

2019 Annual General Meeting

# Talga Resources Ltd



# Forward Looking Statement & Disclaimer

This presentation has been prepared by Talga Resources Ltd (ACN 138 405 419) ("Issuer") for the sole purpose of providing an overview of its current prospects and proposed exploration and development strategy to recipients ("Recipient"). This presentation and its contents are provided to the Recipient in confidence and may not be reproduced or disclosed in whole or in part to any other person, without the written consent of the Issuer.

The presentation is based on information available to the Issuer as at the date of the presentation. The information contained in this presentation has not been verified by the Issuer nor has the Issuer conducted any due diligence in relation to that information. The presentation contains selected information and does not purport to be all inclusive or to contain all information that may be relevant to the Recipient. The Recipient acknowledges that circumstances may change and this presentation may become outdated as a result. The Issuer accepts no obligation to update or correct this presentation.

This document includes forward-looking statements. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may," "potential," "should," and similar expressions are forward-looking statements. Although the Issuer believes that the expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this presentation. To the maximum extent permitted by law, none of the Issuer, its directors, employees or agents, advisers, nor any other person accepts any liability for any loss arising from the use of this presentation or its contents or otherwise arising in connection with it, including, without limitation, any liability arising from fault or negligence on the part of the Issuer or its directors, employees or agents. Nothing in this Presentation is a promise or representation as to the future. Statements or assumptions in this presentation as to future matters may prove to be incorrect and differences may be material. The Issuer does not make any representation or warranty as to the accuracy of such statements or assumptions.

The information in this presentation does not take into account the investment objectives, financial situation and particular needs of any Recipient. The Recipient should not make an investment decision on the basis of this presentation alone and the Recipient should conduct its own independent investigation and assessment of the content of this presentation. Nothing in this presentation constitute financial product, investment, legal, tax or other advice. Nothing in this presentation should be construed as a solicitation to buy or sell any security or to engage or refrain from engaging in any dealing in any security.

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

# Talga (ASX:TLG)

**A highly integrated producer of advanced battery anode materials and graphene additives**

Developing a range of clean-tech products utilising its high grade natural graphite deposits in Sweden

We now employ 35 technical and professional people from the exploration and development of mines, through processing technology, to marketing and R&D of new products

Vertical integration with 100% ownership of mineral resources, processing and product is designed to provide security of supply for customers and create long-lasting value for stakeholders



