



# Talga Group Ltd

EV Anode and Graphite Forum

Mark Thompson  
Managing Director



# Cautionary Statement and Disclaimer

Talga Group Ltd ACN 138 405 419 (the Company) is the issuer of this presentation.

## **Niska Scoping Study**

The Niska Scoping Study is a preliminary technical and economic study of the potential viability of developing the Nunasvaara North, Niska South and Niska North graphite deposits by constructing an integrated mining and refining operation to produce Talga's anode products for Li-ion batteries. It is based on low level technical and economic assessments that are not sufficient to support the estimation of ore reserves or to provide assurance of an economic development case. Further evaluation work and appropriate studies are required before the Company will be in a position to estimate any ore reserves or to provide any assurance of an economic development case or certainty that the conclusions of the Scoping Study will be realised. The Scoping Study is based on the material assumptions outlined in the announcement of 7 December 2020. These include assumptions about the availability of funding. While Talga considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Scoping Study will be achieved. To achieve the range of outcomes indicated in the Scoping Study, funding in the order of US\$1,000 million plus contingencies may be required. Investors should note that there is no certainty that the Company will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares. It is also possible that the Company could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce the Company's proportionate ownership of the deposits covered by the Niska Scoping Study. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Scoping Study.

## **Forward-looking statements**

This presentation contains forward-looking statements. Those forward-looking statements reflect views held only as at the date of this presentation. Any such statement is subject to inherent risks and uncertainties. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement, and such deviations are both normal and to be expected. Recipients must make their own assessment about the likelihood of a matter, about which a forward-looking statement is made, occurring. The Company makes no representation about the likelihood of a matter, about which a forward-looking statement is made, occurring. The Company and its directors, employees, agents, advisers and consultants: give no representation or warranty to a recipient of this presentation as to the accuracy or completeness of the statements contained in this presentation or in relation to any other matter; and to the fullest extent permitted by law, disclaim responsibility for and have no liability to a recipient of this presentation for any error or omission in or for any statement in this presentation.

## **Reliance on presentation**

A recipient of this presentation must make their own assessment of the matters contained herein and rely on their own investigations and judgment in making an investment in the Company. This presentation does not purport to contain all of the information required to make an informed decision whether to invest in the Company. Specifically, this presentation does not purport to contain all the information that investors and their professional advisers would reasonably require to make an informed assessment of the Company's assets and liabilities, financial position and performance, profits, losses and prospects.

## **Not a recommendation or financial advice**

The information in this presentation is not a recommendation to subscribe for securities in the Company and does not constitute financial advice. Any person who intends to subscribe for securities must conduct their own investigations, assessment and analysis of the Company and its operations and prospects and must base their investment decision solely on those investigations and that assessment and analysis. Prospective investors should consult their own legal, accounting and financial advisers about an investment in the Company.

## **Photographs and images**

Photographs, maps, charts, diagrams and schematic drawings in this presentation are owned by and have been prepared or commissioned by the Company, unless otherwise stated. Maps and diagrams used are illustrative only and may not be drawn to scale. Unless stated otherwise, all data contained in charts, graphs and tables is based on information available at the date of this presentation.

# Introduction to Talga Group

Talga is building a European supply chain of battery & advanced materials critical to the shift towards a more sustainable world

The company is differentiated by:

- **Full mine-to-anode vertical integration**
- **Ownership of product technology**
- **Unique high grade mineral sources**
- **Green products and proximity to market**

Our strong in-house expertise spans battery materials and processing technology, product development and marketing as well as mineral exploration and mining



# Talga Operations

Perth, Australia

***Group head office***

Luleå & Kiruna, Sweden

***Anode production & graphite deposits***

Cambridge, UK

***Product and R&D technology centre***

Rudolstadt, Germany

***Production process pilot facility &  
EU customer network***

Osaka, Japan & Hong Kong

***Commercial offices & product development***





# Experienced Board and Management Team

**Strong technological and operational leadership with on the ground European presence**

## Board of Directors



**Terry Stinson**

Non-Executive Chairman

Over 35 years' Executive and Non-Executive Director experience, working for global innovation companies. Formerly the CEO and Managing Director of Orbital Corporation, VP for Global Fuel Systems at Siemens AG and CEO of Synerject. Currently the Non-Executive Chairman of Carnegie Clean Energy Limited and Non-Executive Director of Aurora Labs.



**Mark Thompson**

Managing Director & Founder

Over 30 years' global experience in the mineral industry including resource project development, technology and management. Founded Talga in 2009 and listed the company on the Australia Securities Exchange in mid 2010. A member of the Australian Institute of Geoscientists and the Society of Economic Geologists.



**Grant Mooney**

Non-Executive Director

Strong corporate advisory background with extensive experience in equity capital markets, corporate governance and M&A transactions. A member of the Institute of Chartered Accountants in Australia. Currently a Non-Executive Director of several ASX listed companies.



**Steve Lowe**

Non-Executive Director

Strong business management and taxation background with more than 20 years' experience consulting to corporate and high wealth clients. A Fellow of the Taxation Institute of Australia and a member of the Australian Institute of Company Directors.



**Ola Rinnan**

Non-Executive Director

Extensive commercialisation and leadership experience across the energy, banking and finance sectors. Has held numerous board positions for European listed companies and financial institutions including Non-Executive Directorships in Smedvig group companies and DFCU Bank.

