

INITIATION OF COVERAGE | PUBLISHED ON 08 DECEMBER 2022 (18:37 NZDT) | BY EUROZ HARTLEYS

ADVANCED HIGH QUALITY EV ANODE DEVELOPER

TLG | TALGA GROUP LTD | MATERIALS
PRICE
1.51
TARGET PRICE
3.00
 (FROM -)

RECOMMENDATION
SPECULATIVE BUY
 (FROM -)

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Event

We are initiating coverage on TLG with a Speculative Buy recommendation.

TLG is an advanced anode developer in Sweden. It is differentiated from almost all other ASX listed graphite companies because it is building the downstream all the way to anode. Most peers stop at fine flake or USPG/BAM (battery anode material).

The project is 100% owned, very high grade (24% TGC), very large (resource + exploration target ~200-230Mt, JORC resource is only 30Mt) and makes a very high quality anode (almost comparable with premium synthetic anode).

Subject to favourable Court approval in Q1/Q2, we expect construction to begin in mid CY23, with production late CY24. Court approval is a key and significant risk, and the reason for our Speculative recommendation. If the mine is approved, we are likely to upgrade to Buy, subject to the share price at the time.

Impact

We assume the initial Stage 1 (19.5ktpa) anode plant is in production by end CY24, but we model less than 19.5ktpa nameplate for conservatism in our financials. In our valuation, we assume expansion to 105ktpa nameplate by end CY2030, but we model production well less than 105ktpa, again for conservatism in our model;

We see potential for anode production in the order of 800ktpa is possible, based on the exploration target and assuming one day a 4mtpa underground mining operation (similar to the nearby Kiruna iron ore mine). This is substantially larger than the current resource. Our base valuation does not assume 800ktpa of anode, but indicatively if the company were to achieve such scale, it would represent around 10% of 2040 demand and would be generating in the order of US\$10bn pa of revenue. This is a speculative assumption, but appears plausible based on the quality of the anode to be produced in Stage 1, the exploration target of 170-200Mt, the need to reduce CO₂ in the anode, and the desire for the industry to move away from Chinese produced anode where possible;

Action

TLG has a very advanced, high quality project. In the past it has been misclassified as niche, but having visited site we believe there is potential for a much larger underground operation in the future (with minimal environmental impact) at least as large as the scoping study (+105ktpa anode). Europe has limited world class resources for battery materials, and hence we believe the few that it possesses need to be developed;

On our estimates, at the current share price, TLG trades on ~7.5x fully funded EV/EBITDA. However, this drops to only 2.2x on our expanded case (FY31 on our model, but likely to be sooner subject to customer demand). We initiate coverage with a Speculative Buy recommendation and a \$3.00/sh price target;

Catalyst

ACC offtake move to binding - early CY23

Court case for enviro approval - 30 January to 20 February 2023 (decision by April)

Financing - 1HCY23

Commence construction - mid 2023

First production - end CY24

Share Price 1.51
 Price Target 3.00
 Valuation 2.65

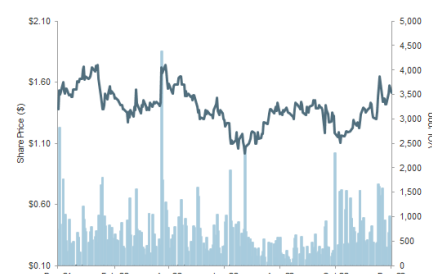
Shares on issue 345
 Market Capitalisation 522
 Enterprise Value 490
 Debt (31 Dec 22e) 0
 Cash (31 Dec 22e) 32

Production F'cast	FY24	FY25	FY26
Mining rate	0	71	95
ktpa concentrate.	0.0	14.9	19.8
ktpa anode.	0.0	13.3	17.7

Assumptions	FY24	FY25	FY26
Small Flake -100	1000	1000	1000
BAM/USPG	3500	3500	4000
Medium Anode	6000	6000	7500
Premium Anode	11000	11000	12000
AUDUSD	0.74	0.74	0.74

Key Financials	FY24	FY25	FY26
Revenue (A\$m)	0	267	385
EBITDA (A\$m)	-15	96	154
NPAT (A\$m)	-52	-13	20
Cashflow (A\$m)	-30	51	118
CFPS (Ac)	-7	10	24

Performance



Source: Euroz Hartleys

MARKET STATISTICS				P&L			
					Jun 24	Jun 25	Jun 26
Share Price			\$1.510	Net Revenue	0.0	267.4	384.5
Issued Capital			334.3m	Total Costs	-15.5	-171.8	-230.3
Options			11.1m	EBITDA	-15.5	95.6	154.2
Issued cap (fully dil inc. all options)			345.4m	- margin	-	36%	40%
Issued cap (plus new capital)			502.4m	Depreciation/Amort	-44.4	-85.8	-96.8
Market Capitalisation - ordinary			A\$505m	EBIT	-59.9	9.8	57.5
Market Capitalisation - fully dil			A\$522m	Net Interest	-14.1	-28.8	-28.7
EV fully finance 19.5ktpa			A\$1152m	Norm. Pre-Tax Profit	-73.9	-18.9	28.8
EV fully financed 105ktpa			A\$2019m	Reported Tax Expense	0.0	0.0	0.0
Debt			A\$0m	Normalised NPAT	-51.8	-13.2	20.2
Cash			A\$32m	Abnormal / Exploration	-22.2	-5.7	8.6
Vittangi Mine & Concentrator	Unit	Jun 25	Jun 26	Reported Profit	-73.9	-18.9	28.8
Ore Mined	Kt pa	71	95	Minority	0.0	0.0	0.0
Grade	%	24.0%	24.0%	Profit Attrib	-73.9	-18.9	28.8
Produced concentrate	Kt pa	14.9	19.8				
EBITDA	A\$m	43.0	67.1	Balance Sheet	Jun 24	Jun 25	Jun 26
Concentrate cash costs	US\$/t	-1361	-1373	Cash	166.8	81.2	183.5
Concentrate selling price	US\$/t	3500	3875	Other Current Assets	1.5	29.9	41.9
Lulea Anode	Unit	Jun 25	Jun 26	Total Current Assets	168.3	111.1	225.5
Concentrate Processed	Kt pa	14.9	19.8	Property, Plant & Equip.	491.5	547.9	467.1
Anode Production	Kt pa	13.3	17.7	Exploration	0.4	0.4	0.4
EBITDA	A\$m	84	119	Investments/other	0.4	0.4	0.4
Anode cash costs	US\$/t	-6334	-6778	Tot Non-Curr. Assets	492.3	548.7	468.0
- net of mine margin	US\$/t	-4196	-4276	Total Assets	660.6	659.8	693.4
Anode selling price	US\$/t	11,000	11,750				
Price Assumptions	Unit	Jun 25	Jun 26	Short Term Borrowings	0.0	0.0	0.0
AUDUSD	A\$/US\$	0.74	0.74	Other	2.1	14.9	19.7
Fines Graphite	US\$/t	1,000	1,000	Total Curr. Liabilities	2.1	14.9	19.7
BAM/USPG	US\$/t	3,500	4,000	Long Term Borrowings	500.0	500.0	500.0
Medium Anode	US\$/t	6,000	7,500	Other	0.0	0.0	0.0
Premium Anode	US\$/t	11,000	12,000	Total Non-Curr. Liabil.	500.0	500.0	500.0
Shares	Jun 24	Jun 25	Jun 26	Total Liabilities	502.1	514.9	519.7
Ordinary Shares - End	496.2	502.3	502.3	Net Assets	158.5	144.9	173.7
Ordinary Shares - Weighted	415.2	499.3	502.3	Net Debt	333.2	418.8	316.5
Diluted Shares - Weighted	423.8	502.3	502.3				
				Cashflow	Jun 24	Jun 25	Jun 26
Asset Valuation (NAV)		A\$m	/shr	EBITDA	-15.5	95.6	154.2
100% Concentrator 100ktpa		125	0.25	Chg working cap	0.0	-15.6	-7.2
- expansion to 500ktpa		666	1.33	Operating Cashflow	-15.5	80.0	147.0
100% Anode Facility 20ktpa		295	0.59	Income Tax Paid	0.0	0.0	0.0
- expanded to 105ktpa		1021	2.03	Interest & Other	-14.1	-28.8	-28.7
Forwards		0	0.00	Operating Activities	-29.5	51.3	118.3
Corporate Overheads		-167	-0.33				
Net Cash (Debt)		32	0.06	Property, Plant & Equip.	-520.7	-142.2	-16.0
Tax (NPV future liability)		-582	-1.16	Exploration and Devel.	0.0	0.0	0.0
Total		1330	2.65	Other	0.0	0.0	0.0
				Investment Activities	-520.7	-142.2	-16.0
				Borrowings	500.0	0.0	0.0
				Equity	194.0	5.3	0.0
				Dividends Paid	0.0	0.0	0.0
				Financing Activities	694.0	5.3	0.0
				Net Cashflow	143.7	-85.6	102.3