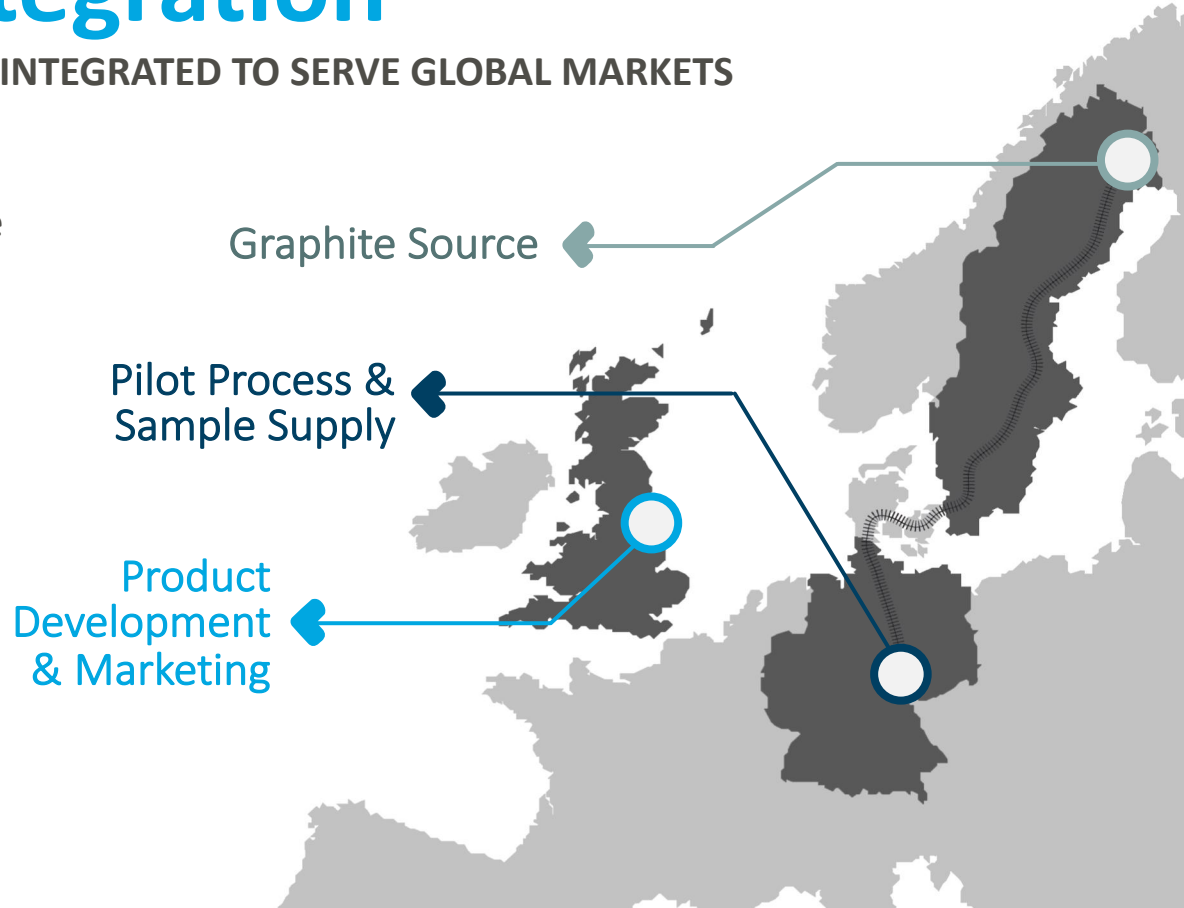
# Year In Review

- ✓ Completed Vittangi Graphite Anode Project **PFS confirming outstanding economics and permits lodged for Stage 1 mining, processing and refining**
- ✓ **Expansion of graphite resources** with discovery of new Niska zone taking Vittangi Project total JORC Resources to 16.9Mt at 25.6%Cg
- ✓ **Outstanding performance results delivered across Talnode® range** for current and next generation battery applications
- ✓ **Commenced qualification of Talnode®-C** with customers
- ✓ **Talnode® and Talphene® related agreements signed** with battery manufacturer Leclanché, Schunk Group and BillerudKorsnäs
- ✓ **World's largest single application of graphene completed** with application of Talphene®-enhanced coating on hull of 33,000t cargo ship in commercial scale trial

# Full Vertical Integration

EUROPEAN BASED AND VERTICALLY INTEGRATED TO SERVE GLOBAL MARKETS

- **Talga Sweden**  
100%-owned high grade graphite deposits under development
- **Talga Germany**  
100%-owned pilot production facility for scaling up process technology & customer samples
- **Talga UK**  
100% in-house science and marketing team in Cambridge



# Own Graphite Supply

**Commanding the entire value chain from mine-to-product resulting in cost, quality and differentiation advantages**

- 100%-owned high grade Swedish graphite projects supplying raw material to downstream processing facilities
- Located in Tier 1 investment and mining jurisdiction with existing quality infrastructure and high level of productivity
- Access to abundance of low CO<sub>2</sub> power suitable for sustainable low cost production of energy intensive products
- Permits lodged for Stage 1 mining, processing and refining at Talga's flagship graphite project Vittangi