## Key Management Personnel and Technical Leadership



**Per-Erik Lindvall**

Talga AB Chairman

A well-known business leader in northern Sweden with a long standing background in the Swedish mining industry including as former Vice President of LKAB. Per-Erik also holds several board assignments and has for many years been a driving force in creating a new, sustainable industrial cluster in northern Sweden.



**Melissa Roberts**

Chief Financial Officer

Over 20 years' experience in the global resources industry across corporate and commercial roles, most recently with global mineral producer Iluka Resources. Melissa joined Iluka in 2009 and held a range of senior roles within the business in Commercial, Investor Relations, Business Development and Information Technology.



**Martin Phillips**

Chief Operating Officer & European CEO

Experienced commercial and project manager with over 25 years of global metals and mining sector experience. Previous positions include engineering and management roles in battery recycling programs and smelting innovations at MIM's Mt Isa and UK operations. Mr Phillips was former Commercial Manager of Iluka Resources Ltd.



**Dean Scarparolo**

Company Secretary

A wealth of experience in developing and managing finance departments of ASX listed resource companies. A member of CPA Australia with over 25 years in roles spanning exploration, development and operations across Australia, Africa and Europe.

# Corporate Overview

## ASX:TLG (12 months)



## STOCKMARKET CODES/TICKERS

Primary listing in Australia on the ASX (**TLG**)  
with OTC trading in Germany (**TGX**) and US (**TLGRF**)

## CAPITAL STRUCTURE

Market Capitalisation:	\$584.2M
Listed Shares:	334.3M
Unlisted Options:	12.1M <sup>(1)</sup>
Cash as at 31 December 2022:	\$23.3M

## MAJOR SHAREHOLDERS

Kinetic Investment Partners	4.8%
Mark Thompson – M. Director	4.3%
Pentwater Capital Management	3.6%
UBS AG (Private Banking)	2.9%
Yandal Investment Pty Ltd	1.6%

**Total number of shareholders 11,596**

# Quality ESG commitment

- › 1st resource company committed to EU Principles for Sustainable Raw Materials
- › High standard of corporate governance
- › Social and Environmental Management Systems and Policies in place accords to Equator Principles
- › Sustainability and People report published annually. Environmental studies and stakeholder consultations completed with diligence and care. 11 years of operating experience in Sweden
- › Committed to positively contribute to development of communities and minimise adverse impact on the environment





An aerial photograph of a two-lane asphalt road that curves through a dense forest. A small red car is driving on the road. The text "Our Mission" is centered at the top of the image.