TLG is developing a large anode/integrated graphite project in Sweden.

TLG is an advanced anode developer in Sweden. It is differentiated from almost all other ASX listed graphite companies because it is going downstream all the way to anode. Most peers stop at fine flake or BAM (battery anode material). BAM is uncoated spherical graphite, and requires further processing, and sells at a significant discount to anode. Producing anode means that TLG maintains control of margin, is a high performance chemical manufacturer, and has potential to grow significant market share because it is dealing closer to the end customer. Anode (compared to BAM/SPG) is a final input into batteries and therefore has been qualified through the long an arduous process.

Anode is critical for battery life and charging performance. The risk of using poor anode is significant warranty and brand problems. Whilst the cathode is made of "chemicals", where purity levels are all that matters, the anode performance is a combination of purity and structure. It simplistic terms, it is more of a "crystal" than a chemical that drives the quality of the anode. This is much harder to test given the crystal can change through manufacturing, and may not be uniform through the ore body. This is the reason for the very long testing periods, and the historic preference for synthetic anode. The requirement to reduce CO2 footprint for anode is encouraging blending of natural anode, despite the risks to performance. TLG testing to date has suggested that blending of its anode has substantially less impact on performance than some other natural anode given performance characteristics are already close to synthetic graphite.

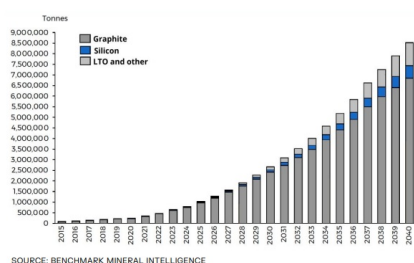
The DFS (July 2021) capex estimate is US\$484m for 19.5ktpa of high quality anode for EV's.

Selling prices for the anode are expected to be similar to synthetic graphite (spot price +US\$10-12k/t).

The key risk is environmental approval, with a court sitting in in late February/ early March and a ruling anticipated in April.

Figure 1: Substantial anode demand

Battery demand will drive multi-decadal growth for anode and disrupt supply chains



Current EV anodes are predominantly synthetic graphite but natural anode increasing market share due to favourable environmental footprint and rising cost of synthetic feedstock

Silicon will be additive to graphite-dominant blends

New technologies (solid state) expected to take time to commercialise and will see limited mainstream uptake due to cost and manufacturing limitations

talga

Source: TLG

Figure 2: DFS estimate

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 _s (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 $\pm 15\%$. 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

Source: TLG

Figure 3: Site visit to EVA demonstration plant



Source: Euroz Hartleys

Lulea Anode Project

The anode plant is planned for 19.5ktpa. DFS (July 2021) capex is estimated at ~US\$284m.

TLG already has a small anode demo facility in Lulea. It has processed small volumes which customers have used for validation. ACC has signed a MoU for 60kt over five years (average 12ktpa), and is expected to move to binding soon.

Figure 4: Artist impression proposed anode plant



Source: TLG

Figure 5: Site visit to planned anode site in Lulea



Source: Euroz Hartleys

Vittangi Graphite Project

The concentrator is sized to process 100ktpa to produce ~22ktpa of graphite concentrate. DFS capex (July 2021) is estimated at ~US\$104m. Concentrate will be trucked to Lulea for processing into anode.

The Vittangi graphite project (containing the Nunasvaara and Niska deposits) has a current total JORC (2012) resource of 30.1Mt at 24.1% graphite ("Cg"). The Phase 1 DFS is based on only 2.3Mt of the JORC resource.

There is a JORC Exploration Target estimate of 170-200Mt at 20-30% Cg.