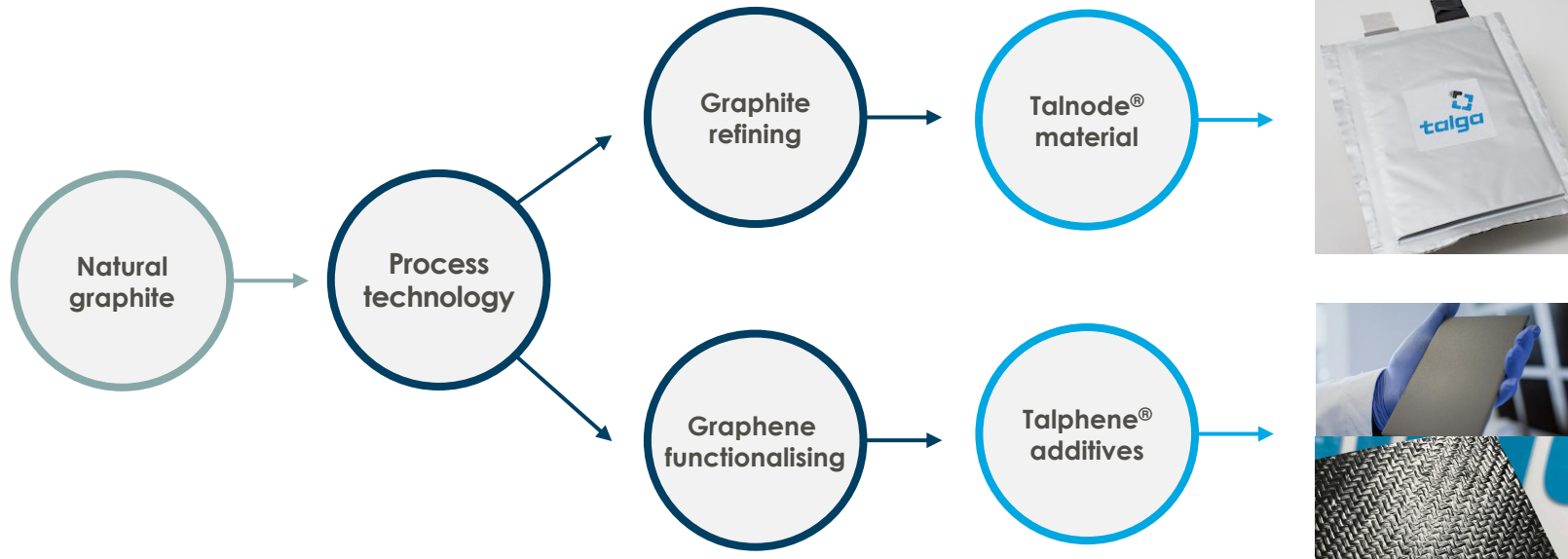
# Talga Pilot Plant

**In-house pilot scale processing facility for sample output and to optimise production technology and processes for planned commercial scale plant**

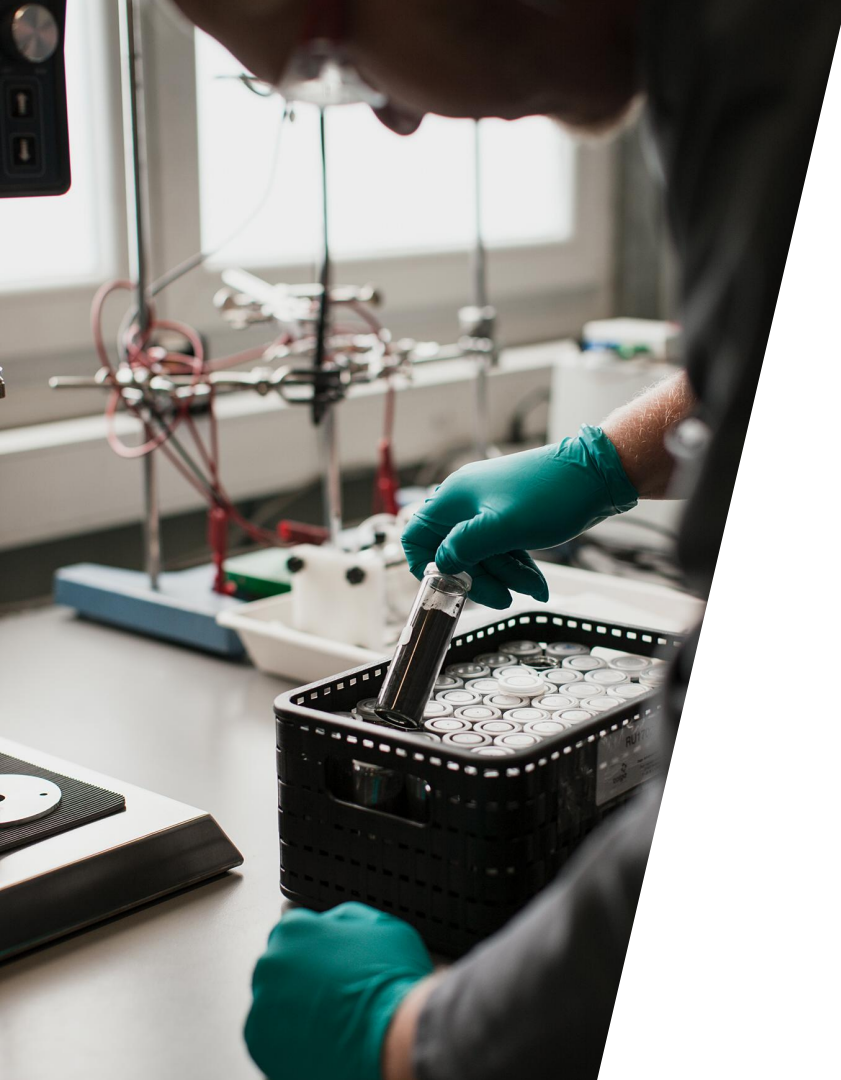
- Favourably located in Rudolstadt-Schwarza Industrial Estate in Thuringia, Germany
- In-house engineering, processing and material chemistry expertise
- Development and protection of proprietary technology and processing know-how
- Planned scale-up of for increased production of Talnode-C in customer qualification programs