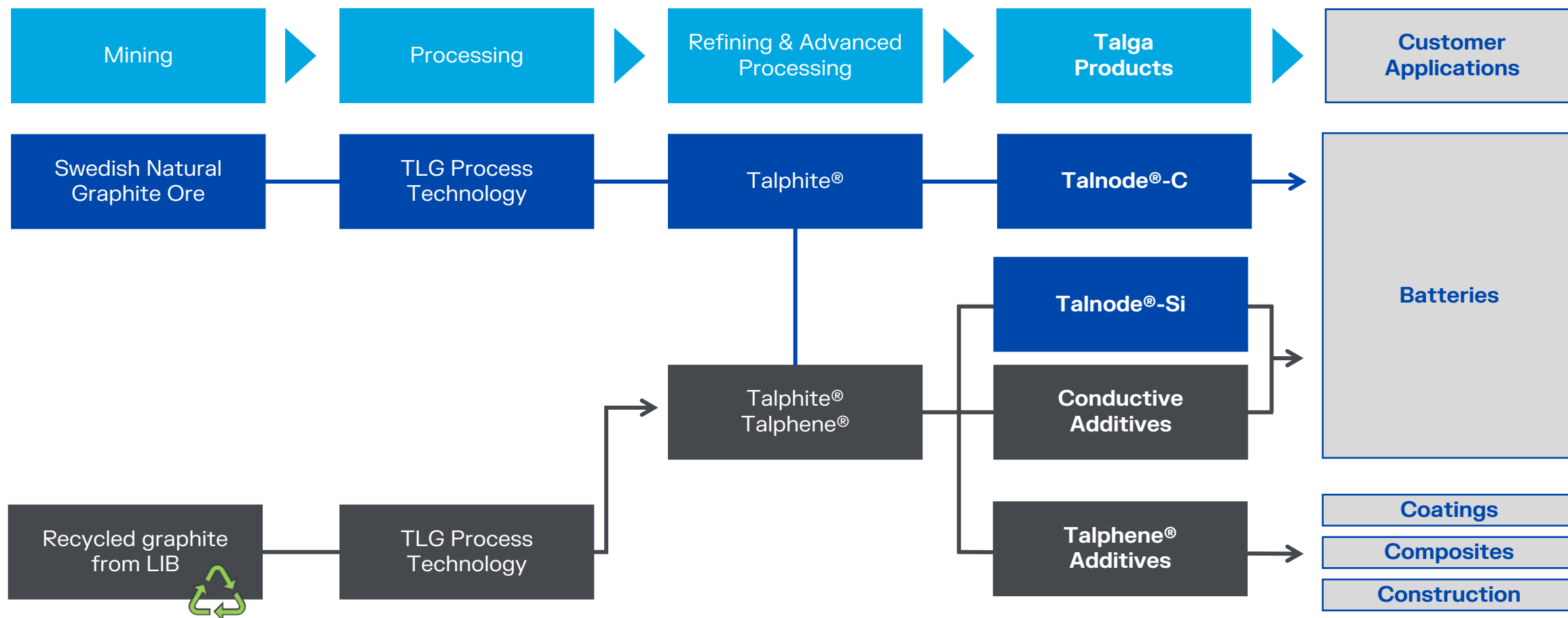
Our Mission

**to enable the world's most  
sustainable batteries and consumer products  
through innovative graphitic materials**



# Talga Technology and Products Map

Diverse range of battery and advanced materials produced from graphite sources

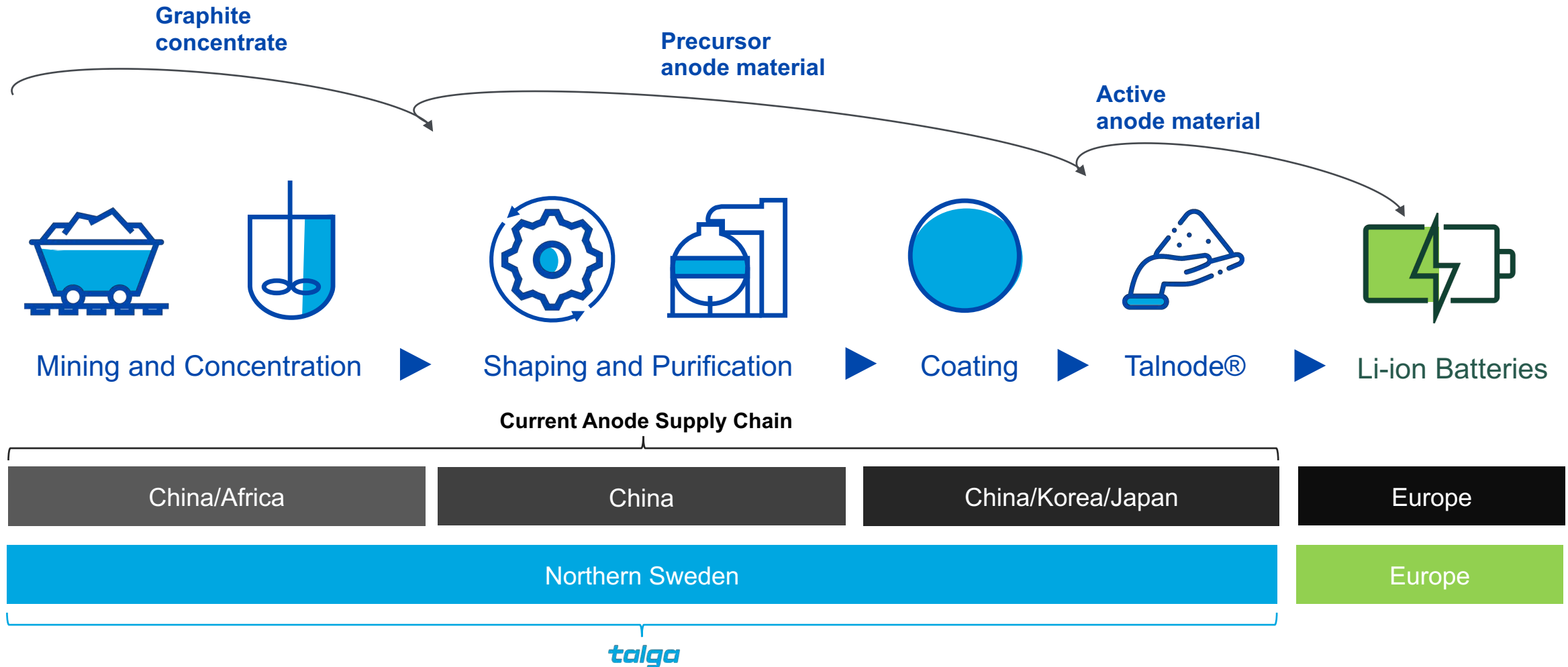


# **Talga is building a fully integrated Li-ion battery anode supply chain in Sweden**

Initial 19,500tpa of coated anode production  
using renewable energy and high grade,  
responsibly extracted natural graphite from  
Talga's Vittangi project



# Swedish anode for the European green transition





# Flagship anode product: Talnode®-C

**Suitable as stand-alone battery anode or blend due to its high energy density**

- ✓ Low resistance, higher thermal efficiency and low swelling more akin to synthetic anodes than natural
- ✓ Fast charge rate, high performance at low temperatures and excellent capacity retention
- ✓ In advanced qualification processes with numerous battery and auto OEM customers



# Green credentials

Talnode®-C has a vastly lower emissions profile than incumbent graphite anodes. It is produced with:

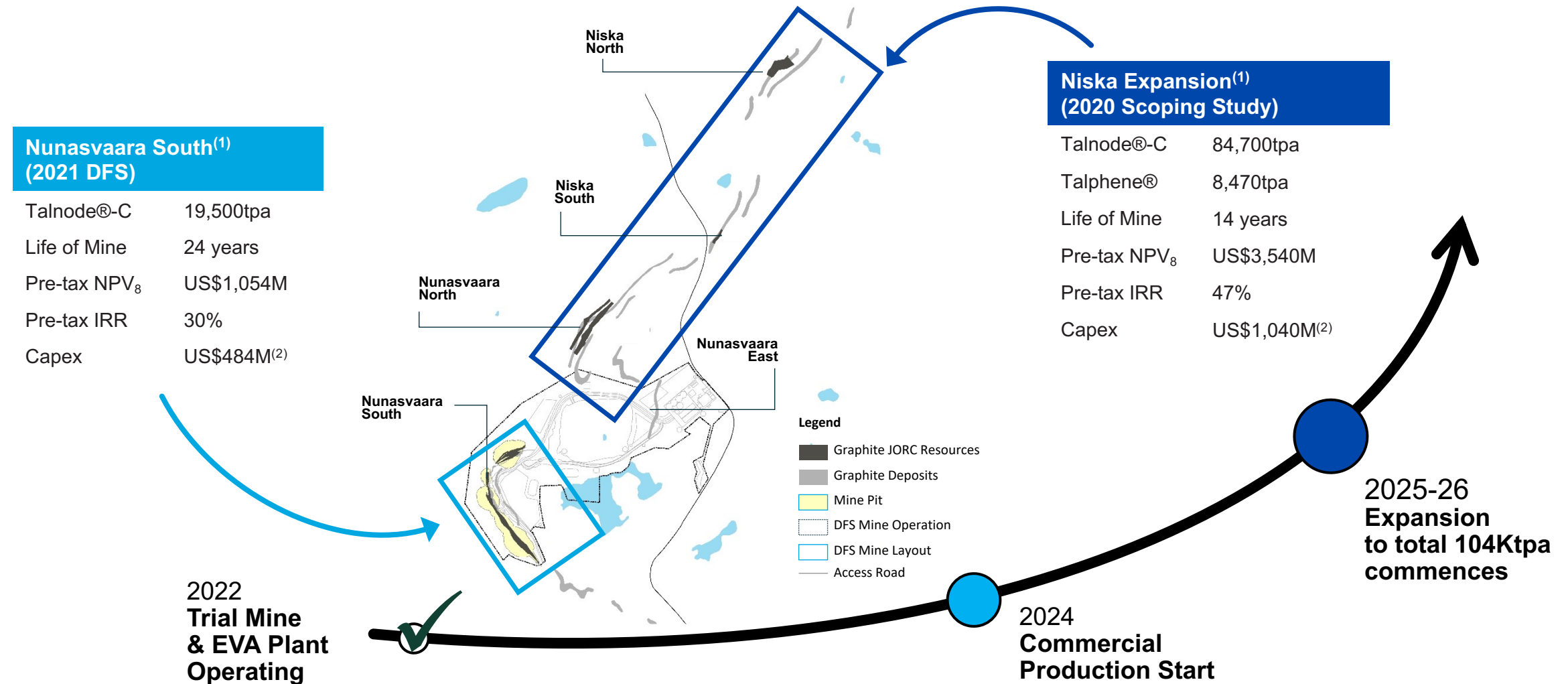
- **Responsible mining of high-grade (low volume) natural graphite**
- **100% renewable electricity**
- **Secure, short supply chain directly to customers**

Hitachi Life Cycle Assessment shows production of 1kg Talnode®-C emits 1.47kg CO<sub>2</sub>-eq<sup>1</sup> (~20x lower than incumbents)



# Path to >100,000tpa anode production

*Niska adds to Vittangi to make Talga one of the largest anode producers outside China*