Figure 6: Vittangi Resource

Deposit	Resource Category	Tonnage (t)	Graphite (% Cg)
Nunasvaara South	Indicated	8,058,000	25.2
	Inferred	2,679,000	25.2
Nunasvaara North	Indicated	4,041,000	27.9
	Inferred	2,166,000	15.3
Nunasvaara East	Indicated	2,991,000	23.3
	Inferred	1,401,000	23.3
Niska North	Indicated	4,744,000	24.0
	Inferred	1,135,000	24.6
Niska South	Indicated	2,765,000	22.5
	Inferred	95,000	17.3
Total	Indicated & Inferred	30,075,000	24.1

Source: TLG

Figure 7: Vittangi Reserve

Deposit	Reserve Category	Tonnage (t)	Graphite (% Cg)
Nunasvaara South	Probable	2,260,140	24.1
Total		2,260,140	24.1

Source: TLG

Figure 8: Artist impression proposed mine and concentrator



Source: TLG

Figure 9: Site visit to rehabbed trial mining site



Source: Euroz Hartleys

Figure 10: Trial mining ore stockpile (one of three sheds)



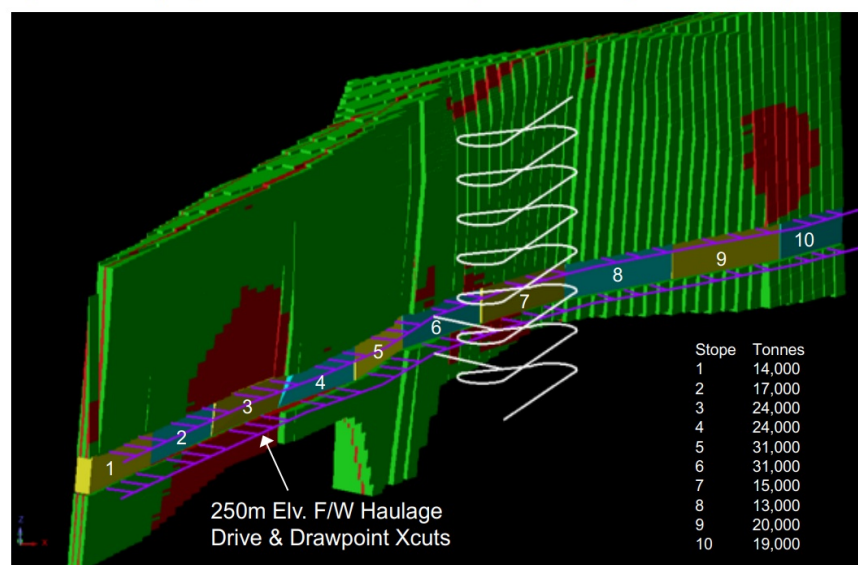
Source: Euroz Hartleys

Expansion to +100ktpa anode

TLG released a scoping study in December 2020 for an expansion to add 85ktpa anode. The study is based on underground mining reducing the visual and potential environmental footprint. The scoping study capex was US\$1.2b. We assume the expansion occurs in our model, but defer it to 2029-2031 to be conservative. We see potential that the expansion is sooner to meet customer demand.

Figure 11: 2020 Underground Scoping Study Expansion

Figure 4 3-D Image of Nunasvaara North 8 Level LHOS from Niska underground mining study.



Source: TLG

Figure 12: 2020 Underground Scoping Study Expansion

PARAMETER	UNITS	OUTCOME
Annual ore mining rate	tonnes	400,000
Average annual production of Talnode®-C	tonnes	84,700
Average annual production of Talphene®	tonnes	8,470
Life of Mine (LOM)	years	14
NPV ₅ (real, pre-tax) from Talnode-C price range	\$M	\$2,430 to \$4,650
NPV ₅ (real, post-tax) from Talnode-C price range	\$M	\$1,610 to \$3,340
Internal Rate of Return (IRR) (pre-tax, base case)	%	47%
Internal Rate of Return (IRR) (post-tax, base case)	%	37%
Post-commissioning Payback (pre-tax, base case)	years	1.7
Free Cashflow (LOM, base case)	\$M	7,605
Talnode®-C base case price (range \$7,500 to 11,250/t)	\$/t product	\$9,375
Talphene® price	\$/t product	\$15,000
Revenue (LOM, base case)	\$M	\$11,700
Cash cost	\$/t product	\$2,380
EBITDA (LOM, base case)	\$M	\$8,850

* The upper end of the pricing range is based on a Talga commissioned report by Benchmark Mineral Intelligence prepared for the Vittangi Anode Project PFS. Benchmark Mineral Intelligence has subsequently confirmed the continued validity of its predicted pricing. The lower end of the range was factored and discounted to allow for potential large volume contracts.

** Talphene® pricing was factored from Talga's customer feedback and Talnode-Si marketing to date for feasibility studies underway in UK.

Source: TLG

Figure 13: 2020 Underground Scoping Study Expansion

CAPITAL COST (US\$M)		
Mine & Processing	Mining, Crushing & Concentrator	\$171
	Purification	\$197
Refinery Plant	Coating	\$304
	Purification	\$85
Indirect Costs	Coating	\$83
Infrastructure		\$202
Sub-total Mine and Processing Plants		\$1,040
Contingency		\$206
TOTAL		\$1,246

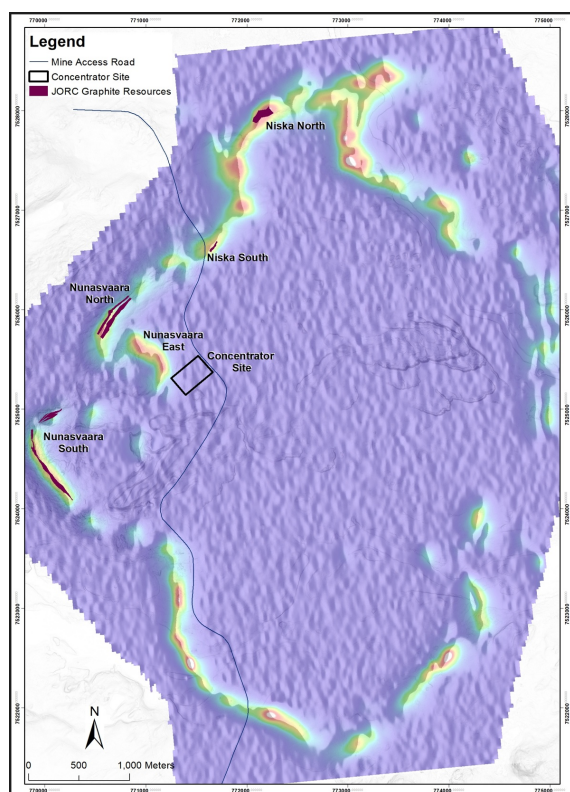
Source: TLG

Expansion well beyond +105ktpa anode

Given the quality of the anode produced to date, the size of the project, and its location, it seems possible that production is not limited to 105ktpa of anode. Considerable more drilling, studies and offtake would be required before it could be considered.

We see potential for anode production in the order of 800ktpa is possible, based on the exploration target and assuming one day a 4mtpa underground mining operation (similar to the nearby Kiruna iron ore mine). This is substantially larger than the current resource. Our base valuation does not assume 800ktpa of anode, but indicatively if the company were to achieve such scale, it would represent around 10% of 2040 demand and would be generating in the order of US\$10bn pa of revenue. This is a speculative assumption, but appears plausible based on the quality of the anode to be produced in Stage 1, the exploration target of 170-200Mt, the need to reduce CO₂ in the anode, and the desire for the industry to move away from Chinese produced anode where possible;

Figure 14: The 2021 Vittangi Graphite Project JORC Exploration Target estimate at Vittangi is currently 170-200Mt at 20-30% Cg



Source: TLG

Figure 15: The nearby Kiruna underground iron ore mine has a skilled workforce capable of bulk underground mining



Source: LKAB

R&D

TLG has always had a strong R&D focus. One of the potential near term products for commercialisation is the silicon-carbon additive. Other products include graphene.