# Talga Production Overview

Strong synergies between graphene and graphite processing, products and technologies enable parallel development of each product vertical







# Graphene Additives

**Functionalised fit-for-purpose graphene additives targeting global large volume applications with performance and sustainability as key drivers**

- Targeted product sectors: batteries, coatings, composites and concrete materials
- Joint development programs underway with a range of international partners
- Talphene® production expansion to progress in step with commercial demands and contracts

# Graphene Potential

**Unlocking real-world graphene applications via careful integration of carbon source and production process to product chemistry**

- Successful incorporation of functionalised Talphene® into primer coatings enabling reduction of chrome, copper or zinc
- Development work included multi-stage testing to optimise Talga's patent-pending dispersion technology for commercial primer coating systems
- World's largest single application of graphene completed with Talphene®-enhanced primer coating 700m<sup>2</sup> of 33,000t cargo ship as part of commercial scale trial



# Battery Anode Materials

Graphite, graphene and hybrid anode materials for current and next generation lithium-ion batteries

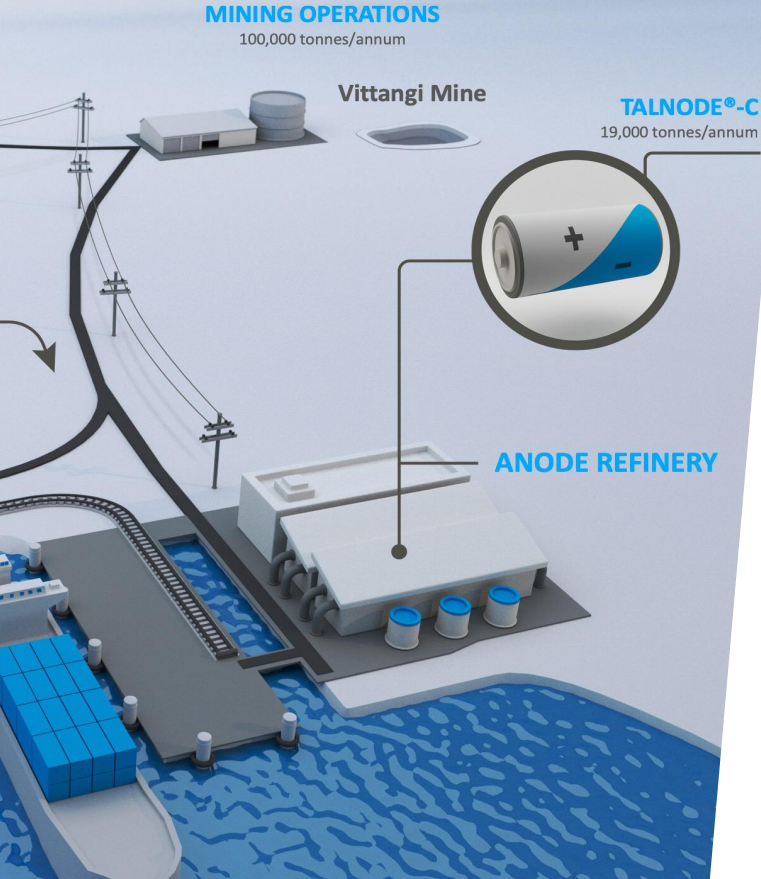
- Talga's flagship battery product Talnode<sup>®</sup>-C, a fully coated active anode powder for **high power** and **fast charge**
- Development of Talnode<sup>®</sup>-X, a formulated graphite anode for 20C **ultra-fast charge** (0-100% in 3 minutes)
- Development of Talnode<sup>®</sup>-Si, a graphene silicon-anode for **higher energy density** (70% higher than standard)
- Development of Talnode<sup>®</sup>-E, a graphene hybrid anode for **solid state batteries**



# Talga Anode Project

Building a world class anode plant in northern Sweden to supply the growing global demand for lithium-ion batteries

- Integrates a natural graphite mine and concentrator to a wholly owned anode refinery close to major European battery factories
- Completed Pre-Feasibility Study confirm the project is technically and financially robust
- High-grade ore, high processing yield and low cost-CO<sub>2</sub> power to position Talga as globally competitive, sustainable producer



