Permit were submitted to government authorities May 2020 followed by Natura 2000 permit in February 2021. Assessment of the applications by agencies and the relevant court are expected to take, based on the timing of other assessments, 12 to 18 months.

<table>
<tr><th>CRITERIA</th><th>JORC CODE EXPLANATION</th><th>COMMENTARY</th></tr>
<tr><td></td><td>materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</td><td></td></tr>
<tr><td>Classification</td><td>The basis for the classification of the Ore Reserves into varying confidence categories.
Whether the result appropriately reflects the Competent Person’s view of the deposit.
The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).</td><td>Indicated Mineral Resources were classified as Probable Ore Reserves after consideration of the appropriate modifying factors.
Results reflect the Competent Person’s view of the deposit.
No Measured Mineral Resources are included in the Probable Ore Reserves category.
<table><tr><th>Category</th><th>Tonnes</th><th>% Cg</th></tr><tr><td>Probable</td><td>2,260,140</td><td>24.1</td></tr></table></td></tr>
<tr><td>Audits or reviews</td><td>The results of any audits or reviews of Ore Reserve estimates.</td><td>No audits or reviews have been conducted.</td></tr>
<tr><td>Discussion of relative accuracy/ confidence</td><td>Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.
The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the</td><td>The Ore Reserve estimate has been undertaken by John Walker, (FGS, MIMMM, FIQ), formerly Principal Mining Engineer for Golder and currently Technical Director at SLR Consulting Ltd. Mr Walker has sufficient experience which is relevant to the style of mineralisation and type of deposit. Mr Walker is a Competent Person, considered to meet JORC Code reporting standards.
The accuracy of the estimates within this Ore Reserve are mostly determined by the order of accuracy associated with the Mineral Resource model, metallurgical input, and long-term cost adjustment. factors.
Some general noted risks are associated with:
Long term site costs may increase with time. Particularly steel prices for construction materials.
Long term pricing may change although the future market for graphite looks stable. The project has been designed at a reasonable revenue discount 0.67 to account for fluctuations. The other products that the mine can produce present upside to the long-term base pricing applied in the economics.
Geotechnical risks due to unforeseen geologic conditions in the pit walls. Further investigations</td></tr>
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	current study stage. • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	before implementation will provide continued mitigation. ○ The groundwater understanding through programmed site investigation will be update. ○ An additional bulk extraction programmed for 2021- 2022 will provide additional pilot samples and testing. ○ The EIA process should continue to progress as required. For permitting there are risks in achieving consent from the indigenous people. Proper engagement by the developer has been undertaken throughout the project development.