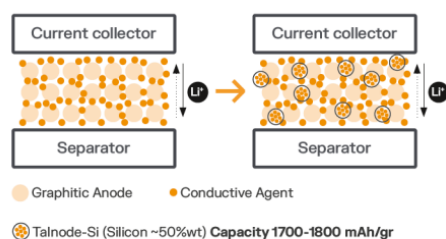
In addition to possible commercialisation though, the R&D focus enables better relationships with customers. Anode is an extremely technical product and having the capability to engage in current and future conversations around anode performance and characteristics is a big advantage to gain the confidence for substantial offtakes.

Figure 16: Additives another potential commercial stream

Silicon Anode: Talnode®-Si

Silicon-carbon composite additive for high energy density anodes

- Gen-1 testing with global Tier 1 customers
- Additive is 30-50% silicon in combination with Talga graphite and graphene
- 'Drop-in' for existing commercial anode



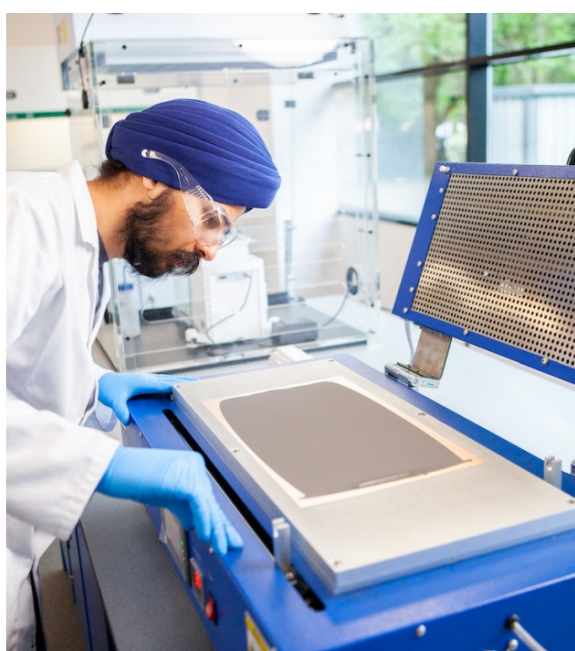
talga

Source: TLG

Figure 17: TLG always has had a strong R&D focus

Next generation technology

- **CALIBER study:** technical and commercial feasibility of producing conductive additives in UK. Main market target to replace carbon black based additives in cathodes
- **RELOAD study:** use of graphene from graphite in spent batteries to make new battery additives
- **UK-CSi study:** silicon anode development using in-situ silicates from graphite ore
- **Graphene products,** including coatings and concrete, expand Talga's addressable markets and opportunities to derive further efficiency and commercial gains from Vittangi



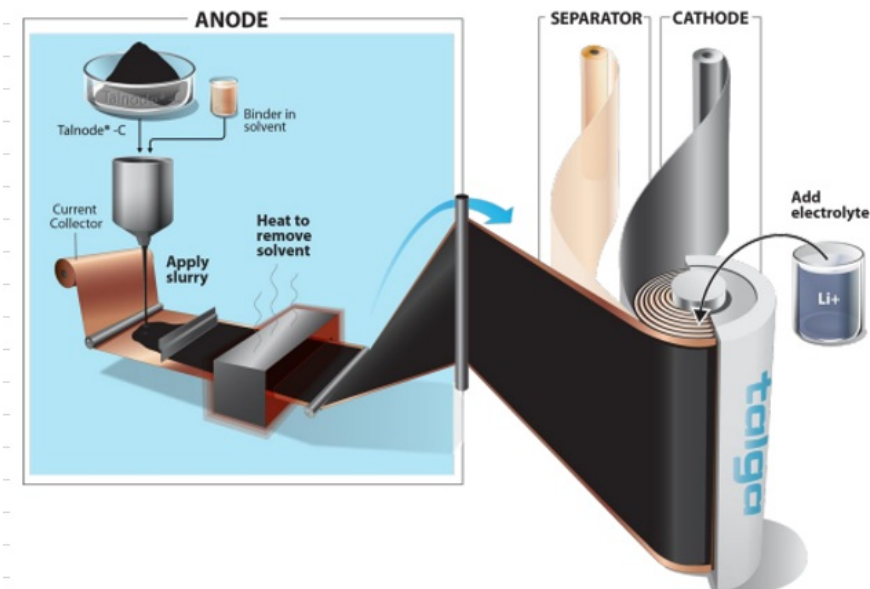
Source: TLG

Industry exposure

TLG is exposed to the high quality battery graphite anode market. Consequently, it is exposed to the global EV market.

Given the CO₂ intensity of its main competition (synthetic graphite), it is also exposed to the CO₂ market;