# 2022 Trial Mining - Vittangi Graphite Project





# Electric Vehicle Anode Plant (EVA), Luleå, Sweden

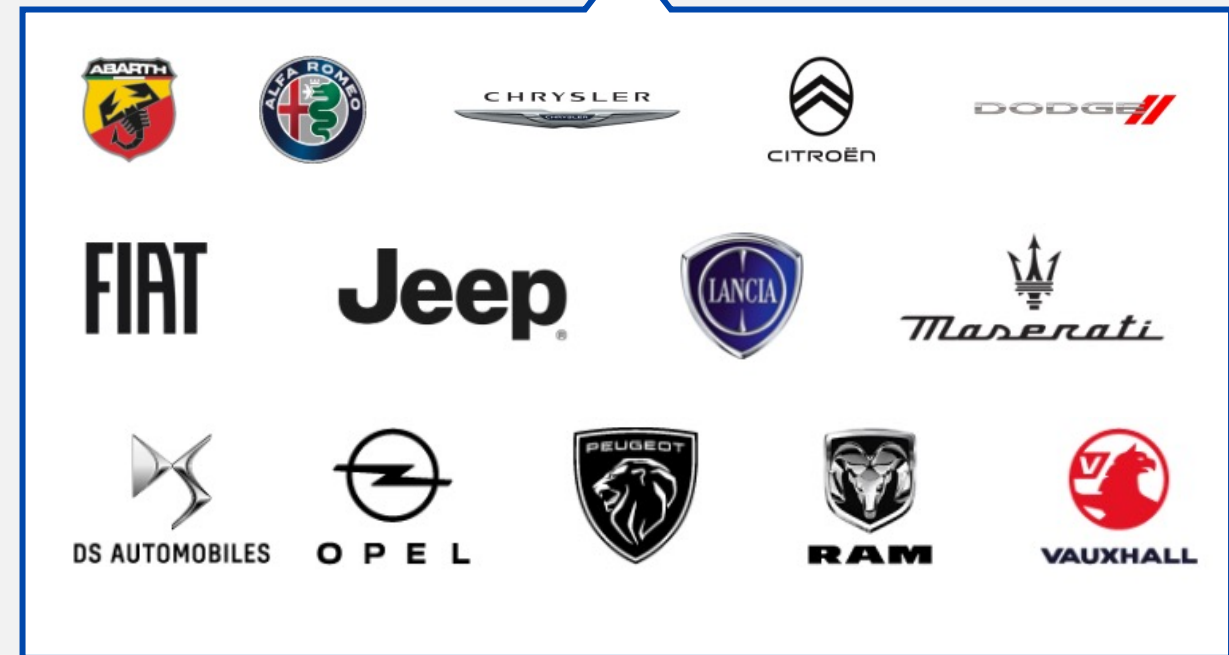




# Customer offtake strategy

## Talga is securing anode supply agreements with multiple customers

- ▶ ACC (co-owned by Mercedes-Benz, Stellantis, and Saft) non-binding offtake term sheet for:
  - ▶ Supply of 60,000 tonnes of Talnode®-C over initial 5-year term starting 2026 from Talga's Vittangi Anode Project in Sweden
  - ▶ Expected to include supply of ramp up volumes over 2023 – 2025
- ▶ Verkor
  - ▶ LOI sets out non-binding terms to supply Talnode®-C over a 4- to 8-year period
  - ▶ Binding term sheet targeting Q1 2023



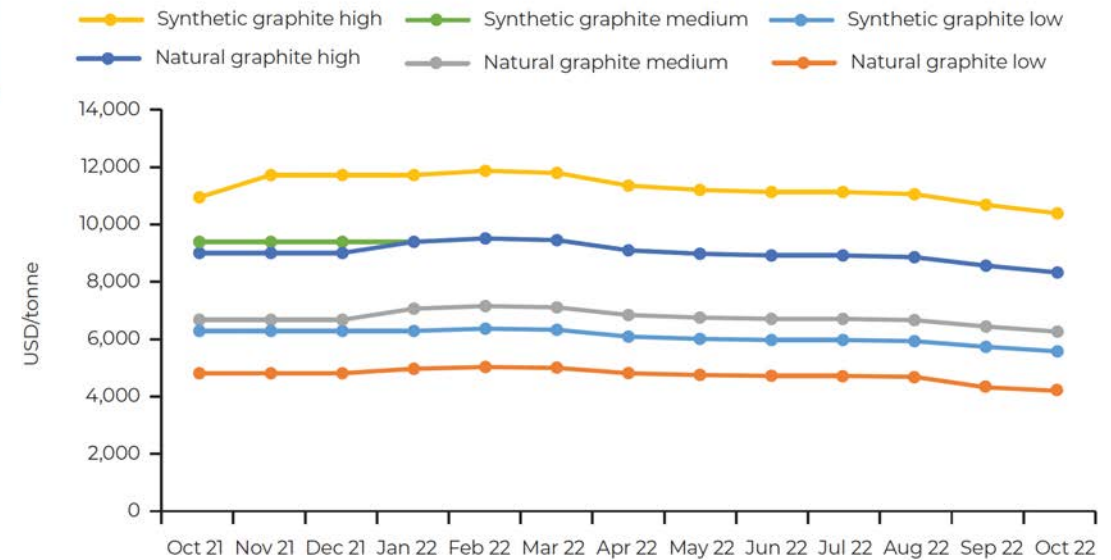
# Graphite Battery Anode Pricing

- ✓ Rising demand for Li-ion batteries for EV production will continue to build pressure in the graphite anode supply chain
- ✓ Benchmark Mineral Intelligence has launched an anode price assessment to provide price transparency for this critical part of the battery supply chain
- ✓ Assessment reports current anode prices as stable, with anode producers absorbing the increased supply costs amid local economic slowdowns
- ✓ Global supply and demand dynamics are expected to positively affect anode pricing in the mid-term