# PFS Key Outcomes

## CONFIRMS TECHNICALLY AND FINANCIALLY ROBUST PROJECT

PARAMETER	UNITS	OUTCOME
Annual ore mining rate	tonnes	100,000
Average annual production of Talnode-C	tonnes	19,000
Life of Mine (LOM)	years	22
Pre-tax NPV <sub>8</sub> (real)	\$M	\$1,056
Pre-tax IRR	%	55%
Capex Stage 1	\$M	\$27
Capex Stage 2	\$M	\$147
Payback	years	1.5
Talnode-C average price	\$/t product	\$11,250
Revenue (LOM)	\$M	\$4,148
Cash cost of production of Talnode-C	\$/t product	\$1,852
EBITDA (LOM)	\$M	\$3,254
Net profit before tax (LOM)	\$M	\$3,133



# TALGA The Opportunity

Uniquely leveraged to the **booming lithium-ion battery megafactory demand** in Europe and the **maturing global graphene market**

Downstream market position and competitive cost curve ensures **capability to ride out cycles**

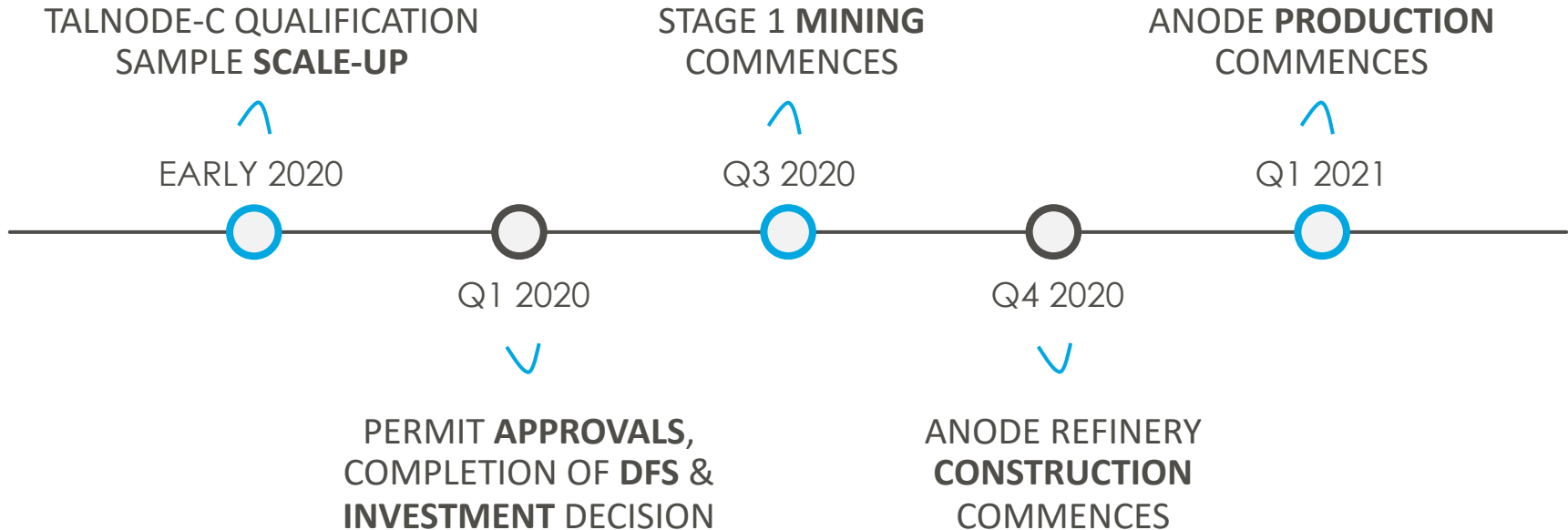
Own technology and product pipeline to **capitalise on next-gen batteries and graphene innovations** as they commercialise

Complies with **green and secure supply chain** for global quality customers

**Poised to capture near term market opportunities** via commercialisation of Talnode-C as first Talga product

# Looking Ahead: Next 12-18 Months

## FOCUS ON VITTANGI GRAPHITE ANODE PROJECT STAGE 1 MILESTONES



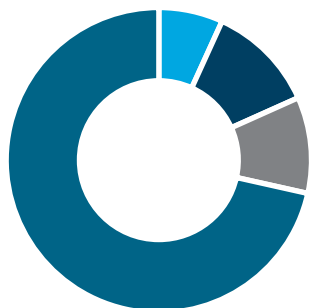
# ASX:TLG Snapshot

**A\$104.4M**  
MARKET CAP\*

**~5000**  
SHAREHOLDERS

**A\$5.6M**  
CASH

**A\$0**  
DEBT



## SHAREHOLDERS

- Board & Management
- Smedvig
- Institutional Investors
- Other

## BOARD OF DIRECTORS

Terry Stinson	Non-Executive Chairman
Mark Thompson	Managing Director
Grant Mooney	Non-Executive Director
Steve Lowe	Non-Executive Director
Ola Rinnan	Non-Executive Director
Andrew Willis	Non-Executive Director