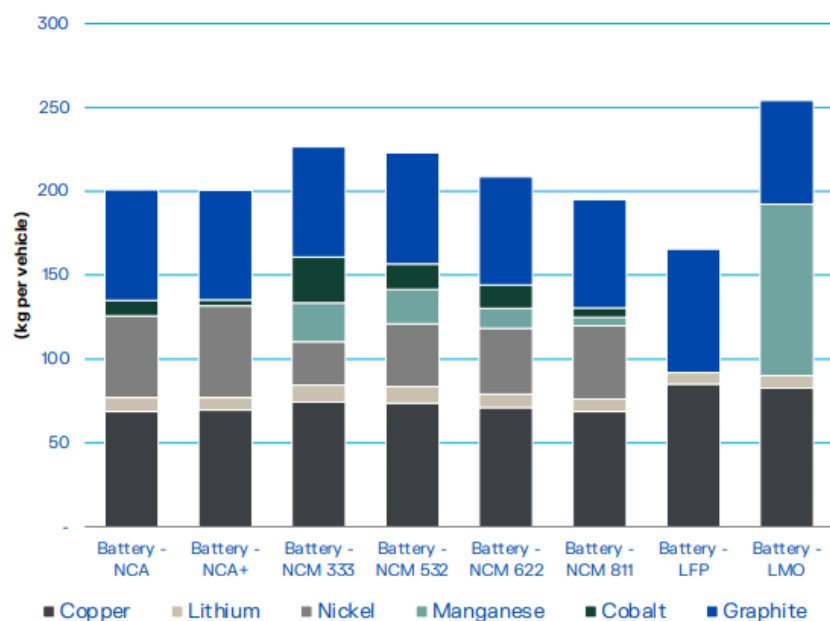
Figure 18: Anode



Source: TLG

Figure 19: All EV battery chemistries currently use graphite anodes

Typical use of minerals in battery electric vehicles



Source: IEA, The Role of Critical Minerals in Clean Energy Transitions, Mar 2022

Source: TLG

Geographic exposure

The mine is in Sweden,

Figure 20: Mine located Kiruna, anode plant to be built in Lulea



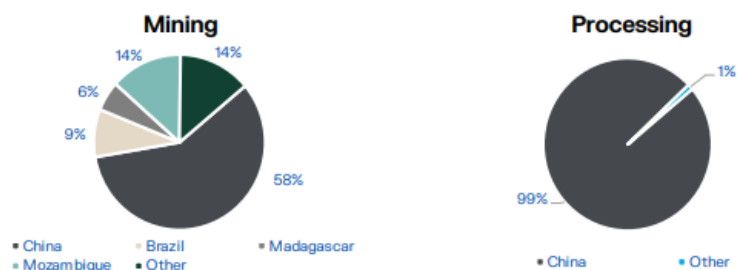
Source: TLG

Peers and Competitors

There are a lot of listed graphite peers on the ASX, but only a few advanced anode projects (SYR, NVX);

Figure 21: Most of supply is China

Natural Graphite Supply Chains



Source: Wood Mackenzie, The implausibility of accelerated decarbonisation pathways, 16 February 2022

Source: TLG

Figure 22: ASX listed graphite and battery anode companies

Company	Ticker	Last	Quot. Mkt	Status
ASX Listed				
1. Syrah Resources Limited	SYR	2.54	1,690	Producer / Developer
2. Novonix Limited	NVX	1.97	993	Producer / Synthetic
3. Renascor Resources Limited	RNU	0.29	703	Developer
4. Talga Group Ltd	TLG	1.51	512	Producer / Developer
5. Magnis Energy Technologies Ltd	MNS	0.39	349	Developer
6. Sovereign Metals Limited	SVM	0.43	207	Developer
7. Archer Materials Limited	AXE	0.665	166	Graphene
8. Black Rock Mining Limited	BKT	0.155	152	Developer
9. Hazer Group Limited	HZR	0.66	116	Synthetic graphite developer
10. Ecograp Limited	EGR	0.255	115	Developer
11. Volt Resources Limited	VRC	0.017	66	Developer
12. Walkabout Resources Ltd	WKT	0.11	63	Developer
13. Triton Minerals Ltd	TON	0.036	47	Developer
14. Evolution Energy Minerals Limited	EV1	0.25	37	Developer
15. International Graphite Limited	IG6	0.29	26	Developer
16. Sarytogan Graphite Limited	SGA	0.47	24	Developer
17. Evion Group NL	EVG	0.086	24	Developer
18. Castle Minerals Limited	CDT	0.025	24	Explorer
19. Buxton Resources Limited	BUX	0.097	15	Explorer
20. Battery Minerals Limited	BAT	0.004	12	Developer
21. Hexagon Energy Materials Limited	HXG	0.017	8	Developer
22. Lincoln Minerals Limited	LML	0.0069	4	Explorer

Source: IRESS. *Market cap is quoted ordinary shares from IRESS. It does not dilute for options, escrow shares, performance shares, convertible notes, recent placements etc. These can be meaningful adjustments that should be taken into account.

Figure 23: European natural graphite peers

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 https://talgagroup.eu-central-1.amazonaws.com/app/uploads/2022/05/2724246/20220527VittangiResourceUpgrade_ASY.pdf
			Inferred	7,500,000	21.8		
Talga	Jalkunen	-	Indicated	-	-	4,693,500	Talga Group, Company Announcement, 27 August 2015 https://talgagroup.eu-central-1.amazonaws.com/app/uploads/imports/asx-announcements/357c26f9-817b-418f-b7d9-299eb85d5d53/TalgaTrebleGraphiteResourceGlobalScale.pdf
			Inferred	31,500,000	14.9%		
Beowulf (Oy Fennoscandia Resources AB)	Aitolampi	-	Indicated	11,000,000	4.9%	1,275,000	Beowulf Mining, Company Announcement, 30 October 2019 https://polaris.brighterir.com/public/beowulf_mining_plc/news/ms/story/wlo036r
			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 https://leadingedgematerials.com/leading-edge-materials-announces-positive-preliminary-economic-assessment-results-for-its-woxna-graphite-anode-project-with-us\$17m-pre-tax-npv-and-42-9-pre-tax-irr/
			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 https://www.mineralcommodities.com/wp-content/uploads/2021/11/Traelen-Malden-Ore-Reserve.pdf
			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 https://talgagroup.eu-central-1.amazonaws.com/app/uploads/imports/asx-announcements/930f89d0-25cf-407b-9738-3e56a7d1575/500IncreaseinContainedGraphiteatRaitajarviProject.pdf
			Inferred	900,000	6.4%		

talga

Source: TLG

Key Suppliers & Customers

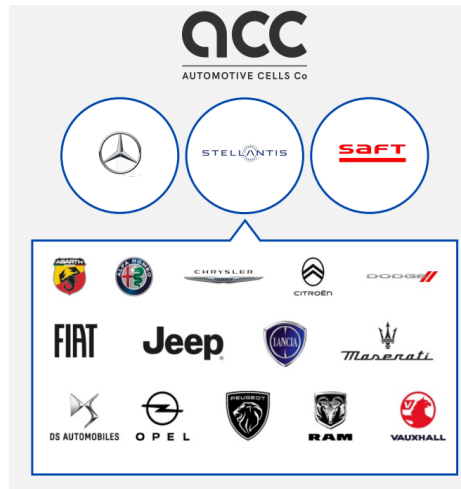
ACC has an MOU for an average of 12ktpa of anode over five years. This represents around 60% of stage one production. We expect further offtakes through CY23.

Figure 24: ACC first offtake

Securing first anode supply agreement

Non-binding anode offtake term sheet signed with Automotive Cells Company, targeting binding agreement by 30 November 2022

- 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
- ACC is co-owned by Mercedes-Benz, Stellantis, and Saft (subsidiary of TotalEnergies)
- ACC is establishing its first lithium-ion battery Gigafactory in France, with further Gigafactories planned to ramp-up total production capacity to 120GWh per annum in 2030



10 See: ASX:TLG 27 September 2022

Source: TLG

Management & Directors

Figure 25: Director exposure of board and key management

Economic Exposure of Board and key management		Performance Rights & options	Shares	Total Economic Exposure	Rank
	Position	#	#	#	
Directors					
Terry Stinson	Non-Exec Chairman	600,000	177,372	777,372	5
Mark Thompson	Managing Director	4,000,000	14,382,174	18,382,174	1
Grant Mooney	Non-Exec Director	500,000	0	500,000	6
Stephen Lowe	Non-Exec Director	500,000	2,077,273	2,577,273	3
Ola Rinnan	Non-Exec Director	500,000	0	500,000	6
Key Management					
Melissa Roberts	CFO	2,000,000	0	2,000,000	4
Martin Phillips	COO	2,500,000	229,950	2,729,950	2

Source: TLG

Terry Stinson, Non-Executive Chair

Mr Stinson has over 35 years' Executive and Non-Executive Director experience, working for global innovation companies across a range of industry segments, along with a proven track record of forming and leading international business collaborations and joint ventures. Formerly the CEO and Managing Director of Orbital Corporation, VP for Global Fuel Systems at Siemens AG, CEO and Managing Director of Synerject and VP of Manufacturing Outboard Marine Corporation, Mr Stinson is currently the Non-Executive Chair of wave energy technology developer Carnegie Clean Energy Limited, Non-Executive Director of Aurora Labs Limited, and Non-Executive Director of Engentus Pty Ltd.