## Anode Price Assessment (DDP China spot basis)

### Benchmark releases anode price assessment

Anode prices have remained relatively stable in recent months



 **BENCHMARK**

Source: Benchmark Anode Price Assessment

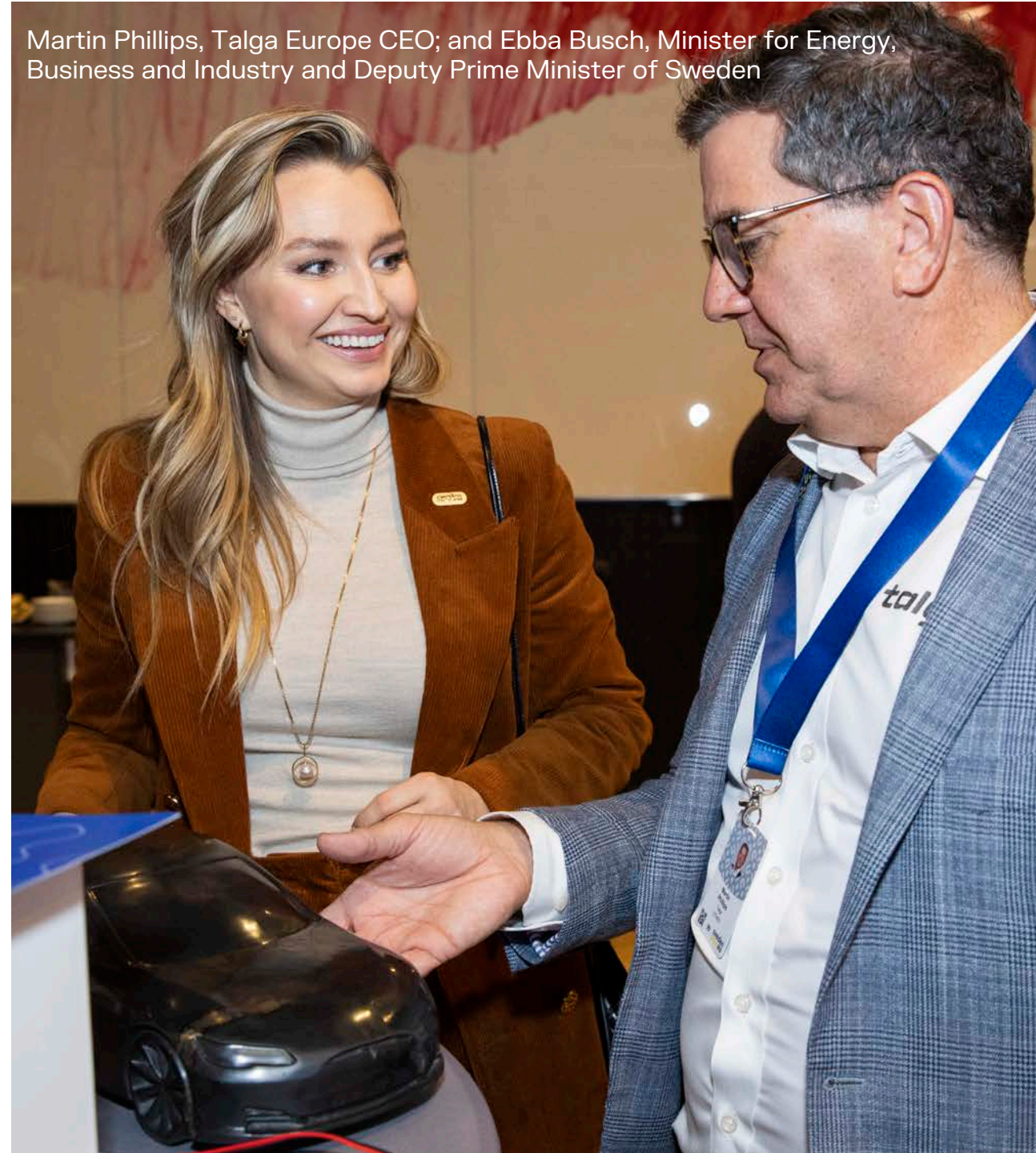
# Right time, right place: European ambition

**EU is exploring bold legislative actions to establish local supply chains critical to a low-carbon future**

- ✓ Electric vehicles and battery production considered key to the European Green Deal
- ✓ Natural graphite classified as Critical Raw Material for green transition
- ✓ Critical Raw Materials Act to be published in March 2023
- ✓ Net-Zero Industry Act to include sovereign wealth fund for green projects



Martin Phillips, Talga Europe CEO; and Ebba Busch, Minister for Energy, Business and Industry and Deputy Prime Minister of Sweden





# Project Funding

## Project financing strategy targets a mix of project equity and debt

- Discussions progressing with multilateral financial institutions, development banks and export credit agencies with due diligence processes commenced
- Advanced discussions with select strategic partners that have indicated an interest in project equity investments and developing long-term partnerships
- Two-day site visit by from EIB, SEK, NIB and multiple green development banks





An aerial photograph of a mining operation. In the upper half, there are several large, terraced open-pit pits of varying sizes, some filled with water. To the right of these pits is a small industrial building. In the lower half, a large, modern processing plant with multiple long, rectangular buildings is visible, surrounded by dense green forest. A road or path runs along the bottom edge of the plant.

# Permitting

- ✓ Court completed its scheduled project site visit in September 2022
- ✓ **Hearing scheduled to commence on 31 January 2023 and expected to conclude on 23 February 2023**
- ✓ The environmental permit will be decided and published after the hearing
- ✓ Exploitation applications for Niska Stage 2 (additional 85,000tpa) submitted mid-2021
- ✓ Environmental permit for Luleå anode refinery production site submitted in June 2022 and advancing

# Company Update – Delivering on strategy

## 2021/2022 Milestones reached

- ✓ Completed DFS for 100% owned Vittangi Mine-to-Anode Project. FEEDs and project optimisation near completion
- ✓ Commissioned (on time, under budget) and operating EVA Plant. Qualification uses graphite concentrate to produce Talnode®-C
- ✓ Environmental permit application progressed
- ✓ Vittangi 54% resource increase completed
- ✓ 25,000 tonne trial mine complete at Niska
- ✓ 60,000 tonne non-binding offtake term sheet signed with ACC
- ✓ Non-binding Letter of Intent signed with Verkor