## MAJOR SHAREHOLDERS

Smedvig – Family Office	11.48%
Mark Thompson – M. Director	6.42%
JP Morgan Nominees	4.32%
Pelmer Securities – Pallinghurst	4.12%
BNP Paribas Nominees	3.93%

**TOP 20 SHAREHOLDERS 51.9%**

NOTE: AS AT 30 SEP 2019. \*MARKET CAP AS AT 26 NOVEMBER 2019.



## TALGA RESOURCES LTD

ASX Code: TLG

Head Office: 1st Floor, 2 Richardson Street, West Perth WA 6005, Australia

Phone: +61 8 9481 6667

Email: [admin@talgaresources.com](mailto:admin@talgaresources.com)

Website: [www.talgaresources.com](http://www.talgaresources.com)

### GLOBAL OPERATIONS

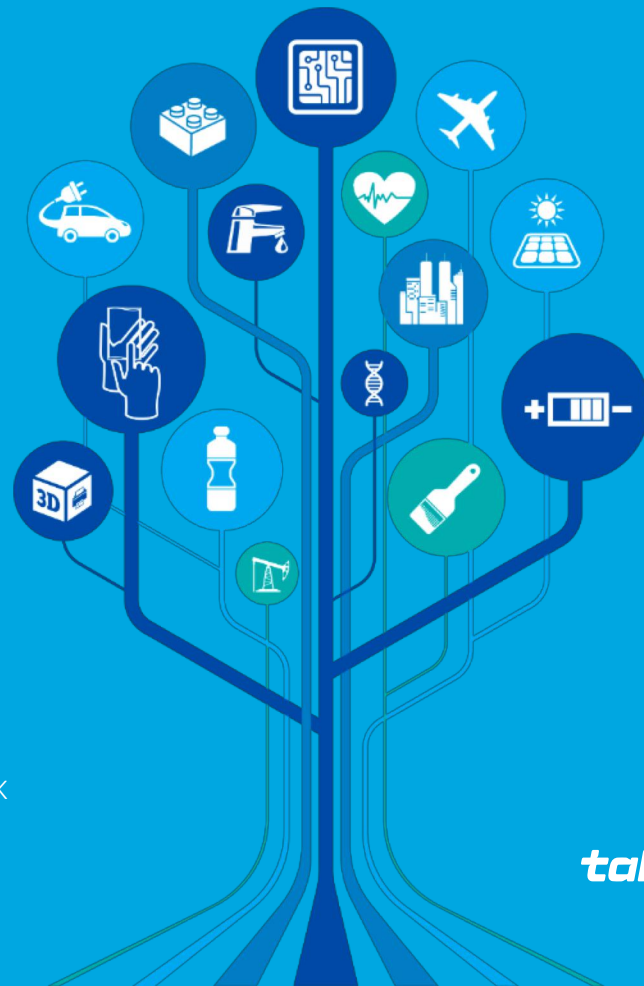
Talga Sweden: Vänortvägen 2, 981 32 Kiruna, Sweden

Talga Sweden: Storgatan 7, 972 38 Luleå, Sweden

Talga UK: The Bradfield Centre, 184 Cambridge Science Park, Cambridge CB4 0FQ, UK

Talga Germany: Prof.-Hermann-Klare-Str. 25, 07407 Rudolstadt, Germany

Talga Japan: Takatsuki, 569-1046, Osaka, Japan



# Competent Person Statements

The information in this report that relates to Graphite Resource Estimation for the Vittangi Project is based on information compiled by Oliver Mapeto and reviewed by Albert Thamm. Both Mr Mapeto and Mr Thamm are consultants to the Company. Mr Mapeto is a Member of both the Australian Institute of Mining and Metallurgy (Membership No.306582) and Australian Institute of Geoscientists (Member No 5057) and Mr Thamm (Member No 203217) is a Fellow Member of the AusIMM. Both Mr Mapeto and Mr Thamm have sufficient experience relevant to the styles of mineralisation and types of deposits which are covered in this document and to the activity which both are 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 Mapeto and Mr Thamm consent to the inclusion in this report of the Matters based on this information in the form and context in which it appears.