Mark Thompson, Managing Director MAIG, MSEG

Mr Thompson has over 30 years' global experience in the geoscience and mineral industries including project discovery, development, technology and management. He is a member of the Australian Institute of Geoscientists, the Society of Economic Geologists and the Society of Vertebrate Paleontology. Mr Thompson founded Talga and previously founded and served on the Board of ASX-listed Catalyst Metals Limited. Mr Thompson was a Non-Executive Director of Gibb River Diamonds Limited.

Grant Mooney, Non-Executive Director

Mr Mooney has a background in corporate advisory with extensive experience in equity capital markets, corporate governance and M&A transactions along with a wealth of experience in resources and technology markets. He is a member of the Institute of Chartered Accountants in Australia. Mr Mooney is a Non-Executive Director of several ASX-listed companies including wave energy technology developer Carnegie Clean Energy Limited, 3D metal printing technology company Aurora Labs Limited, and mineral resources companies Barra Resources Limited, Riedel Resources Ltd, Accelerate Resources Limited, SRJ Technologies, and Gibb River Diamonds Limited.

Stephen Lowe, Non-Executive Director

Mr Lowe has a background in business management with over 20 years' experience consulting to a range of corporate and high wealth clients. Mr Lowe was the Group Manager for the Creasy Group for 12 years before retiring in August 2019. Mr Lowe is also an experienced public company Director, being the former Chair of Sirius Resources NL and former Non-Executive Director of Coziron Resources Ltd and Windward Resources Ltd. Mr Lowe holds a Bachelor of Business (Accounting) and a Masters of Taxation from the UNSW. He is a Fellow of the Taxation Institute of Australia.

Ola Rinnan, Non-Executive Director

Mr Rinnan has extensive commercialisation and leadership experience across the energy, banking and finance sectors and has held numerous board positions for European listed companies and financial institutions including Non-Executive Directorships in Smedvig group companies and DFCU Bank (representing the largest shareholder Norfund). Formerly the Chairman of Avinor AS, CEO at Eidsiva Energi AS, CEO at Norgeskreditt AS and CFO for Moelven Industrier AS, Mr Rinnan is currently the Chairman of Nordavind DC Sites AS, Hamar Media AS, Espern Eiendom AS, Alpha Entrance AS, Megafun AS and Gravidahl AS. Mr Rinnan holds a Bachelor in Economics and a Masters in Construction and Materials Technology.

Major Shareholders

There are no substantial shareholders, although recent presentations from the company lists Kinetic and Pentwater as institutions with holdings below 5%.

Unpaid capital

There are 7.5m options and ~3.6m performance shares at various strikes and expiry.

Financials

On our estimates, EBITDA will average ~A\$170m once the anode facility for Stage 1 (19.5ktpa nameplate).

An expansion to 100ktpa nameplate would increase EBITDA to A\$980m pa on our estimates.

We do not model an expansion to 800ktpa, because it is extremely speculative, but scaling the 100ktpa EBITDA by 8x would be a world class mining / downstream operation and significant contributor to earnings of any of the major mining or chemical companies.

Figure 26: P&L Assumptions

P&L	Unit	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 29	Jun 30	Jun 31	Jun 32
Net Revenue	A\$m	0.0	0.0	0.0	267.4	384.5	393.8	393.8	393.8	1163.4	1932.9	1932.9
Total Costs	A\$m	-26.0	-15.5	-15.5	-171.8	-230.3	-234.5	-235.2	-235.8	-627.9	-1020.1	-1020.8
EBITDA	A\$m	-26.0	-15.5	-15.5	95.6	154.2	159.3	158.7	158.0	535.4	912.9	912.2
- margin		-	-	-	36%	40%	40%	40%	40%	46%	47%	47%
Depreciation/Amort	A\$m	-1.0	-6.3	-44.4	-85.8	-96.8	-106.5	-106.4	-122.3	-233.7	-312.5	-314.8
EBIT	A\$m	-27.0	-21.8	-59.9	9.8	57.5	52.8	52.3	35.7	301.7	600.4	597.4
Net Interest	A\$m	0.0	-0.1	-14.1	-28.8	-28.7	-27.6	-26.5	-44.9	-78.2	-89.5	-83.3
Norm. Pre-Tax Profit	A\$m	-27.0	-21.8	-73.9	-18.9	28.8	25.2	25.8	-9.2	223.6	510.8	514.0
Reported Tax Expense	A\$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-67.1	-153.3	-154.2
Normalised NPAT	A\$m	-27.0	-15.3	-51.8	-13.2	20.2	17.7	18.1	-6.5	156.5	357.6	359.8
Abnormal / Exploration	A\$m	-9.8	-6.5	-22.2	-5.7	8.6	7.6	7.7	-2.8	0.0	0.0	0.0
Reported Profit	A\$m	-36.8	-21.8	-73.9	-18.9	28.8	25.2	25.8	-9.2	156.5	357.6	359.8
Minority	A\$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Profit Attrib	A\$m	-36.8	-21.8	-73.9	-18.9	28.8	25.2	25.8	-9.2	156.5	357.6	359.8

Source: Euroz Hartleys

Balance Sheet

We assume a significant component of debt to finance the Stage 1 19.5ktpa nameplate and then a subsequent expansion .