## Targeted upcoming catalysts/milestones

- ✓ CY2023 project financing and commencement of construction
- ✓ Commercial agreements: >20 battery and automotive customers receiving Talnode®-C for large-scale EV battery qualification and procurement processes
- ✓ Scheduled formal hearing (Q1 2023) for environmental permit for Vittangi graphite mining operation
- ✓ Further development and commercialisation of next-gen anode technology
- ✓ Development of strategy for further expansion beyond 100ktpa anode production



# *talga*

[www.talgagroup.com](http://www.talgagroup.com)



ASX:TLG

# Vittangi DFS & Niska Scoping Study Key Outcomes

Parameter	Units	Vittangi	Niska
Annual ore mining rate	tonnes	<b>100,000</b>	<b>400,000</b>
Average annual production of Talnode®-C	tonnes	<b>19,500</b>	<b>84,700</b>
Average annual production of Talphene®	tonnes	-	<b>8,470</b>
Life of Mine (LOM)	years	<b>24</b>	<b>14</b>
Pre-tax NPV <sub>8</sub> (real)	\$M	<b>\$1,054</b>	<b>\$3,540<sup>1</sup></b>
Pre-tax IRR	%	<b>30%</b>	<b>47%</b>
Capex	\$M	<b>\$484<sup>2</sup></b>	<b>\$1,246</b>
Payback	years	<b>2.5</b>	<b>1.7</b>
Talnode®-C price	\$/t product	<b>\$11,875<sup>3</sup></b>	<b>\$9,375<sup>4</sup></b>
Talphene® price	\$/t product	-	<b>\$15,000</b>
Revenue (LOM)	\$M	<b>\$5,352</b>	<b>\$11,700</b>
Cash cost of production of Talnode®-C	\$/t product	<b>\$2,363</b>	<b>\$2,380</b>
EBITDA (LOM)	\$M	<b>\$4,081</b>	<b>\$8,850</b>

Note: Estimated Key Economic Outcomes all in USD. Talnode®-C Price based on Benchmark Assessment Report. Talga confirms all material assumptions underpinning the production target and corresponding financial information continue to apply and have not materially changed as per listing rule 5.19.2 (1) Pre-tax NPV<sub>8</sub> is base case (range of \$2,430M to \$4,650M); (2) excluding 9.1% contingency and owners' costs; (3) 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. (4) Price is base case price (range \$7,500 to 11,250/t).

# JORC Graphite Reserve and Resources

Ore Reserve <sup>3, 5</sup>	Tonnes	Graphite (% Cg)
Nunasvaara (JORC 2012)	2,260,140	24.1
Probable	2,260,140	24.1

Mineral Resources <sup>1, 2, 4, 6, 7, 8</sup>	Tonnes	Graphite (% Cg)
Vittangi (JORC 2012)	30,100,000	24.1
Indicated	22,600,000	24.9
Inferred	7,500,000	21.8
Jalkunen (JORC 2012)	31,500,000	14.9
Inferred	31,500,000	14.9
Raitajärvi (JORC 2004)	4,300,000	7.1
Indicated	3,400,000	7.3
Inferred	900,000	6.4
<b>Total Mineral Resources</b>	<b>65,900,000</b>	<b>18.6</b>

Note:

1. Mineral resources are inclusive of ore reserves.
2. Mineral Resources are reported at various cut off grades: Vittangi 10% Cg, Jalkunen 5% Cg and Raitajärvi 5% Cg.
3. Ore Reserve is reported at a cut off grade of 12% Cg.
4. Errors may exist due to rounding.



# JORC Exploration Target

2021 Exploration Target Vittangi Graphite Project		
Vittangi (JORC 2012)	Low	High
Tonnage Range	170Mt	200Mt
Grade Range	20% Cg	30% Cg

*Note that the potential quantity and grade of the Exploration Target is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.*

Talga completed new ground electromagnetic geophysical ("EM") surveys of graphite targets at Vittangi following the 2020 upgrade of the Vittangi graphite resource. The EM survey results have been reviewed in combination with prior Talga geochemical samples collected from the surface within the conductors, which averaged 26.2% graphite ("Cg") (ASX:TLG 15 Nov 2012). Modelling of this data in conjunction with positive outcomes of the Niska underground mining scoping study have enabled a revised JORC-compliant Exploration Target estimate totalling 170-200Mt at 20-30% Cg at Vittangi (ASX:TLG 20 Jul 2021). This is a significant increase from the previous 26-46Mt at 20-30% Cg (ASX:TLG 17 Sep 2020). The majority of this estimate is proximal along strike and down dip from Talga's existing Vittangi JORC (2012) graphite resources of 30.1Mt @ 24.1% Cg. Additional targets are located along the mapped graphite units around the greater Nunasvaara Dome area.

New rounds of diamond core drilling commenced at Vittangi in mid-2021. The staged 69 hole diamond drilling program totalling ~8,000m tested parts of the JORC Exploration Target as down-dip extensions of the current JORC Resources as well as shallow subcrop targets between Nunasvaara North and Niska South. Reviews of JORC Exploration Targets will be undertaken where significant changes are indicated by continued exploration.

See Talga's ASX announcement dated 20 July 2021 for further information.