The information in this report that relates to the Mineral Resource Estimate and metallurgical results for the Vittangi Graphite Project was first released to ASX on 27 April 2017 and 10 April 2019 respectively. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of the Mineral Resource Estimate, that all material assumptions and technical parameters underpinning the Mineral Resource Estimate continue to apply and have not materially changed.

The information in this report that relates to Reserve Estimation is based on and fairly represents information that has been compiled by John Walker. Mr Walker is a Principal Mining Engineer 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 report 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 report of the matters based on this information in the form and context in which it appears.

The information in this report that relates to Reserve Estimation was first released to ASX on 23 May 2019. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of the Reserve Estimation, that all material assumptions and technical parameters underpinning the Reserve Estimation continue to apply and have not materially changed.

The information in this report that relates to Graphite Resource Estimation for the Jalkunen and Raitajärvi Projects is based on information compiled and reviewed by Mr Simon Coxhell. Mr Coxhell is a consultant to the Company and a member of the Australian Institute of Mining and Metallurgy. Mr Coxhell 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 Coxhell consents to the inclusion in this report of the Matters based on this information in the form and context in which it appears.

The information in this report that relates to the Mineral Resource Estimate for the Jalkunen and Raitajärvi Projects were first released to ASX on 27 August 2015 and 26 August 2013 respectively. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of the Mineral Resource Estimate, that all material assumptions and technical parameters underpinning the Mineral Resource Estimate continue to apply and have not materially changed.

The information in this report that relates to production targets or forecast financial information derived from a production target was first disclosed in the Company's announcement of 23 May 2019 titled 'Outstanding PFS results support Vittangi graphite development'. The Company confirms that all the material assumptions underpinning the production targets and forecast financial information derived from the production targets continue to apply and have not materially changed.

# Appendix

# JORC Graphite Reserve & Resources

Ore Reserve <sup>3, 6</sup>	Tonnes	Graphite (% Cg)
<b>Nunasvaara (JORC 2012)</b>	<b>1,935,000</b>	<b>23.53</b>
Proven	0	0
Probable	1,935,000	23.53

Mineral Resources <sup>1, 2, 4, 5, 7, 8, 9</sup>	Tonnes	Graphite (% Cg)
<b>Vittangi Nunasvaara (JORC 2012)</b>	<b>12,300,000</b>	<b>25.57</b>
Indicated	10,700,000	25.7
Inferred	1,600,000	23.9
<b>Vittangi Niska (JORC 2012)</b>	<b>4,600,000</b>	<b>25.8</b>
Indicated	4,600,000	25.8
<b>Jalkunen (JORC 2012)</b>	<b>31,500,000</b>	<b>14.9</b>
Inferred	31,500,000	14.9
<b>Raitajärvi (JORC 2004)</b>	<b>4,300,000</b>	<b>7.1</b>
Indicated	3,400,000	7.3
Inferred	900,000	6.4
<b>Total Mineral Resources</b>	<b>52,700,000</b>	

NOTE: <sup>1</sup> MINERAL RESOURCES ARE INCLUSIVE OF ORE RESERVES.

<sup>2</sup> MINERAL RESOURCES ARE REPORTED AT VARIOUS CUT OFF GRADES: NUNASVAARA 17% Cg, NISKA 10% Cg, JALKUNEN 5% Cg AND RAITAJÄRVI 5% Cg.

<sup>3</sup> ORE RESERVE IS REPORTED AT A CUT OFF GRADE OF 12% Cg.

<sup>4</sup> ERRORS MAY EXIST DUE TO ROUNDING.

SEE: ASX:TLG <sup>5</sup> 27 APR 2017, <sup>6</sup> 23 MAY 2019, <sup>7</sup> 15 OCT 2019, <sup>8</sup> 27 AUG 2015 & <sup>9</sup> 26 AUG 2013