Figure 27: Balance Sheet Assumptions

Balance Sheet	Unit	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 29	Jun 30	Jun 31	Jun 32
Cash	A\$m	13.0	23.1	166.8	81.2	183.5	298.7	404.9	216.9	52.8	643.7	1286.4
Other Current Assets	A\$m	2.4	1.5	1.5	29.9	41.9	42.9	42.9	42.9	122.3	201.6	201.7
Total Current Assets	A\$m	15.4	24.6	168.3	111.1	225.5	341.5	447.8	259.8	175.1	845.4	1488.0
Property, Plant & Equip.	A\$m	16.9	15.1	491.5	547.9	467.1	376.6	296.3	1075.1	1798.5	1518.0	1235.2
Exploration	A\$m	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Investments/other	A\$m	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Tot Non-Curr. Assets	A\$m	17.8	16.0	492.3	548.7	468.0	377.5	297.1	1075.9	1799.3	1518.8	1236.1
Total Assets	A\$m	33.2	40.6	660.6	659.8	693.4	719.0	744.9	1335.7	1974.4	2364.2	2724.1
Short Term Borrowings	A\$m	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	A\$m	4.8	2.1	2.1	14.9	19.7	20.1	20.1	20.2	52.4	84.6	84.7
Total Curr. Liabilities	A\$m	5.4	2.1	2.1	14.9	19.7	20.1	20.1	20.2	52.4	84.6	84.7
Long Term Borrowings	A\$m	1.1	0.0	500.0	500.0	500.0	500.0	500.0	1100.0	1550.0	1550.0	1550.0
Other	A\$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Non-Curr. Liabil.	A\$m	1.1	0.0	500.0	500.0	500.0	500.0	500.0	1100.0	1550.0	1550.0	1550.0
Total Liabilities	A\$m	6.5	2.1	502.1	514.9	519.7	520.1	520.1	1120.2	1602.4	1634.6	1634.7
Net Assets	A\$m	26.6	38.5	158.5	144.9	173.7	198.9	224.8	215.5	372.0	729.6	1089.4
Net Debt	A\$m	-11.3	-23.1	333.2	418.8	316.5	201.3	95.1	883.1	1497.2	906.3	263.6

Source: Euroz Hartleys

Debt

TLG has passed the European Investment Bank's preliminary screening for debt financing.

Following substantial due diligence undertaken to date, including completed site visits, EIB has advanced the Project to 'Under Appraisal' in preparation of a decision.

EIB's potential financing commitment of up to EUR300m, pending final due diligence, credit approvals and agreements, is foreseen to cornerstone and complement debt funding discussions underway with a consortium of leading export credit agencies and international banks

Hedging

It is possible that there is a component of fixed pricing in offtakes, although we ideally would like to see minimal fixed pricing. We would prefer offtake partners took equity positions in TLG to hedge their commodity risk exposure, rather than fixed prices.

Capex requirements

Capex for Stage 1 of 19.5ktpa nameplate is estimated in the DFS at US\$484m.

An expansion to ~100ktpa anode would be an additional US\$1.25b based on 2020 scoping study.

Figure 28: Capex estimates for 19.5ktpa

Nunasvaara South (2021 DFS) ¹	
Talnode®-C	19,500tpa
Life of Mine	24 years
Pre-tax NPV ₈	US\$1,054M
Pre-tax IRR	30%
Capex	US\$484M ⁽³⁾

Source: TLG

Figure 29: Capex for expansion to ~100ktpa

Niska Expansion (2020 Scoping Study) ²	
Talnode®-C	84,700tpa
Talphone®	8,470tpa
Life of Mine	14 years
Pre-tax NPV ₈	US\$3,540M
Pre-tax IRR	47%
Capex	US\$1,040M ⁽³⁾

Source: TLG

Free cash flow

TLG will be free cash flow negative until FY26 on our estimates, although if the expansion is brought forward in line with the companies' expected timetable then free cash flow will not be positive until FY28.

Figure 30: Cash Flow Assumptions

Cashflow	Unit	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 29	Jun 30	Jun 31	Jun 32
EBITDA		-26.0	-15.5	-15.5	95.6	154.2	159.3	158.7	158.0	535.4	912.9	912.2
Chg working cap		-0.6	-1.9	0.0	-15.6	-7.2	-0.6	0.0	0.0	-47.1	-47.1	0.0
Operating Cashflow	A\$m	-26.6	-17.4	-15.5	80.0	147.0	158.7	158.7	158.0	488.3	865.7	912.2
Income Tax Paid	A\$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-67.1	-153.3	-154.2
Interest & Other	A\$m	0.0	-0.1	-14.1	-28.8	-28.7	-27.6	-26.5	-44.9	-78.2	-89.5	-83.3
Operating Activities	A\$m	-26.5	-17.4	-29.5	51.3	118.3	131.1	132.2	113.1	343.1	622.9	674.6
Property, Plant & Equip.	A\$m	-12.4	-4.5	-520.7	-142.2	-16.0	-16.0	-26.0	-901.1	-957.1	-32.0	-32.0
Exploration and Devel.	A\$m	-0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	A\$m	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Investment Activities	A\$m	-12.4	-4.5	-520.7	-142.2	-16.0	-16.0	-26.0	-901.1	-957.1	-32.0	-32.0
Borrowings	A\$m	-0.5	0.0	500.0	0.0	0.0	0.0	0.0	600.0	450.0	0.0	0.0
Equity	A\$m	0.0	32.0	194.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Dividends Paid	A\$m	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financing Activities	A\$m	-0.5	32.0	694.0	5.3	0.0	0.0	0.0	600.0	450.0	0.0	0.0
Net Cashflow	A\$m	-39.5	10.1	143.7	-85.6	102.3	115.1	106.2	-188.0	-164.1	590.9	642.6

Source: Euroz Hartleys

Dividends

We assume no dividends for the foreseeable future.

Equity Issuance

Our model assumes ~\$200m of new equity. We assume new shares in TLG, although it is possible it is via a sell down of project interest.

FX exposure

Costs will be in Swedish Krona. We assume selling prices will be based on US\$ reference prices, but it is not clear yet.

Interest Rate exposure

We expect a large proportion of capex to be funded with debt, and hence TLG will have meaningful interest rate exposure.

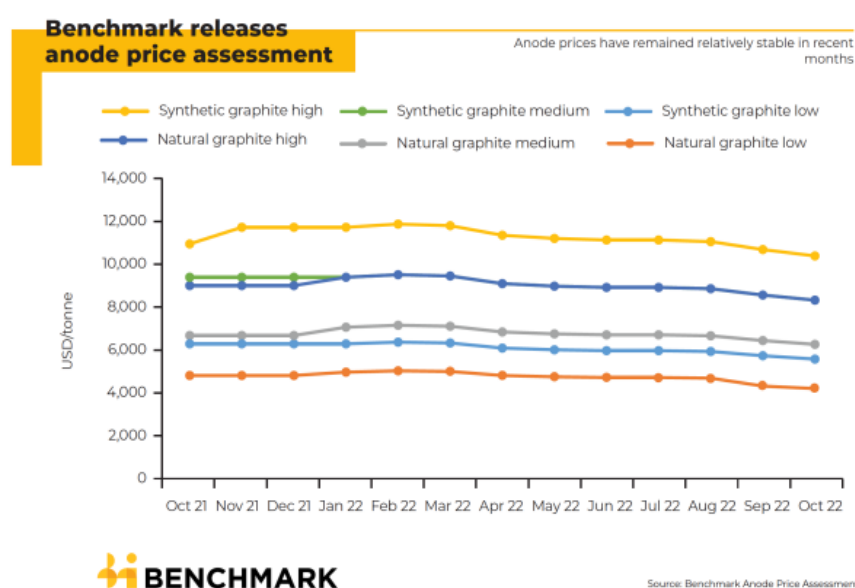
Commodity price exposure

Anode quality varies substantially, and so do prices.