# European Natural Graphite Peer Comparison

Company	Project	Study	Resource	Tonnage	Grade	Contained Tonnage	Information Source
Talga	Vittangi	DFS	Indicated	22,600,000	24.9	7,249,000	Talga Group, Company Announcement, 27 May 2022 <a href="https://talgagroup.eu-central-1.linodeobjects.com/app/uploads/2022/05/27124246/20220527VittangiResourceUpgrade_ASX.pdf">https://talgagroup.eu-central-1.linodeobjects.com/app/uploads/2022/05/27124246/20220527VittangiResourceUpgrade_ASX.pdf</a>
			Inferred	7,500,000	21.8		
Talga	Jalkunen	-	Indicated	-	-	4,693,500	Talga Group, Company Announcement, 27 August 2015 <a href="https://talgagroup.eu-central-1.linodeobjects.com/app/uploads/imports/asx-announcements/357c05f9-817b-416f-b7a9-299eb85d5dd3/TalgaTreblesGraphiteResourceToGlobalScale.pdf">https://talgagroup.eu-central-1.linodeobjects.com/app/uploads/imports/asx-announcements/357c05f9-817b-416f-b7a9-299eb85d5dd3/TalgaTreblesGraphiteResourceToGlobalScale.pdf</a>
			Inferred	31,500,000	14.9%		
Beowulf (Oy Fennoscandian Resources AB)	Aitolampi	-	Indicated	11,000,000	4.9%	1,275,000	Beowulf Mining, Company Announcement, 30 October 2019 <a href="https://polaris.brighterir.com/public/beowulf_mining_plc/news/rns/story/w1o096r">https://polaris.brighterir.com/public/beowulf_mining_plc/news/rns/story/w1o096r</a>
			Inferred	15,700,000	4.7%		
Leading Edge	Woxna	Producer	Indicated	9,810,000	7.5%	1,020,000	Leading Edge Materials, Company Announcement, 9 June 2021 <a href="https://leadingedgematerials.com/leading-edge-materials-announces-positive-preliminary-economic-assessment-results-for-its-woxna-graphite-anode-project-with-us317m-pre-tax-npv-and-42-9-pre-tax-irr/">https://leadingedgematerials.com/leading-edge-materials-announces-positive-preliminary-economic-assessment-results-for-its-woxna-graphite-anode-project-with-us317m-pre-tax-npv-and-42-9-pre-tax-irr/</a>
			Inferred	2,510,000	8.1%		
			Measured	960,000	9.21%		
Mineral Commodities	Traelen	Producer	Measured	67,000	30.2%	434,000	Mineral Commodities, Company Announcement, 16 November 2021 <a href="https://www.mineralcommodities.com/wp-content/uploads/2021/11/Traelen-Maiden-Ore-Reserve.pdf">https://www.mineralcommodities.com/wp-content/uploads/2021/11/Traelen-Maiden-Ore-Reserve.pdf</a>
			Indicated	719,000	25.2%		
			Inferred	1,058,000	22.0%		
Talga	Raitajärvi	-	Indicated	3,400,000	7.3%	307,300	Talga Group, Company Announcement, 26 August 2013 <a href="https://talgagroup.eu-central-1.linodeobjects.com/app/uploads/imports/asx-announcements/930169d0-25cf-407b-9738-3e56a71d7375/500IncreaseinContainedGraphiteatRaitajarviProject.pdf">https://talgagroup.eu-central-1.linodeobjects.com/app/uploads/imports/asx-announcements/930169d0-25cf-407b-9738-3e56a71d7375/500IncreaseinContainedGraphiteatRaitajarviProject.pdf</a>
			Inferred	900,000	6.4%		



# Competent Person Statements

The Vittangi Mineral Resource estimate was first reported in the Company's announcement dated 27 May 2022 titled 'Talga's battery anode growth ambitions boosted with 54% graphite resource increase'. 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 Ore Reserve statement was first reported in the Company's announcement dated 1 July 2021 titled 'Robust Vittangi Anode Project DFS'. 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 Reserve estimate in the previous market announcement continue to apply and have not materially changed.

The Jalkunen Mineral Resource estimate was first reported in the Company's announcement dated 27 August 2015 titled 'Talga Trebles Total Graphite Resource to Global Scale'. 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 Raitajärvi Mineral Resource estimate was first reported in the Company's announcement dated 26 August 2013 titled '500% Increase to 307,300 Tonnes Contained Graphite in New Resource Upgrade for Talga's Swedish Project'. 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 Company first reported the production targets and forecast financial information referred to in this announcement in accordance with Listing Rules 5.16 and 5.17 in its announcements titled 'Robust Vittangi Anode Project DFS' dated 1 July 2021 and 'Positive Niska Scoping Study Outlines Pathway to Globally Significant Battery Anode Production' dated 7 December 2020. The Company confirms that all material assumptions underpinning those production targets and forecast financial information derived from those production targets continue to apply and have not materially changed.

The Information in this presentation that relates to prior exploration results for the Vittangi Graphite Project is extracted from ASX announcements available to view on the Company's website at [www.talgagroup.com](http://www.talgagroup.com), with information on the exploration target first released to ASX on 20 July 2021. The Company confirms that it is not aware of any new information or data that materially affects the exploration results included in the relevant original market announcements. The Company confirms that the form and context in which the Competent Person and Qualified Person's findings are presented have not been materially modified from the relevant original market announcements.