# Peer Comparison Information

## MINERAL RESOURCES ESTIMATE GRADE JORC/NI43-101

Company	Project	Stage	MRE Grade	Cut-off Grade	Information Source
Talga	Nunasvaara	Development	25.5	17	ASX Announcement, 27 April 2017 <a href="https://www.asx.com.au/asxpdf/20170427/pdf/43hrrm62qg5hp8.pdf">https://www.asx.com.au/asxpdf/20170427/pdf/43hrrm62qg5hp8.pdf</a>
Mason	Lac Guéret	Development	16.3	6	Company Website, 19th September 2019 <a href="http://www.masongraphite.com/projects/lac-gueret-graphite-project/default.aspx">www.masongraphite.com/projects/lac-gueret-graphite-project/default.aspx</a>
Buxton	Yalbra	Development	16.2	4	Company Interim Financial Report, 16 March 2016 <a href="http://www.asx.com.au/asxpdf/20160316/pdf/435w84kwc5j5gl.pdf">www.asx.com.au/asxpdf/20160316/pdf/435w84kwc5j5gl.pdf</a>
Lincoln	Kookaburra Gully	Development	15.1	5	ASX Announcement, 19 December 2013 <a href="http://www.asx.com.au/asxpdf/20131219/pdf/42lqg554lxp15w.pdf">www.asx.com.au/asxpdf/20131219/pdf/42lqg554lxp15w.pdf</a>
Focus	Lac Knife	Development	14.8	3	Press Release, 28 January 2014 <a href="http://www.marketwired.com/press-release/focus-graphite-reports-92-increase-measured-indicated-mineral-resource-categories-its-tsx-venture-fms-1873218.htm">www.marketwired.com/press-release/focus-graphite-reports-92-increase-measured-indicated-mineral-resource-categories-its-tsx-venture-fms-1873218.htm</a>
Syrah	Balama Mozambique	Operating	10.0	3	ASX Announcement, 29 March 2019 <a href="http://www.asx.com.au/asxpdf/20190329/pdf/443w7j8hbl9gtd.pdf">www.asx.com.au/asxpdf/20190329/pdf/443w7j8hbl9gtd.pdf</a>
Triton	Balama North Nicanda Hill	Development	11.1	3	Company Website, 19th September 2019 <a href="http://www.tritonminerals.com/projects/balama-north/#nicanda">www.tritonminerals.com/projects/balama-north/#nicanda</a>
Kibaran	Epanko	Development	9.9	8	ASX Announcement, 31 March 2017 <a href="http://www.asx.com.au/asxpdf/20170331/pdf/43h5qh0m1jmf4h.pdf">www.asx.com.au/asxpdf/20170331/pdf/43h5qh0m1jmf4h.pdf</a>

# Peer Comparison Information

## MINERAL RESOURCES ESTIMATE GRADE JORC/NI43-101

Company	Project	Stage	MRE Grade	Cut-off Grade	Information Source
<b>Sovereign</b>	Mallingunde	Development	7.1	4	Company Website, 19th September 2019 <a href="http://www.sovereignmetals.com.au/projects">www.sovereignmetals.com.au/projects</a>
<b>Graphex</b>	Chilalo	Development	5.4	2/5	ASX Announcement, 28 August 2019 <a href="http://www.asx.com.au/asxpdf/20190828/pdf/447xrt01m63qyp.pdf">www.asx.com.au/asxpdf/20190828/pdf/447xrt01m63qyp.pdf</a>
<b>Next Source</b>	Molo	Development	6.13	2	Company Website, 19 September 2019 <a href="http://www.nextsourcematerials.com/graphite/molo-graphite-project">www.nextsourcematerials.com/graphite/molo-graphite-project</a>
<b>Graphite One</b>	Graphite Creek	Development	7.2	6	Company Website, 19 September 2019 <a href="http://www.graphiteoneresources.com/projects/graphite-creek/resource-estimates/">www.graphiteoneresources.com/projects/graphite-creek/resource-estimates/</a>
<b>Magnis</b>	Nachu	Development	5.4	3	ASX Announcement, 1 February 2016 <a href="http://www.asx.com.au/asxpdf/20160201/pdf/434rl82h51bvd7.pdf">www.asx.com.au/asxpdf/20160201/pdf/434rl82h51bvd7.pdf</a>
<b>Hexagon</b>	McIntosh	Development	4.45	3	ASX Announcement, 5 April 2019 <a href="http://www.asx.com.au/asxpdf/20190405/pdf/4442qj43jg_xh5x.pdf">www.asx.com.au/asxpdf/20190405/pdf/4442qj43jg_xh5x.pdf</a>
<b>Westwater</b>	Coosa	Development	2.39	1	Company Website, 19 September 2019 <a href="http://www.westwaterresources.net/projects/graphite/coosa-graphite-project">www.westwaterresources.net/projects/graphite/coosa-graphite-project</a>
<b>Ontario</b>	Kearney	Development	2.14	1.10	Company Website, 19 September 2019 <a href="http://www.ontariographite.com/s/kearney_mine.asp">www.ontariographite.com/s/kearney_mine.asp</a>
<b>Northern</b>	Bissett Creek	Development	1.74	1.02	Company Website, 19 September 2019 <a href="http://www.northerngraphite.com/project/bissett-creek-project/overview/">www.northerngraphite.com/project/bissett-creek-project/overview/</a>