TLG is developing natural anode product, that is expected to price towards high quality synthetic anode.

Whilst TLG will mine fine flake graphite, it is substantially less exposed to flake graphite prices because it is integrated and our model does not assume flake graphite external sales (although it is a possibility).

Figure 31: Anode prices



Source: TLG

Figure 32: Commodity Price Assumptions

Price Assumptions	Unit	Spot	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 29	Jun 30	Jun 31	Jun 32
AUD/USD	A\$/US\$	0.67	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Small Flake -100	US\$/t	810	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
BAM/USPG	US\$/t	3,000	3,500	3,500	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Medium Anode	US\$/t	7,000	6,000	6,000	7,500	7,500	7,500	7,500	7,500	7,500	7,500
Premium Anode	US\$/t	10,500	11,000	11,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000

Source: Euroz Hartleys

Valuation Considerations

We assume A\$200m of equity to finance the Stage 1 (19.5ktpa nameplate of anode production) with the balance of capex funded by debt. Our model is more conservative than the DFS by assuming only 17.7ktpa of anode. Stage 2 expansion to +100ktpa nameplate of anode is funded by debt, given we conservatively assume this is not in production until 2031. We are likewise more conservative on production, assuming only 85ktpa of anode versus expected nameplate of 105ktpa. Our cash costs are also much higher than the Company estimate (US\$4.2k/t vs DFS US\$2.4k/t). We do use similar selling prices though (US\$12k/t).

Selling price assumptions are opaque, but we assume prices similar to current synthetic high quality anode. Selling prices assumptions are a significant risk to our valuation.

Other risks are permitting, offtake agreements, securing power and commissioning.

We use a 12% discount rate, consistent with other project pre-production. At steady state, we would lower our discount rate to 8%, which has a big uplift in valuation, assuming that steady state is the same as our modelling assumptions.

Our valuation is \$2.65/shr. We see potential to upgrade this if commodity prices increase, the project is de-risked, or if we include some of the technology/r&d products.

The approvals are also a risk to timing, which is another reason we are using NPV12 to allow for risk of timing slippage. We note that the recent approval of the nearby iron ore expansion helps with our confidence that the TLG mine will also be approved (see <https://www.domstol.se/nyheter/2022/12/mark--och-miljodomstolen-lamnar-kaunis-iron-ab-tillstand-till-befintlig-och-utokad-gruvverksamhet-i-kaunisvaara-pajala-kommun/>)

Figure 33: Production Assumptions

Vittangi Mine & Concentrator	Unit	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 29	Jun 30	Jun 31	Jun 32
Ore Mined	Kt pa				71	95	95	95	95	285	475	475
Grade	%				24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%	24.0%
Produced concentrate	Kt pa				14.9	19.8	19.8	19.8	19.8	58.6	97.4	97.4
EBITDA	A\$m				43.0	67.1	70.3	70.3	70.3	211.6	352.9	352.9
Concentrate cash costs	US\$/t				-1361	-1373	-1376	-1376	-1376	-1328	-1318	-1318
Concentrate selling price	US\$/t				3500	3875	4000	4000	4000	4000	4000	4000
Lulea Anode	Unit	Jun 22	Jun 23	Jun 24	Jun 25	Jun 26	Jun 27	Jun 28	Jun 29	Jun 30	Jun 31	Jun 32
Concentrate Processed	Kt pa				14.9	19.8	19.8	19.8	19.8	58.6	97.4	97.4
Anode Production	Kt pa				13.3	17.7	17.7	17.7	17.7	52.2	86.7	86.7
EBITDA	A\$m				84	119	121	121	121	358	595	595
Anode cash costs (purchase concentrate)	US\$/t				-6334	-6778	-6926	-6926	-6926	-6926	-6926	-6926
- net of mine margin (ie integrated)	US\$/t				-4196	-4276	-4302	-4302	-4302	-4253	-4243	-4243
Anode selling price	US\$/t				11,000	11,750	12,000	12,000	12,000	12,000	12,000	12,000

Source: Euroz Hartleys

Price Target Methodology

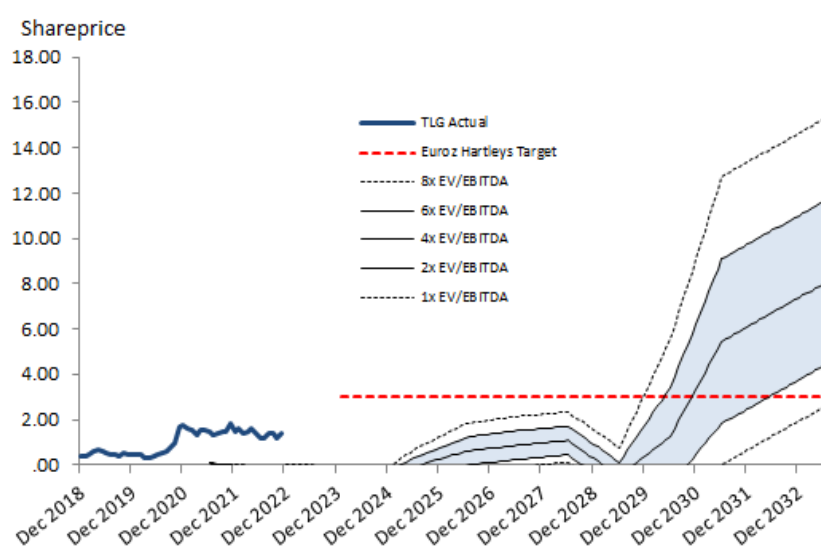
Our price target is a risk weighting of several scenarios.

Figure 34: Price Target

Price Target Methodology	Weighting	Spot	12 mth out
NPV12 Base Case	47%	\$2.65	\$3.23
NPV8 Base Case	4%	\$5.83	\$6.30
NPV12 at Spot Commodity and FX prices	20%	\$2.28	\$2.85
1.5x spot NAV	5%	\$3.42	\$4.28
Expansion to 800ktpa anode	3%	\$12.71	\$14.23
Net Cash	21%	\$0.09	\$0.09
Risk weighted composite		\$2.50	
12 Months Price Target		\$3.00	
Share price - Last		\$1.510	

Source: Euroz Hartleys

Figure 35: EV/EBITDA bands and price target



Source: Euroz Hartleys

Company disclosures

The companies and securities mentioned in this report, include:

Talga Group Ltd (TLG) | Price 1.51 | Target price 3.00 | Recommendation Speculative Buy;

Price, target price and rating as at 08 December 2022 (not covered)*

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